



ACS150

The American Chemical Society at 150

REFLECTIONS ON THE YEARS 2002–2026



CELEBRATING
ACS150
Chemistry is Everything

La química lo es todo

万物皆化学

世界は化学でできている

Química é tudo

Kimya her şeydir

रसायन वज्जिज्ञान ही सब कुछ है

ءيش لك يه ءاي ميكل

Chemie ist alles

Chemie is alles

La chimie, c'est tout

Acknowledgments

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And we offer sincere gratitude to retired ACS staff members Frank Walworth and Flint Lewis for their invaluable contributions.

As we celebrate 150 years of ACS, we thank you all for helping us tell the story of this long-lived, vibrant, and dynamic organization that works every day toward improving all lives through the transforming power of chemistry.

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PREFACE

Reflections of Madeleine Jacobs

ACS Executive Director and CEO, January 2004–February 2015



As I reflect on my journey as Executive Director and CEO of the American Chemical Society (ACS) from January 2004 to February 2015, I am filled with gratitude, pride, and awe at what we accomplished together.

When I first stepped into this role, I knew I would be leading an organization with a rich legacy and a mission that resonated deeply with my own values. What I didn't fully realize at the time was how transformative the years ahead would be – not just for ACS, but for the broader chemistry community and, indeed, for me personally.

Those early days were marked by a sense of both excitement and challenge. The need for unity and effective leadership was clear, and I was determined to build a collaborative management team that could harness the collective strengths of our talented executives. Through teamwork and open dialogue, we created an environment where innovation could flourish and where every individual felt valued. The transition from fragmented leadership to a high-functioning team was not easy, but it laid the foundation for a decade of unprecedented growth and achievement.

We faced tough choices, streamlined operations, and tackled deficits head-on. The economic headwinds of the 2008 global financial crisis made the situation more challenging. By focusing on

efficiency and strategic alignment, we managed to turn the tide and set ACS on a course toward financial stability and sustainable growth. Beyond the numbers, however, our greatest impact was in enriching lives – whether through advancing education, elevating public affairs, promoting green chemistry, or forming global partnerships. The \$34 million gift from the Hach Scientific Foundation was a testament to the power of vision and perseverance, as were the millions raised to support international initiatives and the founding of the American Association of Chemistry Teachers.

Together, we embraced technology, expanded our reach, and strengthened ACS' relevance not only in the United States but around the world. It was a privilege to lead during such a dynamic era, and it is my hope that this book inspires you to see what is possible when passion meets purpose. Every step forward was made possible by those willing to dream big and work hard – may you find your own spark in these pages.

PREFACE

Reflections of Thomas M. Connelly Jr.

ACS Executive Director and CEO, February 2015–December 2022



I had the privilege of succeeding my friend Madeleine Jacobs as Executive Director of the American Chemical Society. Leading ACS, one of the world's greatest scientific societies, was the honor of a lifetime.

With its capable staff, thousands of committed volunteer leaders, and a huge membership, as well as the benefits of its ACS Publications and CAS Divisions, ACS is advantaged among science societies. As would be expected, there were challenges, but ultimately these challenges provided opportunities for our Society to grow and better serve the chemistry enterprise. Some highlights follow.

Embrace and advance inclusion in chemistry.

This Board-approved goal was added to the ACS Strategic Plan in 2021. I appreciated the elegance and brevity of this wording as well as its expansiveness. With no limiting parameters, it makes clear that we embrace all who touch the chemistry enterprise, everywhere.

The practice of chemistry is global, and increasingly so. ACS must be a force to connect and support chemists regardless of where individuals reside. We approached globalization in partnership with chemistry societies around the world with whom we meet regularly. Through various initiatives and the growth in membership and staff globally, ACS has successfully expanded its support to the entire chemistry enterprise.

After COVID, ACS did not return to what was before: We moved on to what is next. Like everyone around the world, ACS members and

staff felt the challenges of COVID at home and at work. We learned the skills of working and meeting virtually, affording time savings, cost reductions, and social distancing – even as we missed face-to-face contact. I am grateful that the ACS Board empowered us to maintain staff operations during this time, without layoffs or furloughs.

Financial strength is a fundamental enabler of all that ACS accomplishes. Through the contributions of our unique information and solutions divisions of CAS and of ACS Publications, our Society programs and other units are able to operate at a higher level, with far greater impact toward achieving our mission than would otherwise be possible. Continuing focus on the ACS Strategic Plan, supported by growth and prudent cost management, will ensure ACS preeminence for years to come.

What's next for ACS? My crystal ball is no clearer than anyone else's, but there are undoubtedly disruptions over the horizon. Irrespective of those challenges, it is my firm belief that ACS will continue to grow as a leading learned society and as a community of scientists, colleagues, collaborators, and friends. My thanks to all of you who made my time as Executive Director so rewarding and enjoyable.

PREFACE

Reflections of Al Horvath

ACS CEO, January 2023 to Present



It is a profound time for the American Chemical Society. As we celebrate the Society's 150th anniversary, we stand at a pivotal moment for both reflection on our accomplishments and action toward our future vision.

There is so much to celebrate, and it is an honor and privilege to be CEO of ACS at this point in time.

The significance of this historic milestone is not lost on me. Those of us in leadership within ACS have the responsibility to lead the Society into the future, carrying the baton from our predecessors and preparing to pass it to those who follow. It is a mighty undertaking!

I have spent countless hours with our community in the U.S. and across the globe, interacting with our members, community associates, Local Sections, Divisions, International Chapters, partners, and other stakeholders. I've had the joy of celebrating 50-, 60-, and 70-year members at Local Section gatherings. I kicked off our first scientific conference held outside of the U.S. I've been gifted the wisdom of many of our ACS volunteer leaders, Presidents, and Directors, both past and present. And I've had the privilege of working alongside the most capable set of colleagues that I've ever had in my more than four-decade career.

There are two things that continually stand out throughout these interactions: how effectively our organization brings people together, and it's people that make all the difference. These

meaningful relationships we continue to build with each other throughout the Society – and beyond – take many forms and enrich our lives. They are the driving force of the Society's impact.

Reaching 150 years takes more than longevity. It demands resilience, reinvention, and agility to navigate through times of change and uncertainty. Across generations, ACS successfully met challenges by staying grounded in scientific excellence while evolving to meet the needs of our members. This ability to adapt without losing sight of who we are is one of our greatest strengths.

As I look ahead, I do so with confidence in this strength and in the scientific community we serve. Our legacy is still being shaped not only by marking 150 years in action but by the future we are building together – one grounded in discovery, inclusion, and service.

ACS will continue to lead by convening bright minds, supporting innovation, and opening doors of opportunity for the next generations. I believe that if the past 150 years showed us anything, it is that our most notable achievements are realized when we move forward with purpose. I look forward to continuing our journey together, guided by our commitment to improve all lives through the transforming power of chemistry.



ACS: 150 Years of Service to the Chemical Sciences and Its Practitioners

By Wayne E. Jones Jr., Chair of the ACS Board of Directors (2024–2026) and Director-At-Large



For 150 years, the American Chemical Society (ACS) has proudly focused on its fundamental goal of supporting chemistry, chemists, and all those in the chemical sciences.

From humble beginnings with 35 chemists in a room in the New York College of Pharmacy in New York City, ACS has flourished through world wars, industrial transformation, and life-changing scientific discovery and innovation to become a global organization with over 100,000 members and greater than 260,000 individuals in an interconnected community that spans more than 195 countries and regions. What were the keys to that success beyond the dreams of those early founders? By answering that question, perhaps we can learn from the past as we address today's challenges and look to a more prosperous next 150 years.

Early Governance and the Rise of Local Sections

In the 1800s, chemistry was a relatively new scientific discipline with little standing. For example, by the middle of the century, only two U.S. universities offered degrees in the discipline: Yale and Harvard. Yet, chemistry was beginning to have an impact beyond isolated aristocratic home laboratories and limited coursework in medical education. In England and Europe, national organizations had begun to appear, and it was believed that the U.S. needed a national organization devoted to advancing chemical knowledge and supporting those who practiced the discipline of chemistry.

The first major gathering of chemists in the U.S. was the celebration of the first 100 years of modern chemistry in recognition of English scientist and theologian Joseph Priestley's discovery of oxygen. At this event in Northumberland, Pennsylvania, on July 31, 1874, 75 chemists from 15 states and several countries, including Canada and Great Britain, gathered to recognize the August 1, 1774, discovery. During the proceedings, a national organization was discussed to promote chemistry and professional chemists in the U.S. Although some opposed such an organization, given the recent establishment of the American Association for the Advancement of Science with a new subsection dedicated to chemistry, the suggestion took root, leading to the small group of 35 chemists who met in New York City on April 6, 1876, to sign the original ACS constitution.

From the beginning, ACS governance reflected a democratic, member-driven ethos. The initial constitution created a mechanism for shared

From the beginning, ACS governance reflected a democratic, member-driven ethos.

leadership by members and a commitment to advance chemistry and all its practitioners. Furthermore, like the U.S. Constitution, the ACS constitution was designed to be changed over time. In fact, there have been eight major revisions (four in the first 25 years) and many bylaw changes over the 150-year history of the Society. Officers were elected, committees were formed, and the Council – composed of representatives from across the membership – became the central deliberative body. Although modest in scale, the early governance structure established a pattern that would endure: ACS would be guided not by a distant elite but by chemists themselves, acting collectively to shape the future of their profession.

In its first decades, ACS was concentrated in New York City and its immediate surrounding communities, but the founders quickly realized that a national society could not thrive if it remained geographically isolated. Chemists across the country wanted and needed access to meetings, professional networks, and scientific exchange. However, the new organization held nearly all of its meetings in New York City. Furthermore, the establishment of a charter in New York State included a requirement that officers be residents of the state, a requirement that was resented by non-residents of the state.

The growing desire for representation led to the founding in 1884 of a competing organization in Washington, D.C., named the Chemical Society of Washington, with other competing geographical structures proposed as well. The solution to the multiple competing sections was the creation of Local Sections, a governance innovation that allowed ACS to decentralize while maintaining a unified national identity.

The first Local Sections, formally recognized in 1891, included Rhode Island, New York, and the Chemical Society of Washington. These were followed by the North Carolina Section in 1896, the Boston Section (precursor to today's Northeastern Section) in 1898, and the Philadelphia Section in 1899. The Local Section structure rapidly became the backbone of ACS' member support system. These Sections organized lectures, laboratory visits, and community events, giving chemists opportunities to connect with colleagues and stay current with developments in the field. Local Sections also provided a mechanism to elect Councilors to represent members and the discipline at the national level,

ensuring that governance remained grounded in the needs and perspectives of chemists working in diverse settings – from industry and academia to government laboratories. They also led to great early growth, with 12 Local Sections and 2,000 members in 1900 expanding to 83 Local Sections by 1930. Today, the 186 Local Sections represent all 50 states in the U.S. as well as parts of Canada and, as of 2026, no county in the U.S. is without Local Section representation in Council.

Professionalism and the Creation of Divisions

The early 20th century was a period of consolidation for ACS governance. The constitution and bylaws were formalized, the Council's authority expanded, and committees multiplied to address the growing complexity of the chemical enterprise. As the Society matured, it became clear that governance needed to support not only geographic communities but also scientific specialties. In 1907, the Society hired Charles L. Parsons as Secretary of ACS, a position he would hold for more than 38 years.

Divisions combined with Local Sections created a dual structure that remains central to ACS governance today: one rooted in geography, the other in scientific specialization.

An early challenge for Parsons was the desire of many members to organize based on their technical specialization rather than geography. The solution was the creation of Divisions, which provided chemists with focused forums for research exchange, symposia, and publication. The first five Divisions were created in 1908 and included Industrial Chemists and Chemical Engineers, Agricultural and Food Chemistry, Fertilizer Chemistry, Organic Chemistry, and Physical and Inorganic Chemistry.

Divisions quickly became essential to ACS' identity. They organized technical programming at ACS Meetings & Expositions, established awards, and helped shape the direction of chemical research in the U.S. Their governance structures – elected officers, executive committees, and subdiscipline-specific initiatives – mirrored the democratic principles of the broader society. The addition of these new subunits was highly successful, helping to drive membership from 3,389 to 5,081 in the three years following their introduction (1907–1910).

The Divisions and their specialty-based scientific communities were also one of the main structural forces that shaped ACS Publications, driving a portfolio expansion beyond the *Journal of the American Chemical Society* and the newly established independent Chemical Abstracts Service (CAS), which subsequently relocated to The Ohio State University in Columbus, Ohio, in 1909. The development of these two arms of ACS recognized that as chemistry fragmented into increasingly specialized subfields, the Society needed parallel systems to publish, organize, and index the expanding scientific output. This move supporting the evolving chemistry enterprise would provide both the technical support for those working in

the chemical sciences and the financial support necessary for the Society to thrive.

Divisions combined with Local Sections created a dual structure that remains central to ACS governance today: one rooted in geography, the other in scientific specialization. Both were designed to support members, amplify their voices, and foster community.

Perhaps the greatest advance to the professional standing of ACS occurred in 1937, when President Franklin D. Roosevelt signed into law the congressional charter – Public No. 358 of the 75th Congress. This remains unique among scientific organizations and significantly elevated the standing of professional chemists in the U.S. This elevated ACS to national legal standing and affirmed its role as the leading U.S. scientific society. It also came with a special relationship with the U.S. government that includes a federal reporting requirement, special opportunities to provide expert counsel on scientific matters, and cooperation with the War and Navy Departments without compensation except expenses.

Postwar Expansion and Modernization of Governance

After World War II, chemistry entered a golden age. Industrial research expanded, federal funding increased, and universities built new laboratories at an unprecedented pace. ACS governance evolved in response to this transformation. The Society expanded its administrative staff, professionalized its operations, and created new committees devoted to education, publications, professional affairs, and public policy. During this period, communication with the broader



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EPNAC.com

community and policy makers also expanded through the establishment of a staffed ACS News Service (established initially in 1919 from the press and publicity committee) and *Chemical & Engineering News* (established in 1923).

Member support and broader support for professionalization became a central priority for the Society. ACS launched career services, continuing education programs, and a degree certification program, and began producing directories and special publications for member use. The establishment of the Petroleum Research Fund in 1944 and the awarding of the first grants in 1954 provided significant research support to chemists in academia. Local Sections expanded their outreach, engaging with schools and the public to promote scientific literacy. Divisions multiplied as new subdisciplines – including polymer chemistry, chemical education, and environmental chemistry – emerged. ACS Meetings & Expositions grew into major scientific events, with divisional programming at their core.

During this time, regional meetings came into being to address travel challenges and funding limitations. Local Sections and Divisions were encouraged to come together outside of ACS Meetings & Expositions to provide more localized member support. Eventually, six regions were established with independent boards that identify and support the Local Sections that run the meetings locally. Divisions were also active in supporting the regional meetings, particularly when their members were active in the meeting planning.

Postwar expansion in the 1950s and 1960s, along with the growth of support for research in industry and government programs, also created

new opportunities. Membership in Local Sections grew dramatically as industry expanded across the country. An increased number and complexity of Divisions brought demands for new publications addressing new subdisciplines. The growth in information also required greater abstracting and indexing from CAS, which responded by developing sophisticated systems for organizing chemical knowledge and, eventually, the computerization of chemical information retrieval.

Education, which had been recognized as critical throughout the early 20th century, also expanded rapidly during this period. The GI Bill had led to the massification of higher education and student enrollments at both the undergraduate and graduate levels, resulting in increasing demands for ACS support. Although students could not then become members, they had been able to form Student Affiliate Chapters since the 1920s and 1930s. During the 1950s and 1960s, ACS introduced more formal charters and a faculty advisor requirement. The standardization, along with better coordination with Local Sections and award programs, led to the modern Student Chapters we see today.

The outcome of these changes had a dramatic effect on the Society. Despite the growth of membership to 88,800 in 1960, membership dues were no longer the primary driver of the Society's finances. By the mid-1970s, ACS had become a complex, multifaceted organization, but its governance remained anchored in the principles established a century earlier: representation, participation, and service to members.

The ACS Centennial and Representing a Broader Community

The Society's centennial in 1976 prompted a period of reflection and renewal. The decade saw dramatic increases in diversity within ACS governance, including Henry A. Hill becoming the first African American president in 1977 and Anna J. Harrison becoming the first female president the following year. Although the Society's membership included many prominent, diverse chemists in the first 100 years, these two seminal leaders initiated dramatic change in its leadership. The number of women serving in Council and on national committees increased dramatically in the 1970s and 1980s. The Women Chemists Committee, established in 1926, became a key leader in advancing women in these governance roles and in the research enterprise with awards and recognition. Later in 1993, the Committee on Minority Affairs was created with the goal of achieving the same success for other underrepresented groups in ACS and the chemical enterprise.

Governance reforms during the 1980s and 1990s also strengthened transparency and clarified the roles of the Board of Directors, the Council, and the committees. The Board of Directors took on a more strategic, oversight-oriented role, and the executive director helped to distinguish management of the business units from Society governance. A more structured committee system was established by the work of the Council Policy Committee, and adjustments helped to ensure that rapidly growing specialties (polymer science, biochemistry, and environmental chemistry) had adequate voices.

Local Sections received new support mechanisms, including enhanced funding models and recognition programs. Their role in public outreach expanded dramatically with the establishment of National Chemistry Week in 1987, which mobilized thousands of volunteers across the country. There was also a recognition of the desire of international members to organize in ways similar to Local Sections, leading to Council approving language in 1991 to create International Chemical Sciences Chapters and to the first of these being chartered in Saudi Arabia in 1993.

Divisions continued to flourish during this time, becoming engines of scientific innovation. They expanded their awards, publications, and symposia, and many developed international partnerships.

ACS also launched major new programs through the second half of the 20th century. One important program, established in 1992 to recognize the contributions of chemistry to society, was the National Historic Chemical Landmarks Program. Another important milestone came in 2000, when ACS assumed stewardship of the Petroleum Research Fund, significantly expanding its capacity to support fundamental research through its grants. Scholarship and travel grant programs were also established in the 1990s at the national level, supported by foundations and donors, and by many of the Divisions.

By the end of the 20th century, ACS governance had become both more sophisticated and more responsive to member needs in the U.S. and globally. The Society balanced centralized coordination with decentralized initiative, empowering Local Sections and Divisions to serve their communities and subdisciplines while maintaining a coherent national strategy.

ACS International Chemical Sciences Chapters

Year Chartered	1993	2003	2011	2013	2014
	 Saudi Arabia	 Hungary	  Shanghai Thailand	 Romania	   Malaysia South Africa South Korea
	      2015	  2016	  2017	 2018	  2019
	Australia Brazil Nigeria Peru Taiwan United Arab Emirates	China (JingJinJi) Iraq South Western China	Jordan Qatar	Colombia	Georgia Pakistan
	 2020	 2022	 2023	    2025	     2026
	Israel	Switzerland	Singapore	Bangladesh East & Northeast India* Egypt Guangdong West India*	Ecuador Ghana Guatemala Northeast China Sri Lanka

*The original India Chapter, chartered in 1997, was dissolved in 2024, with regional Chapters established instead.
The Hong Kong Chapter, chartered in 1997, is now defunct.

Image credits (flags): Oleksandr Shnuryk/Getty Images; Nina Stanojevic/Getty Images (Taiwan flag)

Governance in the 21st Century

The 21st century brought new challenges and opportunities. ACS governance now operates on an enterprise scale in a global, digital, and rapidly evolving scientific landscape. The Board of Directors, Council, and committees continue to guide the Society, but their work increasingly focuses on issues such as ethics, diversity, sustainability, and international collaboration. At the same time, our enterprise operations, including ACS Publications, CAS, Meetings, and Education/Professional development programs, require both financial oversight and investment well beyond those of typical not-for-profit membership organizations. In response, a continuous strategic planning process has been implemented to more explicitly achieve strategic alignment between mission and business operations.

Local Sections remain vital. They have embraced digital programming, hybrid events, and new forms of community engagement. Their outreach efforts – National Chemistry Week, Chemists Celebrate Earth Week (added to the ACS outreach portfolio in 2003), and numerous local initiatives – reach millions of people annually. They also provide leadership training, networking opportunities, and a sense of belonging for chemical scientists at all career stages. With the introduction of students as members, there

has also been a drive for stronger interactions between Local Sections and Student Chapters at both the graduate and undergraduate levels.

As ACS became global, demand from international members for greater representation in ACS governance occurred. In response, ACS has added more than 30 International Chemical Sciences Chapters since 1993. Furthermore, international students have joined, bringing a rapid global expansion to nearly 200 International Student Chapters in over 140 countries worldwide. And the ACS Board and Council have added an international director (2024) and international zone councilors (2026), respectively, to their governance structures.

Divisions have grown as well, expanding their scientific reach by offering webinars, posting virtual symposia, and developing global collaborations. They continue to shape ACS Meetings & Expositions programming and provide platforms for emerging research areas. Their governance structures have adapted to support international members and to foster interdisciplinary connections.

ACS Publications now supports more than 90 journals across disciplinary and interdisciplinary subfields of chemistry and related scientific disciplines. ACS journals contain papers written by authors from around the world. CAS also

ACS has added more than 30 International Chemical Sciences Chapters since 1993.

As ACS looks beyond its 150th anniversary, its governance must continue to evolve and respond to new innovations in science, public policy, and societal demands.

continues to grow its offerings, indexing more than 300 million molecules, structures, and sequences in its CAS Registry® and expanding into the life sciences.

ACS' support programs have seen equally dramatic growth. The Society now offers career services, leadership development, grants, awards, online communities, and a vast array of digital resources. The ACS Institute was established in 2019 to consolidate training and now has over 200 professional courses available in person and online, spanning technical, personal, and career development. These programs reflect a governance philosophy that places members at the center of every decision.

150 Years of a Member-Driven Society

Throughout its history, ACS has remained committed to democratic governance that has been supportive of members, chemical science professionals at large, and the chemistry enterprise. Local Sections and Divisions, along

with International Chemical Science Chapters and Student Chapters – all supported by a robust national structure – have ensured that chemical science professionals across the country and around the world have access to community, professional development, and scientific exchange. It is that focus on member needs from across the complex, diverse community that has led to ACS' success and drives the Society toward achieving its mission to advance scientific knowledge, empower a global community, and champion scientific integrity.

As ACS looks beyond its 150th anniversary, its governance must continue to evolve and respond to new innovations in science, public policy, and societal demands. But its core principles endure – including representation, participation, and service to members – alongside our steadfast commitment to improve all lives through the transforming power of chemistry and science. This combination will be the key to our success for the next 150 years and the realization of our vision of a world built on science.

Chairs of the ACS Board of Directors 2002-2026



Nina I. McClelland
2001-2003



James D. Burke
2004-2006



Judith L. Benham
2007-2009



Bonnie A. Charpentier
2010-2011



William F. Carroll Jr.
2012-2014



Pat N. Confalone
2015-2017



John E. Adams
2018-2020



Paul W. Jagodzinski
2021-2023



Wayne E. Jones Jr.
2024-2026



The American Chemical Society at 150 Years: A New Era of Impact



Early in the 21st century, the American Chemical Society (ACS) stood at a pivotal moment in its history.

Having just marked its 125th anniversary in 2001, the Society entered a new era shaped by rapid technological change, daunting global challenges, and an increasingly interconnected scientific community. The entire world, and with it the field of chemistry, experienced unexpected and dramatic shifts. To meet the evolving needs of researchers, industrial chemists, educators, and students, ACS began a dynamic period of reinvention – one in which the organization expanded its reach, deepened its impact, and redefined its role in advancing chemistry for the benefit of the world.

Rising to Meet a Changing World (2002–mid-2000s)

The early years of this period were characterized by urgency and resolve. In the aftermath of the attacks on September 11, 2001, ACS mobilized its scientific expertise and strengthened its services to support members amid uncertainty. ACS also demonstrated the relevance of chemical expertise to national priorities by providing scientific guidance to the U.S. government in support of anti-terrorism efforts, reinforcing its role not only as a scholarly organization but as a trusted resource.

At the same time, ACS accelerated its transition into the digital age. A major milestone came in 2003 with the transformation of the National Employment Clearing House into a fully online service – laying the groundwork for what would become a comprehensive digital career ecosystem. Soon after, in 2005, came the launch

of the Chemjobs Career Center, a modern centralized hub designed to support chemists at every career stage.

ACS also reaffirmed its enduring commitment to scientific excellence. The 2003 celebration of the 125th volume of the *Journal of the American Chemical Society* (JACS) and the 80th anniversary of *Chemical & Engineering News* (C&EN) highlighted both the Society's legacy and the accelerating scale of scientific output. As Peter Stang, JACS Editor-in-Chief at the time, wrote in his first editorial of 2003, "Recent advances in technology and, in particular, modern instrumentation and computational capabilities, coupled with contemporary chemical and scientific insights, have opened up vistas in chemical research unimagined" even a decade before. Through its publishing portfolio, ACS continued to disseminate and report news about that transformational research, underscoring the Society's central role in documenting chemical discovery.



As the Internet transformed publishing, communications, and community worldwide, ACS committed to developing increasingly powerful websites and platforms for users and customers.

Photo credit (computer): Ryan McVay/
Getty Images

Meanwhile, ACS strengthened its policy voice. Leadership visits to congressional offices, policy statements, legislative outreach, and mobilization of the membership helped to advance funding priorities for science education and research, signaling a more proactive advocacy strategy that would continue in the decades ahead.

Innovation in Publishing, Data, and Access (mid-2000s–2010s)

As global research output exploded, ACS positioned itself at the forefront of scientific information. CAS, which celebrated 100 years in 2007, experienced remarkable growth during this period. This foundational scientific information service, previously known as Chemical Abstracts Service, added the 50 millionth registered substance to the CAS REGISTRY® in 2009 and the 100 millionth in 2015 – a dramatic acceleration in the documentation of chemical knowledge.

This growth was matched by advances in accessibility and technology. By 2005, SciFinder

ACS invested in people, creating more pathways to entry for the field of chemistry.

Scholar, then the academic version of this CAS research product, became widely adopted, and the introduction of the web-based SciFinder® platform in 2008 eliminated the need for specialized software and broadened global access.

Publishing innovation also transformed access to research. In 2006, ACS introduced open access publishing options across its journals – a crucial step in supporting the community by participating in a broader movement toward making science more readily accessible. This effort included major milestones such as the launch in 2015 of ACS *Central Science*, a fully open access multi- and interdisciplinary journal, and later *JACS Au*, which extended open access to one of chemistry's most prestigious titles.

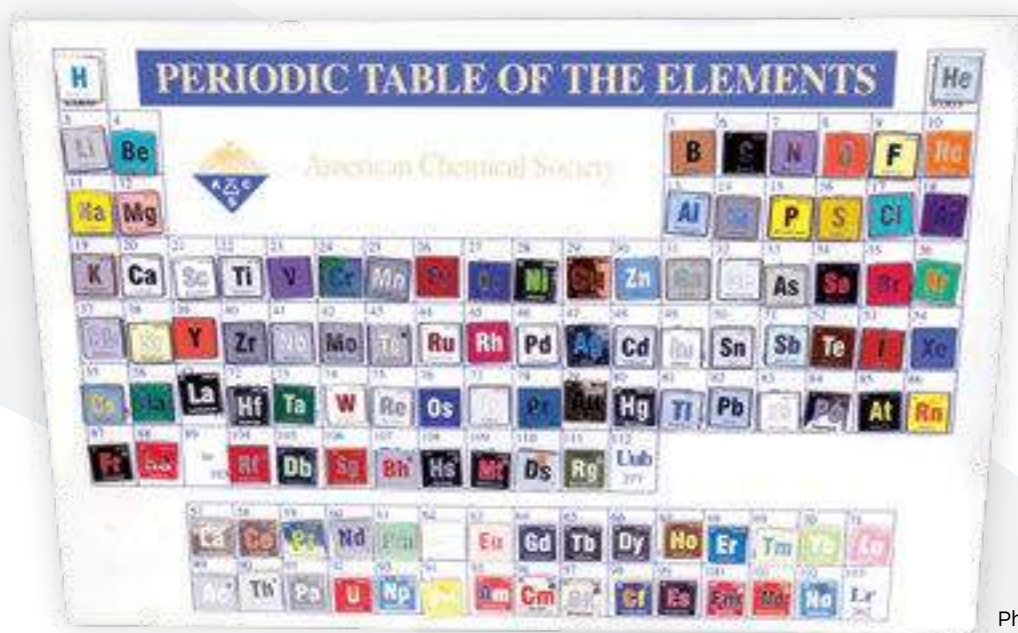


Photo credit: EPNAC.com

Simultaneously, new digital resources reshaped scientific workflows as CAS continued to evolve its data infrastructure. By the early 2020s, retrosynthetic planning in CAS SciFinder® helped chemists to identify the most efficient synthetic paths for target compounds, and CAS Insights™ enabled scientists to identify trends, connections, and emerging opportunities across disciplines.

Investing in Talent, Education, and Inclusion

Throughout this period, ACS made strategic investments in people – expanding opportunities from early education through professional advancement. Creating more pathways to enter the field of chemistry remained a focus with programs such as the Project SEED (Summer Experiences for the Economically Disadvantaged) internship



program, which celebrated 50 years in 2018; ACS Scholars, which marked 25 years in 2020; and later the ACS Catalyst Scholarships for undergraduates. Together, these programs have provided tens of thousands of opportunities for students to become part of the chemistry community.

New initiatives broadened this impact. The CAS Future Leaders™ program, established in 2010, focused on developing emerging scientific leaders. The LEADS Conference (Lasting Encounters between Aspiring and Distinguished Scientists), launched in 2022, further strengthened professional development by connecting high-potential early-career scientists with mentors and peers. And the introduction in 2015 of ChemIDP, an ACS initiative supported by the National Science Foundation, provided individualized career planning tools to support graduate students and postdoctoral researchers.

The CAS Future Leaders™ program was established in 2010 to focus on developing the next generation of leaders. Shown here is the 2025 cohort. Photo credit: CAS



The organization's sustained work in advocacy helped shape federal priorities in science funding and innovation.

ACS also expanded its reach into pre-college education through the creation of the American Association of Chemistry Teachers (AACT) in 2014. This initiative addressed a long-standing need for community, professional development, and resources tailored primarily for K–12 educators.

Inclusion and belonging became increasingly central to ACS' efforts to broaden the chemistry enterprise, and this concept was incorporated into the organization's strategic plans, most recently as one of the four core values, along with passion for science, lifelong learning, and sustainability. This commitment also became more visible with milestones such as the creation of the Stanley C. Israel Regional Award for Advancing Diversity in 2004 and the establishment of the Office of Diversity, Equity, Inclusion, and Respect in 2021, now the Office of Inclusion and Belonging.

Chemistry in Service to Society

As global challenges intensified, ACS focused more explicitly on the societal impact of chemistry. Sustainability emerged as a defining priority, supported by the expanding work of the ACS Green Chemistry Institute (GCI) and initiatives such as its Pharmaceutical Roundtable, launched in 2005.

This focus deepened with a \$50 million investment in strategic initiatives, including the Campaign for a Sustainable Future, which aligned with the United Nations Sustainable Development Goals. Approved by the ACS Board of Directors in 2021, the campaign launched in January 2022. By 2023, new platforms and grant programs, as well as funding through the well-established ACS Petroleum Research Fund (PRF), were creating more opportunities for researchers to explore and innovate in sustainable chemistry.

ACS' influence on public policy also grew. The organization's sustained work in advocacy helped shape federal priorities in science funding and innovation, culminating in major outcomes such as the launch of the bipartisan Congressional Chemistry Caucus in 2016 and passage of the CHIPS (Creating Helpful Incentives to Produce Semiconductors) and Science Act of 2022.

At the same time, ACS' work in science communications expanded as multimedia boomed and social media became integrated into daily life. The ACS Newsroom, the first permanent publicity bureau established by a U.S. scientific society, celebrated 100 years in 2019. Founded as the ACS News Service with a mission "to translate chemistry into terms of everyday life ... guided by



Students at
Universidade de
São Paulo Campus
de São Carlos
take a break.

a desire to truthfully and accurately express the ideals and aims of the American scientist,” the newsroom found new ways to tell researchers’ stories and increase engagement by adding podcasts and video series and establishing ACS flagship channels across social media platforms.

The Society also helped scientists learn to tell their own stories to the public, lawmakers, funding agencies, and other stakeholders. This skill had become essential over the years as the chemistry community collectively navigated profound technological changes, global financial ups and downs, shifting political priorities, and increasing competition for the public’s attention.

Global Expansion and Collaboration

From the mid-2000s onward, ACS continued to expand its global footprint as technology continued to create new avenues for collaboration. International representation proliferated in Asia, Latin America, the Middle East, and Africa. From 2003 to early 2026, 34 ACS International Chemical Sciences Chapters were chartered (see timeline), in addition to the chapter in Saudi Arabia, chartered in 1993. These 35 active International Chemical Sciences

Chapters reflect the truly global nature of the chemistry community and support collaboration across borders.

Major collaborative initiatives reinforced ACS’ global orientation. ACS joined with organizations worldwide to celebrate the International Year of Chemistry in 2011 and the International Year of the Periodic Table of Chemical Elements in 2019. The launch of the ChemRxiv® preprint server in 2017, in partnership with other international chemical societies, created a shared platform for rapid dissemination of scientific research.



Researchers at the Malta Conference in 2013 talked science at a reception at the U.S. ambassador’s residence.

Photo credit: Sarah Everts/C&EN

The 35 active International Chemical Sciences Chapters reflect the truly global nature of the chemistry community and support collaboration across borders.

Conferences such as the International Chemical Congress of Pacific Basin Societies, known as Pacifichem, and the Atlantic Basin Conference on Chemistry, first held in 2018, regularly brought together scientists from around the world to exchange ideas and build networks. In 2003, ACS and four partner societies founded the meeting that became the Malta Conferences, which uses science diplomacy to improve the quality of life in the Middle East. And in 2025, the first ACS Global Scientific Conference drew participants from more than 20 countries, symbolizing the Society's transformation into a global convener of the chemical sciences.

Resilience and Reinvention During the COVID-19 Era

The COVID-19 pandemic in 2020 marked a defining stress test for ACS and the entire scientific community. The study of this and closely related viruses, how they spread, and preventive measures and treatments quickly escalated to front-and-center concerns for public health. The pace of scientific inquiry and advancement was unprecedented while problematic advice from less-than-reliable sources spread globally in no time.

Throughout this public health emergency, ACS remained a trusted source of scientific information. ACS journals published more than 1,400 articles related to COVID-19, and these materials were accessed almost 11 million times during this period. At the same time, CAS proactively engaged with research organizations that were developing therapeutics and vaccines, delivering data that supported and helped to expedite lifesaving work.



At ACS Fall 2021, AI and Carolyn Ribes shared tips about how to communicate scientific information in an easy-to-understand way.

The Society rapidly transitioned to remote operations, canceled or postponed major in-person meetings, and turned to virtual alternatives such as online poster sessions and the SciMeetings platform. The quick pivot to virtual formats dramatically expanded participation and made events accessible globally. The 2020 Green Chemistry & Engineering Conference, for example, attracted approximately 5,000 attendees – far exceeding typical in-person participation – and drew a majority international audience.

ACS also supported the chemistry community by expanding access to resources, including free access to professional development tools. And the Society continued to move forward with major updates to the ACS governing documents, committee structure, and membership model.



Photo credit: Inaris Photo & Film

THE AMERICAN CHEMICAL SOCIETY AT 150

Many of these adaptations accelerated innovation over the long term. Digital engagement, online learning through the ACS Institute, and hybrid event formats became enduring features of the Society's operations.

Renewal, Growth, and Momentum (2023–early 2026)

By 2023, ACS had largely returned to normal operations while incorporating lessons from the pandemic. Key leadership transitions, including the appointment of Albert G. Horvath as CEO, coincided with renewed strategic focus.

ACS' publishing program and scientific information products leaned into innovation and adapted to meet the rapidly evolving needs of the community. ACS journals reached into more interdisciplinary areas of science and served new audiences, publishing more than 81,000 peer-reviewed articles in 2025 with more than 346 million article downloads – evidence of the growing global demand for chemical knowledge. By the end of 2025, ACS was publishing 87 journals, up from 30 at the start of 2002. The CAS portfolio of information products also continued to develop with additions such as CAS BioFinder®, the CAS IP Finder™ tool



The ACS Center for Lab Safety supports and promotes the safe, ethical, responsible, and sustainable practice of chemistry.

Photo credit: EPNAC.com

for patent searching, and the agentic AI tool CAS NewtonSM for scientific discovery, released in early 2026.

At the same time, ACS refined its long-term direction through the development of the 2025–2029 Strategic Plan, ensuring alignment with emerging scientific, technological, and societal priorities.

ACS' publishing program and scientific information products leaned into innovation and adapted to meet the rapidly evolving needs of the community.

Continuing advocacy efforts reinforced ACS' influence on science policy and environmental priorities, with more than 77% of House and Senate members hearing from ACS membership in 2025.

Toward the 150th Anniversary

The years immediately preceding ACS' 150th anniversary were marked by both reflection and forward-looking momentum.

Reflection took place as the 184 ACS Local Sections, located throughout the U.S. and Puerto Rico, celebrated their own milestones during the period 2002–2026. More than a dozen of these regional groups reached the impressive milestone of 125 years, and more than 50 reached the century mark, with many others celebrating important anniversaries (see timeline). A new Local Section, Snake River, was chartered in 2007. The longevity of so many of these groups is a testament to the strength of their volunteer leadership, the enduring value of the fellowship they provide, and the enthusiasm for the many events they organize and hold.

Looking forward, the Society prioritized new ways to convene and engage audiences. The Future of Meetings initiative reimagined how scientists gather and collaborate, with the increasingly interdisciplinary nature of science evident in more joint programming. In 2025, ACS celebrated the first Chemical Technical Professionals Day to recognize the contributions of these professionals, who make up the backbone

of chemistry. Continuing advocacy efforts reinforced ACS' influence on science policy and environmental priorities, with more than 77% of House and Senate members hearing from ACS membership in 2025, following alerts sent by ACS' Act4Chemistry. And as the end of 2025 drew near, ACS initiated its anniversary programming and invited members worldwide into a year's worth of celebration of 150 years.

A Legacy in Motion

From 2002 to 2026, ACS underwent profound transformation. It modernized its digital infrastructure, expanded its global presence, strengthened its commitment to inclusion and belonging, and positioned chemistry as a central force in addressing the world's most pressing challenges.

Together, the accomplishments highlighted here and many more throughout this 25-year period kept the Society on an upward trajectory defined by adaptation, innovation, and impact. As ACS approached its 150th anniversary, it did so as a steward of a distinguished legacy and as a dynamic, forward-looking community prepared to shape the future of science on a global scale for another 150 years and beyond.



Selected Highlights by Year

2002

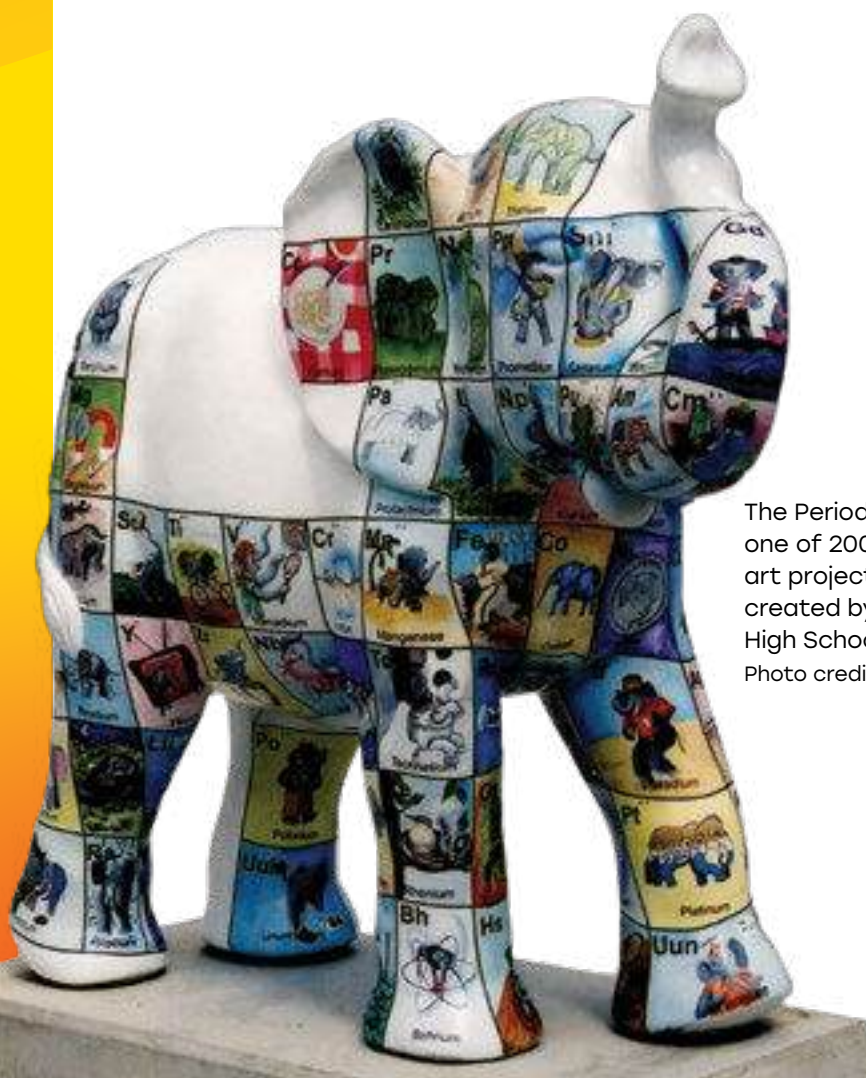
HIGHLIGHTS



- ▶ In the aftermath of 9/11, ACS redoubled its efforts to support members through its portfolio of career services and helped to provide expertise and advice to the government to support anti-terrorism efforts.
- ▶ Eight Local Sections celebrated anniversaries in 2002: Rock River, 25 years; Idaho, Inland Northwest, and North Alabama, 50 years; Kanawha Valley, Princeton, and South Carolina, 75 years; and Cornell, 100 years. See the timeline for milestones in subsequent years.
- ▶ In response to a request from the White House Office of Science and Technology Policy, Philip Brodsky, Chair of the Committee on Chemistry and Public Affairs, testified before the President's Council of Advisors on Science and Technology in May on federal R&D policy.

“Under the larger umbrella of the American Chemical Society, chemical professionals will speak with one voice that echoes loudly and clearly – in Congress, in our communities, and across the globe.”

– ELI M. PEARCE
ACS PRESIDENT, 2002



The Periodic Table of the Elephants, one of 200 sculptures in a public art project in Washington, D.C., was created by students at Patapsco High School & Center for the Arts. Photo credit: Susan Morrissey/C&EN



C&EN staff celebrate the magazine's 80th anniversary at a gala in New York City. Photo credit: C&EN

- ▶ The [Journal of the American Chemical Society](#) (JACS), in collaboration with [Chemical & Engineering News](#) (C&EN), held a special symposium at ACS Fall 2003 in New York City to celebrate JACS' 125th volume and C&EN's 80th anniversary issue.
- ▶ The National Employment Clearing House (NECH) debuted as an online, fully electronic and Internet-accessible employment service. Prior to this, NECH operated solely on paper messages.
- ▶ CAS resources linked to the ACS Publications Archive online, allowing researchers to seamlessly discover ACS journal articles after identifying their relevance through CAS information services.
- ▶ ACS leaders visited 50 congressional offices to advance the Society's position on the National Science Foundation and the Department of Education.
- ▶ ACS hosted the first Chemists Celebrate Earth Day (CCED), which was later renamed to Chemists Celebrate Earth Week (CCEW).
- ▶ ACS partnered with the Royal Society of Chemistry of Great Britain, the International Union of Pure and Applied Chemistry, and the German Chemical Society to found the Malta Conferences, formally known as Frontiers of Science: Research and Education in the Middle East. In 2011, the Malta Conferences Foundation became a 501(c)(3) charitable organization.

2003

HIGHLIGHTS

“Now, more than ever, chemistry is not just the science of matter, but science that matters to our nation and to the world.”

—ELSA REICHMANIS
ACS PRESIDENT, 2003



2004

HIGHLIGHTS



“We seek to develop creative scientists and are asking how creativity can best be taught.”

– CHARLES P. CASEY
ACS PRESIDENT, 2004

- ▶ The Stanley C. Israel Regional Award was created to recognize individuals and/or institutions that have advanced diversity in the chemical sciences and significantly stimulated or fostered activities that promote inclusiveness within the region.
- ▶ The American Chemistry Council and ACS collaborated on a Science and the Congress briefing to urge more funding for the National Children’s Study, a longitudinal effort to catalog and understand the effects of the environment on the health of children.
- ▶ As part of the Society’s advocacy for the Green Chemistry Research and Development Act of 2004, the ACS Green Chemistry Institute (GCI) and the Office of Legislative and Government Affairs worked with the House Committee on Science on draft language.
- ▶ The ACS GCI organized the ACS PRF (Petroleum Research Fund) Summer School on Green Chemistry, which drew participants representing 24 countries.
- ▶ ACS launched the chemistry.org/kids portal to enhance K–8 education.



Dorothy Phillips congratulates Leyte Winfield, a winner of the 2024 Stanley C. Israel Award.
Photo credit: Dorothy J. Phillips

2005

HIGHLIGHTS

- ▶ The C&EN-Chemjobs Career Center, a one-stop shop for ACS employment services, replaced NECH and supported ACS members at all stages in their careers.
- ▶ ACS and the American Institute of Chemical Engineers collaborated to advance the chemical sciences through joint activities and advocacy.
- ▶ SciFinder Scholar was installed in more than 930 institutions around the world, making it the most widespread scientific research tool in universities and colleges where chemistry is taught and researched.
- ▶ The ACS GCI launched the Green Chemistry Institute Pharmaceutical Roundtable with the active participation and support of the leading pharmaceutical companies in the U.S. Four more roundtables were established in later years for chemical manufacturing, formulators, hydraulic fracturing, and biochemical technology.
- ▶ The ACS Scholars Program celebrated 10 years in 2005.



Initiatives including the ACS GCI Pharmaceutical Roundtable and the C&EN-Chemjobs Career Center help address the needs of industry.

“Despite some twists and bumps, the road to everything from sustainable energy to superior medicine goes through chemistry.”

– WILLIAM F. CARROLL JR.
ACS PRESIDENT, 2005



2006

HIGHLIGHTS



“Advances in science and engineering and technological change that lead to innovation are the driving forces of the economy. We recognize that the capacity to create and use new knowledge is the key to our future prosperity.”

– E. ANN NALLEY
ACS PRESIDENT, 2006

- ▶ More than 1,000 letters were sent to the White House by ACS Legislative Action Network members urging the U.S. President to include themes of competitiveness and innovation in his State of the Union Address. This was part of a unified message throughout the scientific spectrum and led by the chemical community. A few weeks later, the President announced the creation of the American Competitiveness Initiative in the State of the Union.
- ▶ ACS and Disney Institute worked together to offer “Everyday Chemistry” at Epcot. This program uses simple activities and resources to show how chemistry connects to daily life, making science fun and accessible for students and educators.
- ▶ ACS and India’s Council on Scientific and Industrial Research (CSIR) conducted its first joint conference – Building Bridges, Forging Bonds for 21st Century Organic Chemistry and Chemical Biology – in Pune.
- ▶ ACS introduced the ACS AuthorChoice option so that all ACS journals could offer authors, their funders, and institutions the opportunity to make any article open access.



Fifteen ACS Presidents came together at the Board reception at ACS Fall 2025.
Photo credit: Christine Brennan Schmidt

2007

HIGHLIGHTS

- ▶ The ACS GCI celebrated its 10th anniversary.
- ▶ A CAS 100th birthday celebration was held in Columbus, Ohio, an event marked by honoring CAS as a National Historic Chemical Landmark.
- ▶ ACS deployed the new version of the [ACS website](#).
- ▶ ACS established the Award for Affordable Green Chemistry, recognizing the discovery of eco-friendly chemistries with the potential to enable products or manufacturing processes that are less expensive than existing alternatives.
- ▶ C&EN began publishing in a new digital format that made it easily accessible to readers outside of North America.
- ▶ At a March 29 hearing before the House Science Committee's Research and Science Subcommittee, ACS President Katie Hunt discussed the Society's views for the future National Science Foundation.

ACS Executive Director and CEO Madeleine Jacobs, ACS President Catherine T. Hunt, Board Chair Judith L. Benham, and CAS President Robert J. Massie at the ceremony designating CAS as a chemical landmark. Photo credit: CAS



“Giving a face to science and technology is not a one-person job.... In short, joining together will increase our impact, build our confidence, and enhance the public’s opinion of our profession.”

—CATHERINE T. (KATIE) HUNT
ACS PRESIDENT, 2007



2008

HIGHLIGHTS



“We need to advocate for the resources necessary to undertake long-term curiosity-driven research that has the potential to have more than an incremental impact on chemistry and on the world. “

—BRUCE E. BURSTEN
ACS PRESIDENT, 2008



The green roof added to the ACS headquarters in 2010 is one of the sustainability measures implemented at ACS locations. Photo credit: Christine Brennan Schmidt

- ▶ The ACS Headquarters building on 16th Street in Washington, D.C., earned (for the second time) the U.S. Environmental Protection Agency's prestigious ENERGY STAR, the national symbol for protecting the environment through superior energy performance.
- ▶ ACS was the only professional society invited to participate in a roundtable convened by House Speaker Nancy Pelosi on the future of the physical sciences. The roundtable was held at Princeton University.
- ▶ Citations associated with document records in CAPlusSM grew to more than 220 million during 2008.
- ▶ The web version of SciFinder[®] was released, providing users with enhanced search capabilities and instant access to CAS database content from anywhere in the world.



Photo credit (computer):
kickers/Getty Images



ACS President Tom Lane, Executive Director and CEO Madeleine Jacobs, Board Chair Judith L. Benham, and philanthropists Kathryn Hach-Darrow and Bruce Hach at the Hach building dedication.

Photo credit: Christine Brennan Schmidt

- ▶ The electronic edition of C&EN became available to all members beginning in 2009.
- ▶ The ACS Fellows Program was launched in 2009, and the first group of Fellows was announced at ACS Fall 2009 in Washington, D.C.
- ▶ Project SEED (Summer Experiences for the Economically Disadvantaged) received the National Science Board's 2009 Public Service award.
- ▶ ACS formally dedicated and named its 16th Street headquarters in Washington, D.C., the Clifford and Kathryn Hach building to honor the \$33.2 million gift from the Hach Scientific Foundation. The dedication ceremony was held on June 3 with Kathryn Hach-Darrow and her son Bruce Hach in attendance.
- ▶ The 50 millionth molecule was added to CAS REGISTRY®.

2009

HIGHLIGHTS

"We, as a society, are all in this together! If we don't band together to further our interests, who will? We cannot rely on others to watch over our discipline. Plainly put, we are the stewards of chemistry, past, present, and future."

— THOMAS H. LANE
ACS PRESIDENT, 2009



2010

HIGHLIGHTS



“One way for us to prepare for and be competitive in the global marketplace is to ensure that ACS takes a strong leadership role in the education system for the chemical sciences.”

– JOSEPH S. FRANCISCO
ACS PRESIDENT, 2010

- ▶ The ACS Mobile app was approved for sale via Apple’s online store. The app alerted users to published articles in ACS journals and included a news feed from C&EN.
- ▶ The 15th Annual Presidential Green Chemistry Challenge Awards Ceremony was held on June 21 in conjunction with the Green Chemistry & Engineering (GC&E) Conference. The ceremony featured speeches by Lisa Jackson, U.S. EPA Administrator, and John Holdren, advisor to President Obama for Science and Technology. A letter from President Obama was read by Dr. Holdren.
- ▶ CAS initiated a professional development program, CAS Future Leaders™, awarding early-career scientists with leadership training, networking, and skill-building to advance their careers and impact in science.
- ▶ ACS held its first Virtual Career Fair in November 2010, with more than 2,600 registrants, 27 exhibitors, 109 recruiters, and 196 job openings. Job seekers made more than 10,000 visits to employer booths to discuss open positions.
- ▶ ACS staff, working closely with the office of Rep. Phil Gingrey (R-GA), authored an amendment to America COMPETES legislation to create a green chemistry research program at the National Science Foundation. The amendment was accepted.



Photo credit: ACS GCI

2011

HIGHLIGHTS



Madeleine Jacobs, ACS President-Elect Bassam Shakhshiri, and Bonnie Charpentier celebrate the International Year of Chemistry. Photo credit: Christine Brennan Schmidt

- ▶ The United Nations declared 2011 as the International Year of Chemistry (IYC). ACS Local Sections, Divisions, Committees, individual members, and staff joined chemists worldwide to highlight the achievements of chemistry and the many ways that chemists and chemical engineers have improved people's lives.
- ▶ ACS received a \$2.5 million grant from The Dow Chemical Company to become the sole sponsor of the 44th International Chemistry Olympiad.
- ▶ ACS secured passage of a U.S. Senate resolution recognizing 2011 as the International Year of Chemistry, with similar resolutions in state legislatures in Minnesota, Tennessee, Ohio, and Pennsylvania.
- ▶ The free C&EN Mobile app launched for iPhones, iPads, and Android mobile devices. The app made C&EN news, blogs, and online job postings available to anyone and selected content available to nonmembers.



“As we consider the opportunities and challenges of international chemical leadership, ACS should embrace a global perspective by expanding its philanthropic efforts.”

– NANCY B. JACKSON
ACS PRESIDENT, 2011



2012

HIGHLIGHTS



“Education is the most critical ingredient for enabling effective collaboration among scientists, enlightened policymakers, and a science-literate public who understand the benefits of scientific and technological progress.”

– BASSAM Z. SHAKHASHIRI
ACS PRESIDENT, 2012

- ▶ CAS REGISTRY® grew to include more than 67 million substances.
- ▶ ACS hosted the 44th International Chemistry Olympiad July 21-30 at the University of Maryland with more than 70 countries participating in the competition.
- ▶ ACS celebrated the 75th anniversary of welcoming undergraduates into the Society. Since the amending of ACS bylaws in 1937, undergraduate participation has grown to more than 18,000 members and 1,040 chapters.
- ▶ National Chemistry Week, an annual community-based program that communicates the importance of chemistry to our quality of life, celebrated 25 years.
- ▶ The landmark report “Advancing Graduate Education in the Chemical Sciences” was released by the ACS Presidential Commission on Graduate Education in the Chemical Sciences. The report called for sweeping reforms to better align Ph.D. training with modern global, economic, and social needs.



ACS and Professor Molenium participated in the National Cherry Blossom Parade in Washington, D.C., as part of the USA Science and Engineering Festival.

Photo credit: Christine Brennan Schmidt

2013

HIGHLIGHTS

- ▶ ACS recognized actor and science advocate Alan Alda – best known for his role in the TV series “M*A*S*H” – with the ACS Award for Public Service for his work in science communication.
- ▶ ACS marked the 90th anniversary of C&EN, including a public lecture by celebrity chef Alton Brown at ACS Fall 2013 in Indianapolis.
- ▶ ACS announced that all Supporting Information for articles published in ACS journals had been digitized and incorporated into the ACS Legacy Archive.
- ▶ ACS International Activities conducted eight in-country, soft-skill workshops for young scientists, engineers, and technologists in Indonesia and Malaysia as part of Building Opportunity Out of Science and Technology (BOOST). This work was supported with \$198,000 from the U.S. Department of State.



Alan Alda speaks at the ACS Open Board Meeting about the need for authenticity in science communication.

Photo credit: Christine Brennan Schmidt

“To be inclusive, ACS should broadly serve chemists and other professionals pursuing any of the diverse career paths related to chemistry, chemical engineering, and allied sciences.”

– MARINDA P. LI WU
ACS PRESIDENT, 2013



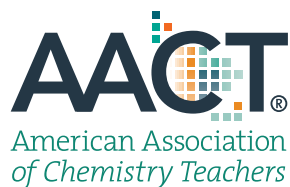
2014

HIGHLIGHTS



**“I’ve had a great life,
and chemistry has
been much of the
reason for it.”**

– THOMAS J. BARTON
ACS PRESIDENT, 2014



- ▶ The American Association of Chemistry Teachers (AACT) officially launched to support and serve primarily K–12 chemistry teachers.
- ▶ With assistance from the Chinese Chemical Society (CCS) and Peking University, ACS organized a Chemistry Festival in Beijing. The event was held in conjunction with the 29th CCS Congress and drew more than 1,000 participants.
- ▶ ACS launched the *Reactions* video series, replacing the *Bytesize Science* video series, which had debuted in 2009. The new series breaks down things around us to the molecular level to explain the chemical reactions that shape our world.
- ▶ ACS Program in a Box was launched to provide resources to Student Chapters and ACS Local Sections holding outreach events.
- ▶ ACS Editors’ Choice debuted as part of the open access publishing strategy. Every day a noteworthy article from an ACS journal, selected by the journals’ editors, is featured at the Editors’ Choice and made openly accessible.



Left: A young visitor at the Chemistry Festival in Beijing. Right: Volunteers have a quiet moment before the Chemistry Festival crowd arrives.

Photo credit: Maureen Rouhi/C&EN

2015

HIGHLIGHTS

- ▶ The ACS Publications Division launched its first fully open access journal, [ACS Central Science](#), as a diamond open access publication, led by future Nobel laureate Dr. Carolyn Bertozzi.
- ▶ CAS registered the 100 millionth unique chemical substance in CAS REGISTRY® and celebrated its 50th anniversary.
- ▶ Madeleine Jacobs, ACS Executive Director and CEO, retired in February after 11 years in this role and more than 24 years of total service to ACS, including 8-1/2 years as the Editor-in-Chief of C&EN.
- ▶ ACS launched [ChemIDP](#), an online tool to help graduate students and post-docs with self-assessment, skill strengthening, career exploration, and goal setting.
- ▶ The ACS community had more than 158,000 members.
- ▶ The ACS Board of Directors approved new Chapters in Australia, Brazil, India, Nigeria, Peru, Taiwan, and the UAE, bringing the total number of International Chemical Sciences Chapters to 16.
- ▶ ACS hosted the 2015 International Chemical Congress of Pacific Basin Societies, also known as Pacifichem. This scientific conference, which is held every five years in Honolulu, is sponsored jointly by ACS and counterparts in Australia, Canada, Japan, Korea, New Zealand, and China.



“ACS is a tremendous resource to help chemists build their skills and take charge of their futures.”

– DIANE GROB SCHMIDT
ACS PRESIDENT, 2015



Meeting attendees learn more about CAS information products and services.

Photo credit: Christine Brennan Schmidt

2016

HIGHLIGHTS



“Scientists and scientific societies with knowledge and power to influence how chemicals are used bear a responsibility to lead and to exemplify humane conduct.”

— DONNA J. NELSON
ACS PRESIDENT, 2016

- ▶ ACS teamed up with two other chemistry groups and two congressmen to launch the bipartisan Congressional Chemistry Caucus, which informs members of Congress, their staffs, and the public about chemistry's benefits for society and the economy. The caucus expanded to become bicameral in 2017.
- ▶ ACS Publications unveiled a redesign of C&EN and launched three new journals, *ACS Energy Letters*, *ACS Sensors*, and *ACS Omega*, an open access journal whose four co-editors are based in China, India, Europe, and the Americas.
- ▶ ACS signed an agreement with chemical societies from four continents to hold the first [Atlantic Basin Conference on Chemistry](#) in Cancún, Mexico, in January 2018.
- ▶ ACS International, Ltd. (ACSI), a subsidiary of the Society, expanded its global footprint, including opening new offices in China, Hong Kong, Japan, and South Korea.



The Congressional Chemistry Caucus, launched in 2016, continues to raise awareness of the value of chemistry, as at the 2023 event pictured here.

Photo credit: Office of Senator Chris Coons

2017

HIGHLIGHTS

- ▶ ACS led the establishment of the [chemical sciences preprint server ChemRxiv®](#) in coordination with the Royal Society of Chemistry and the German Chemical Society.
- ▶ Under the brand of *Chemical & Engineering News*, ACS introduced C&EN BrandLab to help advertisers create custom-branded content.
- ▶ C&EN Global Enterprise went live in 2017, expanding the reach of C&EN to 2,500 institutions around the globe.
- ▶ ACS expanded its content and programming for international members by hosting, in South Korea, the first-ever meeting ACS Asia-Pacific International Chapters Conference (APICC).
- ▶ The ACS-sponsored team of high school chemistry students representing the U.S. at the International Chemistry Olympiad in Thailand won four gold medals for the first time in the program's history.
- ▶ Just three years after launching a 2014 pilot program, 46 ACS International Student Chapters had been chartered in 23 countries.
- ▶ ACS Publications launched *ACS Earth and Space Chemistry*, further expanding the scope of the journals portfolio.



Sir Fraser Stoddart talked about outreach during his plenary lecture at the inaugural APICC in South Korea.

Photo credit: Christopher LaPrade/C&EN



**“We cannot take
for granted the
perception of scientists
as authoritative
sources of facts and
accept that we must
earn our legitimacy
through committed
engagement, exchange,
and education.”**

– ALLISON A. CAMPBELL
ACS PRESIDENT, 2017



2018

HIGHLIGHTS



“We have an obligation to our charter and to our members to promote high standards of professional ethics, particularly ensuring that the working, meeting, and learning environments for everyone are safe, welcoming, and inclusive.”

—PETER K. DORHOUT
ACS PRESIDENT, 2018

- ▶ ACS held the first Atlantic Basin Conference on Chemistry (abcchem.org/) in Cancún, Mexico, in January 2018.
- ▶ C&EN debuted a new online format and launched the *Stereo Chemistry* podcast.
- ▶ ACS held its first Safety Summit in 2018, with special emphasis on safety in academic institutions.
- ▶ Project SEED celebrated its 50th anniversary in various ways, including a successful fundraising campaign.
- ▶ The Education Division received a grant from the National Science Foundation to develop the ACS Bridge Program to strengthen the pipeline of qualified doctoral candidates by offering support to students, including those whose paths to advanced study may have faced barriers.
- ▶ This year marked the 140th volume of the ACS flagship journal, JACS, the world's preeminent journal for all of chemistry and the interfacing areas of science.

50th
Anniversary
Project
SEED
1968–2018
AMERICAN CHEMICAL SOCIETY



The Atlantic Basin Conference on Chemistry encourages international collaboration (photo from the 2022 conference).

Photo credit: Jessica Marshall/C&EN



Photo credit: Laura Howes\|C&EN

- ▶ ACS joined the International Union of Pure and Applied Chemistry and other chemical societies to celebrate the International Year of the Periodic Table of Chemical Elements.
- ▶ ChemRxiv®, the open access preprint archive, an undertaking of ACS, the German Chemical Society, and Britain's Royal Society of Chemistry, added the Chinese Chemical Society and the Chemical Society of Japan as partners, making it a truly collaborative activity for the global chemistry community.
- ▶ ACS Publications established a partner publishing arrangement with the American Society for Mass Spectroscopy.
- ▶ The ACS Newsroom, the first permanent publicity bureau established by an American scientific society, marked 100 years. Originally named the ACS News Service, it was founded to bridge the gulf between scientists and the public and "to translate chemistry into terms of everyday life ... guided by a desire to truthfully and accurately express the ideals and aims of the American scientist."

Three ACS Presidents (left to right): President-Elect Luis Echegoyen, President Bonnie A. Charpentier, Immediate Past President Peter K. Dorhout.
Photo credit: Linda Wang\|C&EN



2019 HIGHLIGHTS

"The strength, dedication, and hard work of ACS volunteers is a powerful force for the society, our science, our communities, and the world."

—BONNIE A. CHARPENTIER
ACS PRESIDENT, 2019



2020

HIGHLIGHTS



“It is not just up to the oppressed to continue fighting for their rights as they have been doing for so long – we all need to get actively involved in order to succeed.”

– LUIS ECHEGOYEN
ACS PRESIDENT, 2020

- ▶ In March 2020, as the scope of the pandemic became more apparent in the U.S., ACS temporarily closed the offices in Washington and Columbus and transitioned staff to working remotely.
- ▶ ACS terminated ACS Spring 2020, which had been scheduled for March in Philadelphia. As an alternative, participants were given the opportunity to present their science through online poster sessions and the open access SciMeetings repository.
- ▶ ACS converted the Green Chemistry & Engineering Conference into a fully virtual meeting in June – the first time ACS had held a large-scale virtual meeting. The conference drew almost 5,000 attendees, more than half of whom were from outside the U.S.
- ▶ The Pacifichem 2020 conference, sponsored jointly by ACS and counterparts in Australia, Canada, Japan, Korea, New Zealand, and China, was rescheduled because of the global pandemic and took place in 2021.
- ▶ ACS responded to the pandemic in a number of other ways, including making employee assistance program resources (e.g., counseling on work-life balance, financial guidance, and legal assistance) and LinkedIn Learning content available to members at no charge.
- ▶ More than 1,400 COVID-19-related articles were published by ACS journals – materials were accessed nearly 11 million times – and CAS proactively engaged with research organizations that were developing therapeutics and vaccines. Selected resources were made freely available across the globe.
- ▶ The ACS Scholars Program celebrated 25 years.
- ▶ ACS Publications had a milestone year, with announcements of new open access journals and the launch of [JACS Au](#) (pronounced “JACS Gold”), the fully open access counterpart of ACS’ flagship journal.
- ▶ ACS Publications and ShanghaiTech University announced a partnership to publish the new journal *Accounts of Materials Research*, the first journal to be published by ACS in collaboration with an organization in China.
- ▶ Following many years of work with allies in Congress, sustainable chemistry and broad energy research provisions championed by ACS were included in defense and spending bills that became law.

SUSTAINABLE DEVELOPMENT GOALS



The new ACS Campaign for a Sustainable Future addresses challenges articulated in the 2030 [UN Sustainable Development Goals](#).

- ▶ At year-end, the ACS Board of Directors approved the largest program that ACS had ever launched, committing \$50 million over five years to four strategic initiatives: enabling a sustainable future, fostering the technical workforce, enhancing scientific data collections, and extending the CAS presence into the life sciences. The initiatives were announced in January 2022.
- ▶ The Society established the ACS Office of Diversity, Equity, Inclusion, and Respect (DEIR) and convened ACS' first summit of chief diversity officers from the chemical industry.
- ▶ The Society formed a diversity roundtable with leaders from ACS and partner societies, including the National Organization for the Professional Advancement of Black Chemists and Chemical Engineers, the American Indian Science and Engineering Society, and SACNAS.
- ▶ The Publications Division and Education Division launched the ACS Institute, offering online learning and training resources for the chemistry community.
- ▶ Professor Erick Carreira took over as Editor-in-Chief of JACS in January. He is the first Editor-in-Chief of this flagship journal to reside outside the U.S.
- ▶ ACS revised its governing documents and standardized and simplified its committee system.
- ▶ ACS developed a tiered membership model with different packages of benefits for different levels.

The content of this publication has not been approved by the United Nations and does not reflect the views of the United Nations or its officials or Member States.

2021 HIGHLIGHTS

“We should promote collaborations between academia, industry, and government to facilitate the translation of lab discovery to commercial products.”

– H. N. CHENG
ACS PRESIDENT, 2021



2022

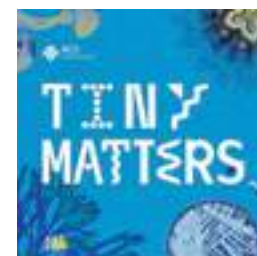
HIGHLIGHTS



“My focus is upon the future of the chemical sciences, ensuring that we, as a profession, are well prepared to address the challenges of the present and future, such as those included in the UN sustainability goals.”

— ANGELA K. WILSON
ACS PRESIDENT, 2022

- ▶ The CAS Insights™ content hub was introduced to help speed researchers' progress by highlighting emerging trends, unseen connections, new applications, and future opportunities across science and technology.
- ▶ As the COVID-19 pandemic abated and the nation began to return to normalcy, ACS staff and volunteers worked together to keep ACS focused and moving forward.
- ▶ The inaugural LEADS (Lasting Encounters between Aspiring and Distinguished Scientists) Conference took place in Washington, D.C., with the goal of preparing high-potential students and young professionals for impactful careers in the chemistry enterprise.
- ▶ The Society enhanced its learning offerings by adding the Center for Entrepreneurship Education to the ACS Institute.
- ▶ ACS launched the *Tiny Matters* science podcast in January 2022 as the newest addition to the ACS Newsroom's multimedia portfolio.
- ▶ The CHIPS (Creating Helpful Incentives to Produce Semiconductors) and Science Act, a key priority for ACS, was signed by President Joe Biden in 2022. The act invests in science and technology and the workforce of the future.
- ▶ At year-end 2022, Thomas Connelly Jr. retired as ACS CEO after nearly eight years in the role.



Attendees who came in person to ACS Spring 2022, a hybrid event, pose for a photo. Photo credit: EPNAC.com



Students from Puerto Rico celebrate with previous Board member Ingrid Montes, ACS President-Elect Mary Carroll, ACS President Judy Giordan, and others at the ACS Student Chapter Awards ceremony.

Photo credit: Christine Brennan Schmidt

- ▶ ACS' treasurer and chief financial officer, Albert G. Horvath, succeeded Tom Connelly as CEO on January 1.
- ▶ As part of the Campaign for a Sustainable Future, ACS partnered with the Center for Green Chemistry & Green Engineering at Yale and Beyond Benign to roll out a new online platform supporting the adoption of sustainable practices. ACS also piloted new grant programs to support researchers who are exploring sustainable chemistry.
- ▶ For the first time, CAS began to provide life sciences content through its existing CAS SciFinder® platform.
- ▶ The ACS Publications Division acquired ChronosHub, a Copenhagen-based company, to develop more effective technology that enhances the publication experience for researchers.
- ▶ ACS celebrated the centennial of C&EN.
- ▶ ACS fully returned to a normal operating pattern following the disruptions caused by the COVID-19 pandemic. ACS meeting performance returned to pre-pandemic levels, and new strategies were developed to make in-person events more relevant and responsive for customers.



ACS CEO Al Horvath addresses attendees at the C&EN Centennial and Talented 12 Reception.

Photo credit: EPNAC.com

2023

HIGHLIGHTS

“My aim is to provide our members with strategies and skills to engage in constructive dialogues with nonscientists – friends, neighbors, family members – who might be skeptical of science.”

– JUDITH C. GIORDAN
ACS PRESIDENT, 2023



2024

HIGHLIGHTS



“When someone asks what you do or what you study, do you enthusiastically engage them? Do you share your passion for your role in the scientific enterprise, the career path you took (or are taking), and the factors that motivate you?”

—MARY K. CARROLL
ACS PRESIDENT, 2024



New Local Section leaders gathered at the 2024 ACS Leadership Institute weekend. Photo credit: Christine Brennan Schmidt

- ▶ Journal submissions from across all key regions grew 24%, and more than 74,000 peer-reviewed articles were published – a 15% boost from the previous year. In addition, ACS delivered more than 346 million article downloads, up 13% over the prior year.
- ▶ CAS achieved the next significant milestone in its storied history of empowering accelerated research and innovation with the introduction of CAS BioFinder®, a new information solution specifically targeting the needs of life science researchers.
- ▶ The Society undertook a careful review of the ACS Strategic Plan to ensure ACS is moving forward with purpose. The year-long effort resulted in the new [2025–2029 ACS Strategic Plan](#).
- ▶ ACS held its first-ever virtual annual member gathering, allowing global members from Southeast Asia, the Middle East, Africa, and Latin America to connect and learn about ACS activities, member benefits, region-specific programs, and career-related sessions.
- ▶ ACS launched a first-of-its-kind dashboard, the new ACS Publishing Center, powered by ChronosHub, making significant progress toward providing an industry-leading publishing experience on a modern technical framework.
- ▶ The inaugural Sustainability Leader Summit was hosted by ACS GCI in partnership with Change Chemistry. The event drew representatives from 22 organizations.

2025

HIGHLIGHTS

- ▶ The first ACS Global Scientific Conference, held in partnership with the Indian Institute of Technology Bombay in October, drew more than 1,200 attendees from more than 20 countries.
- ▶ ACS kicked off its year-long 150th anniversary celebration for 2026 with an event at PacifiChem in December.
- ▶ ACS worked with federal agencies to encourage funding for science, continuing environmental regulations, and protection of intellectual property and to keep lines of communication open at a moment when federal science priorities and funding were being redefined.
- ▶ More than 77% of House and Senate members heard from ACS membership this year following alerts sent by ACS' Act4Chemistry volunteer advocacy program.
- ▶ On May 22, ACS celebrated the first Chemical Technical Professionals (CTP) day, honoring and sharing resources for these professionals across the chemical industry.
- ▶ The new ACS Catalyst Scholarship program for undergraduates launched and will award 200 scholarships of \$10,000 beginning in fall 2026, doubling the scale of ACS' annual undergraduate scholarship support. ACS also funded 56 grantees in a one-time opportunity to support graduate students whose research had been disrupted because of terminated or canceled research grants.
- ▶ At the 29th annual Green Chemistry & Engineering (GC&E) conference, 2025 ACS President Dorothy Phillips signed the "Stockholm Declaration on Chemistry for the Future" on behalf of ACS.



Photo credit: Chad
Isaiah Photography

“ACS is striving to connect the skilled technical workforce of tomorrow, or chemical technical professionals with job opportunities to help close the gap between open positions and suitable workers.”

– DOROTHY J. PHILLIPS
ACS PRESIDENT, 2025



2026

HIGHLIGHTS



**“Can we, in turn,
challenge the world to
learn chemistry – or at
least what chemistry
can do for all of us –
to provide everyone,
not just chemists, a
global connection?”**

–RIGOBERTO HERNANDEZ
ACS PRESIDENT, 2026

- ▶ ACS celebrated its 150th anniversary with events all year, including on Founding Day, April 6. In addition, ACS received formal Senate recognition of the Society’s 150th anniversary milestone.
- ▶ The first event in the JACS Symposium Series was held in Zurich, the first in a series of exclusive international events celebrating ACS’ 150th anniversary and its flagship journal, JACS.
- ▶ By early 2026, ACS had 35 active International Chemical Sciences Chapters.
- ▶ Rollout of the new ACS Publishing Center, powered by ChronosHub, was completed, offering its enhanced manuscript submission experience in every ACS journal.
- ▶ The 300 millionth substance was added to CAS REGISTRY®.
- ▶ ACS partnered with the Gordon and Betty Moore Foundation to establish the ACS Postdoctoral Fellowship in Quantum Systems. The \$3.66 million grant will award 30 fellowships in 2026.
- ▶ ACS published its first sustainability report at the 30th annual Green Chemistry & Engineering Conference in June.
- ▶ CAS introduced CAS Connections, a new integration framework that embeds the CAS Content Collection™ and CAS Newton™ directly into the R&D tools researchers already use.
- ▶ ACS launched the new branding, reflecting an interdisciplinary, global, inclusive, and unified organization.



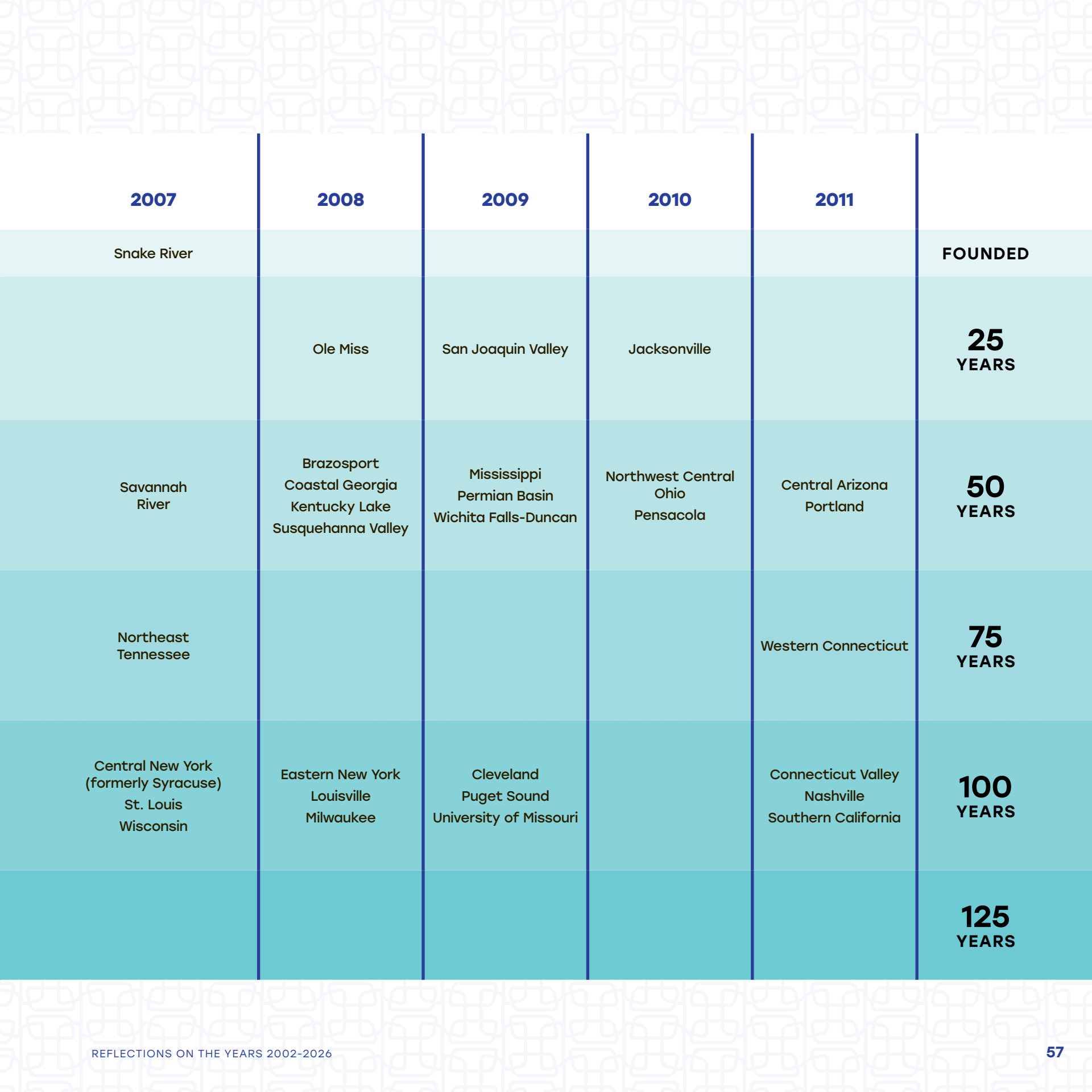
As part of the ACS 150th anniversary celebration, the JACS Symposium Series is holding eight events across five continents.
Photo credit: Shanghai Yongjie Culture Communication Co.



ACS President
Rigoberto Hernandez
and previous ACS
Executive Director and
CEO Madeleine Jacobs
celebrate the Society's
150th anniversary on
Founding Day, April 6.
Photo credit: Christine
Brennan Schmidt

ACS Local Sections Timeline

	2002	2003	2004	2005	2006
FOUNDED					
25 YEARS	Rock River	Alaska Ozark			Southwest Georgia
50 YEARS	Idaho Inland Northwest North Alabama	Corning Southern Arizona	Eastern North Carolina Indiana-Kentucky Border Santa Clara Valley	Western Michigan	
75 YEARS	Kanawha Valley Princeton South Carolina	Kansas State Montana Washington-Idaho Border	Wichita	Dayton East Tennessee MO-KAN-OK, The Tri-State Northeast Wisconsin	Virginia Blue Ridge
100 YEARS	Cornell	Pittsburgh	Georgia	Iowa Western New York	East Central Illinois Indiana Louisiana Minnesota
125 YEARS					



2007	2008	2009	2010	2011	
Snake River					FOUNDED
	Ole Miss	San Joaquin Valley	Jacksonville		25 YEARS
Savannah River	Brazosport Coastal Georgia Kentucky Lake Susquehanna Valley	Mississippi Permian Basin Wichita Falls-Duncan	Northwest Central Ohio Pensacola	Central Arizona Portland	50 YEARS
Northeast Tennessee				Western Connecticut	75 YEARS
Central New York (formerly Syracuse) St. Louis Wisconsin	Eastern New York Louisville Milwaukee	Cleveland Puget Sound University of Missouri		Connecticut Valley Nashville Southern California	100 YEARS
					125 YEARS

ACS Local Sections Timeline

	2012	2013	2014	2015	2016
FOUNDED					
25 YEARS					Orlando South Florida
50 YEARS	Orange County		South Plains	Southern Illinois	South Central Missouri
75 YEARS	Chattanooga Dallas-Ft. Worth Panhandle Plains Wilson Dam		Baton Rouge Green Mountain Illinois Heartland Memphis Penn-York Sioux Valley Texas A&M	Western Maryland	Binghamton San Diego Southeastern Pennsylvania Wooster
100 YEARS	Detroit Lexington Maine New Haven Oregon Rochester	Alabama	Maryland	Ames Virginia	
125 YEARS					New York Rhode Island

2017	2018	2019	2020	2021	
					FOUNDED
		Tampa Bay		California Los Padres	25 YEARS
Sierra Nevada	Heart o' Texas LaCrosse-Winona Northeast Georgia	Central Utah	East Texas	Rio Grande Valley	50 YEARS
Kalamazoo Mid-Hudson	Carolina-Piedmont Lake Superior Sabine-Neches	Hamton Roads Northeastern Ohio Southern Nevada Wabash Valley	Joliet South Texas	Mojave Desert Northeastern Indiana Northwest Louisiana Southwest Louisiana Upper Peninsula Western Carolinas Wyoming	75 YEARS
Central Texas Delaware Greater Houston Michigan State University Toledo		Midland Oklahoma	Colorado Omaha South Jersey		100 YEARS
Cincinnati	Chemical Society of Washington	Lehigh Valley	Chicago Nebraska North Carolina		125 YEARS

ACS Local Sections Timeline

	2022	2023	2024	2025	2026
FOUNDED					
25 YEARS					Middle Georgia
50 YEARS	Central Wisconsin Decatur-Springfield				
75 YEARS	Central Massachusetts Central New Mexico Central Ohio Valley Northern Oklahoma Puerto Rico San Antonio Trenton Tulsa University of Arkansas	Mobile Red River Valley Richland Southern Indiana	Ouachita Valley San Gorgonio Upper Ohio Valley	Auburn Central Arkansas Central North Carolina Mark Twain Penn-Ohio Border*	Northern New York Wakarusa Valley
100 YEARS	Hawaii Northern West Virginia Purdue Sacramento St. Joseph Valley	Akron Erie Illinois-Iowa	Central Pennsylvania Florida Salt Lake	North Jersey	
125 YEARS	Columbus	Northeastern	Huron Valley Philadelphia	Kansas City	California

*The Penn-Ohio Border Local Section was dissolved in 2025 after 75 years.



Reflections of ACS Divisions

AGRICULTURAL AND FOOD CHEMISTRY DIVISION

Celebrating Innovation and Leadership

The ACS Agricultural and Food Chemistry Division (AGFD) has long served as a global leader in advancing scientific discovery, innovation, education, and collaboration in agriculture and food chemistry.

As one of the five original ACS Divisions, AGFD has played a foundational role in shaping the scientific understanding of food systems, agricultural sustainability, nutrition, food safety, and bioactive compounds. In 2008, the Division celebrated its 100th anniversary, marking a century of scientific leadership and interdisciplinary impact. From 2002 to 2026, AGFD has continued to evolve into an increasingly international and multidisciplinary community dedicated to “Driving the Future of Agriculture and Food.”

The AGFD mission is to lead and foster a global community that advances, communicates, and promotes agricultural and food chemistry research, development, education, and outreach. One of the Division’s distinguishing strengths is its rotating leadership

model, in which the chair position alternates among representatives from academia, government, and industry. This structure ensures balanced perspectives and broad stakeholder engagement while strengthening interactions between scientific research, regulatory agencies, and industrial innovation. The Division also maintains a strong international presence, with members from numerous countries contributing to its scientific programming and collaborative activities.

Over the last two decades, AGFD has significantly expanded its scientific scope through seven active subdivisions: Agriceuticals, Food Bioengineering, Flavor Chemistry, Food Safety, Functional Foods & Natural Products, Nutrition & Gut Microbiome, and Sustainability

& Green Technologies. These subdivisions reflect the rapidly changing priorities of agricultural and food chemistry and demonstrate the Division’s ability to adapt to emerging scientific challenges and opportunities.

In Food Bioengineering, major advances during this period have included the industrialization of microbial fermentation technologies for the production of enzymes, amino acids, antibiotics, and food ingredients. The emergence of recombinant DNA technology, metabolic engineering, and synthetic biology transformed the field by enabling microorganisms to produce high-value compounds with improved efficiency and sustainability. More recently, precision fermentation, systems-based bioprocess engineering, and genome-editing technologies such

as CRISPR have enabled the development of alternative proteins, sustainable flavors, nutraceutical compounds, and climate-resilient crops. These technologies are increasingly important for addressing global food security and environmental sustainability challenges.

The Flavor Chemistry subdivision has also experienced remarkable scientific progress. Advanced analytical tools such as gas chromatography-mass spectrometry (GC-MS), multidimensional GC, and GC-olfactometry enabled the structural elucidation of key aroma compounds in foods and beverages. Additionally, the integration of molecular sensory science, flavoromics, and biotechnology has expanded understanding of flavor perception and consumer preference. Enzymatic and microbial approaches for natural flavor production have gained considerable importance as the food industry moves toward cleaner labels and more sustainable ingredient sourcing.

Food Safety research has undergone transformative development since 2002. The implementation of Hazard Analysis and Critical Control



Members of the Division gathered in Washington, D.C., for the 2023 AGFD strategic planning retreat.

Photo credit: Coralia Osorio

Point (HACCP) systems became a global standard for preventive food safety management. Simultaneously, advances in molecular diagnostics, polymerase chain reaction (PCR)-based technologies, biosensors, and whole-genome sequencing revolutionized pathogen detection, surveillance, and traceability in complex food systems. Quantitative microbial risk assessment approaches have further strengthened science-based regulatory frameworks and food protection strategies worldwide.

The Functional Foods & Natural Products subdivision has contributed significantly to understanding the role of bioactive compounds in human health. During this period, substantial progress was made in identifying phytochemicals, antioxidants, polyphenols, peptides, and other functional ingredients with potential health-promoting properties. Nutraceutical development expanded rapidly, and metabolomics and other omics-based technologies enabled researchers to better understand the molecular

Beyond scientific research, AGFD has made substantial contributions to professional development, communication, and community building.

mechanisms linking dietary bioactives with disease prevention and health promotion.

Similarly, the Nutrition & Gut Microbiome subdivision emerged as one of the most dynamic areas within AGFD. Advances in high-throughput sequencing and multi-omics technologies have transformed scientific understanding of the intestinal microbiota and its role in metabolism, immunity, and chronic disease. Research on probiotics, prebiotics, synbiotics, and diet-microbiome interactions became central to modern nutrition science and opened new opportunities for personalized nutrition and precision health approaches.

The Sustainability & Green Technologies subdivision reflects AGFD's growing commitment to environmental stewardship and sustainable food systems. Important milestones include the implementation of green chemistry principles in food processing, the development of biomass valorization and biorefinery concepts, and

innovations in sustainable agricultural intensification. Circular bioeconomy strategies, food waste valorization, precision agriculture technologies, and climate-smart food production systems have become increasingly important themes within the Division's scientific programming.

In Agriceuticals, scientific efforts have focused on discovering and enhancing health-promoting phytochemicals in agricultural products. Advances in metabolomics, plant biotechnology, and breeding strategies have enabled the development of biofortified crops and nutritionally enhanced commodities. These innovations support the growing intersection between agriculture, nutrition, and preventive health.

Beyond scientific research, AGFD has made substantial contributions to professional development, communication, and community building. During the 2002–2026 period, the Division strengthened its efforts to disseminate scientific

knowledge through innovative programming and digital communication strategies. An annual webinar series was established to provide educational opportunities for members unable to attend ACS Meetings & Expositions. The Division also expanded its presence on social media platforms, including LinkedIn, Facebook, and Instagram, often with the active participation of graduate student members. These initiatives enhanced scientific outreach, visibility, and member engagement across generations and geographic regions.

AGFD also continued publishing *Cornucopia*, a long-standing Division publication that summarizes major achievements, highlights scientific programming, and provides abstracts associated with ACS meetings. This publication remains an important historical and scientific resource for Division members.

The Division further strengthened mentorship and inclusivity through initiatives

such as the International Student Symposium and the AGFD Leadership Luncheon, which facilitate interactions between senior scientists and early-career researchers. These programs foster leadership development, networking, and international collaboration while supporting the next generation of agricultural and food chemists.

An important organizational innovation during this period was the establishment of the Senior Programming Guidance Committee (SPGC). This committee advises and supports AGFD technical programming across ACS Meetings & Expositions and emerging scientific venues. The SPGC helps identify gaps in programming, emerging research areas, potential symposium organizers, and new communication strategies such as webinars and virtual scientific events. Through its long-term perspective and mentorship role, the committee has strengthened the continuity, quality, and impact of AGFD scientific programming.

The Division has also maintained strong connections with scientific publishing

(JAgFoodChem portfolio). The *Journal of Agricultural and Food Chemistry* (JAFC) remains one of the most influential journals in the field globally. Over time, the publishing portfolio expanded to include *ACS Food Science & Technology*, *ACS Agricultural Science & Technology*, and *ACS Nutrition Science*. These journals reflect the increasing interdisciplinarity and global relevance of agricultural and food chemistry research.

AGFD has been home to numerous influential scientists whose contributions have shaped modern nutrition and food science. Among them, Elmer McCollum stands as one of the most prominent historical figures associated with the Division. McCollum was a pioneer in nutrition science and co-discovered vitamins A and B while contributing substantially to the understanding of the relationship between diet and health. More recently, Professor Terry Acree, internationally recognized for his contributions to flavor chemistry and sensory science, received the inaugural Thomas H. Parliment Award, recognizing excellence and leadership in flavor research.

Looking toward the future, AGFD is well positioned to continue leading innovation at the intersection of agriculture, chemistry, food science, nutrition, biotechnology, and sustainability. Emerging technologies such as artificial intelligence, machine learning, precision fermentation, synthetic biology, digital agriculture, and multi “omics” integration are expected to transform food production and health sciences in profound ways. At the same time, climate change, food security, sustainable resource management, and global health challenges will require increasingly interdisciplinary and collaborative scientific solutions.

As AGFD moves beyond its first century of scientific leadership, the Division will continue to foster international collaboration, support young scientists, strengthen scientific communication, and promote transformative research that improves both human and planetary health. Through its commitment to excellence, innovation, and service, AGFD remains uniquely positioned to shape the future of agricultural and food chemistry for generations to come.

DIVISION OF AGROCHEMICALS

Chemistry For and From Agriculture

The ACS Division of Agrochemicals (AGRO) brings together a worldwide community of scientists and stakeholders to advance knowledge and promote innovative solutions for the protection of agricultural productivity, public health, and the environment.

As a dynamic, multidisciplinary Division, AGRO is the scientific home not only for chemists but also for toxicologists, chemical ecologists, agronomists, soil scientists, engineers, microbiologists, and other professionals whose work spans the agricultural sciences.

Established as a fully approved ACS Division in 1970 (originating from the Pesticides Subdivision of the Division of Agricultural and Food Chemistry, founded in 1951), AGRO adopted its current name in 1985 to reflect a scope that had grown well beyond traditional pesticides. AGRO has steadily expanded its programming to encompass biotechnology, plant growth regulators, semiochemicals, biologicals, soil chemistry and fertilizers, and emerging areas such as bioenergy and biofuels. In 2024, the Division formally absorbed the long-dormant Subdivision of Fertilizer and Soil Chemistry, reaffirming AGRO's role as the ACS home for soil chemistry, biostimulants, and related emerging topics. The Division is unified under its motto "Chemistry for and from agriculture" (adopted in 2006) and the vision statement "Advancing responsible agriculture and global health."

A Milestone Anniversary: Celebrating 50 Years of AGRO

The years 2002–2026 have been a defining era for AGRO, anchored by the Division's celebration of a major milestone: the 50th anniversary of its formal recognition as an ACS Division. Originally planned for 2020, the celebration was delayed by the COVID-19 pandemic ramifications and ultimately was observed at ACS Fall 2023 in San Francisco. The commemoration featured a memorable gala, a special agricultural tour of the San Francisco Bay area, and a complementary virtual celebration that extended participation to members worldwide who could not attend in person.

To preserve this legacy in an accessible and enduring form, AGRO launched an interactive online AGRO Timeline, chronicling the Division's milestones, leadership, and scientific contributions for current and future members. The anniversary was further commemorated in 2024 through the AGRO50 Virtual Special Issue of the *Journal of Agricultural and Food Chemistry* and its companion journal, *ACS Agricultural Science & Technology* – a curated collection of

approximately 50 new and previously published articles spotlighting highly cited contributions from AGRO-sponsored award winners and the breadth of the AGRO community's research interests (collection available at pubs.acs.org/page/vi/agro-50).

Strategic Planning: Charting a Deliberate Course

AGRO has embraced structured, multiyear strategic planning and held strategic planning retreats in January 2006, January 2011, October 2016, and October 2023. Each effort produced concrete outcomes:

- ▶ **2006 Plan:** Adoption of “Chemistry For and From Agriculture” motto; concentration of programming at one of the ACS Meetings & Expositions; revamp of education awards.
- ▶ **2011 Plan:** Launch of webinar series; creation of International Activities Committee; e-newsletter; revised committee structure.
- ▶ **2016 Plan:** AGRO liaisons with key organizations; launch of Vendor Interface Program; website redesign; AGRO 50 planning.
- ▶ **2023 Plan:** Updated vision (“Advancing Responsible Agriculture and Global Health”) and mission (*Growing a Global Community to Create Solutions for Agriculture, Public Health, and the Environment*); three goals focused on (1) membership engagement across the student-to-mid-career continuum, (2) information delivery through new communication channels, and (3) AGRO 2050 – creating a future-ready Division.

AGRO's efforts garnered an ACS ChemLuminary Award in 2021 for Best Activity or Program Highlighting ACS Change Drivers or Strategic Planning.

Technical Programming: Evolution and Growth

The Division prides itself on programming that addresses emerging issues and covers the gamut of AGRO topics. ACS provided Innovative Project Grant (IPG) funds to AGRO to spark creative programming initiatives, including early-career symposia that are organized by and feature speakers who are early in their careers as well as a new 2027 program to launch AGRO's first dedicated all-virtual digital conference.

Travel disruptions after September 11, 2001, cut the program size to 60–90 presentations in 2002–2003, but AGRO rebounded by 2004. A pivotal decision redirected programming to Fall ACS 2008 only; by 2010, programs exceeded 300 presentations, and by 2017, they surpassed 400. After fully virtual programs during COVID-19 (2020–2021), AGRO embraced the hybrid format from ACS Fall 2022 in Chicago, sustaining 25–27 symposia and ~300 presentations annually through 2025. Beginning in 2025, AGRO adapted to ACS' meeting reimagining – embracing Joint/Enhanced Symposia with ORGN, AGFD, ENVR, ANYL, CINF, I&EC, and TOXI; Innovative Digital Experience Program for global audiences.

International Leadership and Collaborative Conferences

AGRO's international stature grew substantially during this period. The Division served as organizer for the 13th IUPAC International Congress of Pesticide Chemistry (ACS Fall 2014, San Francisco) – an extraordinary event drawing more than 1,000 presentations. AGRO also deepened its partnership with the Pesticide Science Society of Japan, co-organizing the Pan-Pacific Pesticide Conference in Honolulu (2003, 2008) and Beijing (2012), and steadily expanded participation in Pacifichem – from one symposium in 2010 to three in 2015 and 13 in 2021.

To formalize and grow international member engagement, AGRO launched two pioneering programs in 2023: the AGRO Ambassadors Program, supporting senior scientists who represent AGRO at international meetings; and the AGRO Journeymen Program, which supports early-career international scientists attending ACS Meetings & Expositions.

AGRO actively collaborates with six international scientific societies: the International Chemical Congress of Pacific Basin Societies (Pacifichem), the International Conference on Green Plant Protection Innovation (ICGPPI), the International Symposium on Adjuvants for Agrochemicals (ISAA), the International Union of Pure and Applied Chemistry (IUPAC), the Latin American Pesticide Residue Workshop (LAPRW), and the North American Chemical Residue Workshop (NACRW). At the ACS ChemLuminary Awards, AGRO received the Global Engagement Award for a Technical Division in 2013 and 2021.

Outreach Innovation

AGRO uses a mix of communication platforms to reach its broad and diverse membership. It has a proud record of a newsletter, the *Picogram*, published twice yearly. Volume 62 was published in 2002, and it continues through today. E-mail blasts and announcements are used to share time-sensitive information. The Division website is an essential resource for meeting details, award information, and archived content, and an operations manual provides guidance for Division administration.

A standout innovation of this era is the AGRO Go Kits program (launched 2024–2025), a scalable, low-cost outreach model that exemplifies how a small Division can achieve global reach with minimal investment. With only \$635 in startup costs, AGRO developed two formats – Round-Trip Kits for booth events and One-Way Kits for smaller engagements – empowering members to represent the Division at events where AGRO does not traditionally program.

Digital Transformation and the Webinar Series

AGRO launched its webinar series at ACS Fall 2012 in Philadelphia and has delivered more than 50 webinars. The series was reimaged in 2025 as the AGRO Lunch and Learn, with a robust 2025–2026 lineup spanning the breadth of agrochemical science. These webinars extend the reach of award-winner lectures to a global audience.

Building on the 2023 strategic plan, AGRO secured an ACS Innovative Project Grant in 2025 to launch “Building AGRO’s Digital Future: Content Hub & Strategic Archival Foundation,” together with a Communications Improvement Grant in

The chemistry of agriculture has never been more central to global priorities: feeding a growing population, adapting food systems to a changing climate, protecting pollinators and other natural resources, and meeting evolving regulatory and societal expectations for safety and sustainability.

2026 to professionalize implementation. This new platform consolidates webinars, symposia recordings, and the *Picogram* archive into a single, searchable hub designed for low-friction access by younger scientists and non-members, and architected for future integration with archival partners.

Recognizing Excellence and Investing in the Next Generation

AGRO honors distinguished scientists through a comprehensive awards portfolio: the ACS International Award for Research in Agrochemicals, the AGRO Award for Innovation in Chemistry of Agriculture, the Sterling B. Hendricks Memorial Lectureship, the Kenneth Spencer Award, the JAFCA Article of the Year Lectureship, and the AGRO Fellow Award.

The Division supports early-career members through the New Investigator Award and Student Travel Awards to expand support for the next generation of agrochemical scientists. Each fall, at the ACS Meeting & Exposition, the Division hosts a student and postdoctoral networking lunch where participants meet professionals from industry, academia, government, and contract labs.

These programs are made possible by the sustained generosity of AGRO's sponsors, whose partnerships underpin the Division's awards, symposia, and outreach activities.

Looking Forward

Building on more than half a century of service to the agrochemical sciences, AGRO stands at a moment of both opportunity and responsibility. The chemistry of agriculture has never been more central to global priorities: feeding a growing population, adapting food systems to a changing climate, protecting pollinators and other natural resources, and meeting evolving regulatory and societal expectations for safety and sustainability. Looking ahead, AGRO will continue to expand its outreach by deploying its new digital content hub and 2027 virtual conference to reach a truly global membership; expand the Ambassadors and Journeymen programs and partnerships with ACS International Chemical Sciences Chapters; deepen joint programming with sister Divisions; foster innovation across the frontiers of modern agrochemistry; and ensure that the next generation finds in AGRO a welcoming, multidisciplinary community and a platform for leadership. Building on a half-century of scientific exchange and a robust 2023 strategic foundation, AGRO is committed to ensuring that the chemistry of our worldwide community creates continues to nourish, protect, and sustain the world.

Technological Transformation Through the Years

Three recent ACS Presidents have been analytical chemists, underscoring the central role of measurement science.

ACS owes a significant portion of its foundational stability and growth to the contributions of analytical chemists.

From the Society's inception, the discipline was instrumental to its institutional survival; the first three ACS Presidents – John W. Draper, J. Lawrence Smith, and Samuel W. Johnson – were all deeply engaged in the field. This tradition of leadership remains steadfast in the contemporary era. Between 2019 and 2025, three recent ACS Presidents – Bonnie Charpentier, Mary Carroll, and Dorothy Phillips – have been analytical chemists, underscoring the central role of measurement science within the broader chemical enterprise.

Building upon this rich legacy of leadership, the period spanning 2002 to 2026 represents a transformative epoch for the Division of Analytical Chemistry (ANYL). In 2002, the Division operated within a paradigm of physical records and paper-based distribution of information. By 2026, ANYL had completed a full transition into the digital age, with all operational frameworks integrated via the internet and/or the cloud.

This digital migration has occurred in tandem with significant fiscal and strategic expansion. In 2002, the Division held approximately \$190,000 in funds; by 2026, these assets had grown to > \$1 million. This financial robustness facilitated several strategic inflection points, notably the execution of seven Strategic Planning Retreats between 2008 and 2024 aimed at enhancing the value proposition, outreach, and performance of the Division for its membership.

A landmark milestone in this strategic trajectory occurred in 2013 with the celebration of the Division's 75th anniversary. Founded in 1938, the Division utilized this occasion – summarized by Roland Hirsch¹ – to catalyze a renewed institutional emphasis on historical preservation, student engagement, and the formalization of

career development pathways for analytical chemists. This period reinforced the identity of analytical chemistry as an “enabling science” providing the essential methodological tools necessary for breakthroughs in biology, medicine, and materials research.

The Division’s commitment to professional innovation was further exemplified by its Innovative Project Grants (IPGs). Since 2016, these grants have been strategically deployed to address gaps in professional development and community outreach. Initial efforts (2016–2018) focused on graduate student-organized symposia and the modernization of the ANYL digital presence. From 2020 to 2021, the focus shifted toward inclusion and belonging through multicomponent programming and travel support for early-career professionals. Subsequent grants in 2022 and 2023 concentrated on membership analysis and further strategic planning. The most recent IPGs specifically targeted the professional advancement of younger chemists, ensuring that the subsequent generation will be equipped to navigate the complexities of the field.

Parallel to these organizational advancements, the Division has evolved scientifically in tandem with the broader discipline. The early 2000s were characterized by a surge in ACS Meetings & Expositions programming dedicated to separation science and spectroscopy. By the 2015–2019 period, the focus transitioned toward the “omics” era, emphasizing hyphenated techniques such as liquid chromatography–mass spectrometry (LC–MS), comprehensive two-dimensional gas chromatography (GC×GC), and liquid chromatography–nuclear magnetic resonance (LC–NMR) to address the complex challenges of genomics, proteomics, and metabolomics. The Division has consistently honored the highest achievements in the field; notably, in 2002, John Fenn was awarded the Nobel Prize in Chemistry for the development of electrospray ionization (ESI), a revolution in mass spectrometry that was commemorated with a full-day symposium at ACS Spring 2003. This trajectory of excellence continues with the Division’s receipt of ChemLuminary awards in 2024 and 2025.

Although scientific progress has been steady, external challenges have also shaped the Division’s operational model. The onset of the COVID-19 pandemic served as an unexpected catalyst for

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institutional adaptation. The transition to virtual symposia and digital outreach expanded global participation and accessibility, effectively dismantling geographical barriers for students and early-career scientists. This resilience has propelled the Division into its current phase (2023–2026), which prioritizes data-rich measurement science, advanced separations, and real-world applications in sustainability and regulatory science. Today, ANYL’s vision is “Advancing chemical measurement science to empower all people,” with a mission to strengthen the global community to drive discovery and innovation.

Moving forward, the landscape of chemical measurement is experiencing a fundamental transformation propelled by the swift adoption of new technologies. Rather than merely utilizing analytical tools, fast-evolving sectors like artificial intelligence, biotech, quantum computing, and semiconductor fabrication are actively reshaping them, serving as the primary catalysts driving laboratory instrumentation and data processing toward autonomous predictive operations.

As ANYL looks beyond 2026, the Division must pivot toward an international outreach strategy that is truly global in nature to expand and enhance the influence of analytical chemistry. By establishing cross-border collaborations, unified data standards, and international symposia, ANYL will solidify its reputation as the definitive global “go-to” organization for measurement science research. Central to this mission will be ANYL’s role in developing the specialized workforce required for the rapidly evolving AI economy. By championing educational models that blend rigorous chemical precision with machine learning, automated synthesis, and high-throughput data analysis, the Division will cultivate the next generation of scientific leaders. Through embracing these technological, educational, and global imperatives, analytical chemistry will continue to serve as the critical guardian of innovation and scientific truth for decades to come.

References

(1) Hirsch, R. F. *Anal Chem* 2013, 85, 3472–3475.

Opposite page: The ACS National Awards honor outstanding chemists. Here, ACS President Angela Wilson (left) and Board member Silvia Jurisson (right) congratulate the 2022 Glenn T. Seaborg Award winner, Carolyn J. Anderson (center). Photo credit: EPNAC.com

NATIONAL AWARDS



DIVISION OF BIOCHEMICAL TECHNOLOGY

Early-Career Engagement Builds a Leadership Pipeline

Over the past 25 years, the ACS Division of Biochemical Technology (BIOT) has evolved alongside the rapidly changing biotechnology industry. BIOT serves as a broad and dynamic community that brings together academia, industry, and government across all career stages to network, share their work with the field, and discuss important issues and emerging topics before they have a larger impact in the commercial sector.

BIOT's annual programming, typically held at ACS Meetings & Expositions in springtime, anchors these activities and is supplemented by year-round opportunities for engagement. Central to BIOT's identity is an intentional balance between academic and industrial participation, with membership that has remained approximately evenly split between these sectors over the decades. This balance, coupled with an inclusive philosophy, has enabled BIOT to remain innovative, resilient, and the go-to community for those interested in biotechnology.

Milestones in Science and Community

BIOT's trajectory reflects the evolution of biotechnology itself. In the early 2000s, the Division became a home for emerging discussions on bioprocess engineering, metabolic engineering, and the integration of biological systems with engineering design principles. As "omics" technologies matured, BIOT programming increasingly incorporated genomics, proteomics, and metabolomics, helping to bridge experimental biology with data-driven analysis.

BIOT plays an important role for the community as both an incubator and amplifier of new scientific directions, particularly at the interface of academia and industry. For example, by the 2010s, BIOT had successfully positioned itself at the leading edge of transformative developments such as synthetic biology and genome engineering (e.g., CRISPR-Cas technology). These topics were initially introduced through dedicated sessions focused on emerging technologies, often drawing interdisciplinary audiences. These forums served as incubators for academic-industry collaborations. Over time, the topics become fully integrated into mainstream programming, given their importance to both academic and applied research. More recently, BIOT held numerous sessions on the use of artificial intelligence and machine learning in bioprocessing, continuous manufacturing, and advanced analytical strategies for biotherapeutics.

Organizationally, BIOT has also undergone significant development. In 2025, the Division developed an updated vision and strategic plan that reflects its core values: inclusivity, innovation,

global engagement, and the integration of science and application. BIOT's goal is to provide an open and accessible community where participation in programming, leadership, and governance is actively encouraged and fostered, leading to a positive reinforcement loop by providing value and community to members who in turn help nurture and grow BIOT.

The past 2+ decades saw the introduction of several key programmatic milestones. A fruitful collaboration between BIOT and the European Society of Biochemical Engineering Sciences (ESBES) originated around 2008–2009 through discussions between BIOT leadership and those in the field in Europe, and our first joint meetings proved to be our first significant step in BIOT's international engagement.

The COVID-19 pandemic in 2020–2021 presented a profound challenge but also an opportunity for adaptation. BIOT rapidly transitioned to virtual and hybrid formats, maintaining engagement and expanding accessibility for a global audience. This period underscored the resilience of the Division and its commitment to community continuity.

Initiatives Driving Impact

BIOT developed a diverse set of initiatives over the past 20 years that have strengthened its scientific leadership and community engagement.

Since the initial BIOT–ESBES partnership, global engagement has expanded significantly, particularly through the strong and growing presence BIOT has developed in India. The ACS BIOT India Chapter exemplifies this success, growing its active membership from 19 paid members in 2023–2024 to 38 in 2025–2026,

with more than 60 individuals engaged through outreach efforts. The Chapter has organized over 11 webinars and journal clubs covering emerging topics such as continuous biomanufacturing, artificial intelligence/machine learning implementation, and advanced analytics, each drawing 40–60 participants from both academia and industry. Participation in key conferences in India, such as BioProcess International, has further expanded visibility and recruitment. Collaborative programming between the India and U.S.-based Student Chapters reflects the increasingly global nature of the BIOT community. In 2026, the launch of a Campus Ambassador Program further extended this reach, while recognition through an Honorable Mention in the ACS Student Communities Awards (2024–2025) highlighted the India BIOT Chapter's impact.

Student and early-career engagement has become a cornerstone of BIOT. The establishment and growth of Student Chapters have created pathways for leadership and long-term participation. BIOT currently has three Student Chapters. The latest two, based in India and in the Research Triangle Park area in North Carolina, were formed approximately one year ago. The Mid-Atlantic Chapter was formed in 2016 and has been extremely active, serving as a model Chapter for the others to follow. This Chapter has hosted on average two in-person events in the Philadelphia area per year, each with approximately 50–70 participants from local universities and biotech companies. During COVID, the Chapter began hosting webinars on a regular basis, which have included technical and non-technical topics. In 2024, the Mid-Atlantic Chapter worked with a BIOT professional member to launch a new mentor program that has seen great success and growth.

The program, which currently includes 67 student–(industry) mentor pairs across 37 universities and 20 companies, benefits mentors and mentees alike and exemplifies the importance of bringing together community members from across career paths and stages. Other student-centered activities, such as hackathons, industry–student mixers, and professional development sessions, provide additional meaningful engagement opportunities and reinforce BIOT’s role as a supportive community.

Innovation-focused programming came to the forefront of BIOT activity in recent years. BIOT launched the BIOT Tank event at ACS Spring 2017 in San Francisco. This initiative introduced an entrepreneurial dimension to BIOT programming, providing a “Shark Tank”-like platform for early-stage ideas at the interface of biology, chemistry, and engineering from researchers competing for prizes to support translational development of their concept. In addition to BIOT Tank, the Division continues to highlight emerging technologies through dedicated sessions at ACS Meetings & Expositions to foster early, yet transformative, ideas.

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BIOT spent considerable effort developing a strong communications strategy, run by a committee that established the BIOT brand in the online world. Initiatives include member spotlights, an expanding social media presence, and “Best of BIOT” features in which top-rated presenters from the ACS Meetings & Expositions are invited to give a web-based talk. The Division’s updated website (acsbiot.org) now serves as a central hub for information, engagement, and outreach.

Achievements and Recognition

The cumulative impact of these efforts is apparent in several ways. Programming at ACS Meetings & Expositions has expanded in both scope and participation, with BIOT consistently attracting diverse audiences. The Division has established itself as a premier venue for the introduction and maturation of emerging technologies, with many once-novel topics now central to the broader field.

BIOT members have also been recognized extensively at both the Division and Society levels. Division-level awards span the full career spectrum, from the W.H. Peterson Award for student presentations to recognitions such as the Young Investigator Award, the James M. Van Lanen Distinguished Service Award, and the Alan S. Michaels Award in the Recovery of Biological Products. At the Society level, many BIOT members have been named ACS Fellows in recent years and have gone on to broader ACS leadership positions. In 2022, Y. Shrike Zhang was a BIOT nominee selected as a Kavli Foundation Emerging Leader in Chemistry Lecturer, demonstrating success in elevating the science and accomplishments from BIOT to the broader ACS community.

In a field defined by rapid evolution, BIOT's enduring strength lies in its openness – to new ideas, new technologies, and new participants. This 'big tent' philosophy has shaped its past and will continue to guide its future.

BIOT also contributed to education and workforce development through its work to grow and promote Student Chapters, as well as participation in external programs such as sending BIOT members to teach as part of the Annual Center for Biopharmaceutical Technology courses in India.

Perhaps most importantly, BIOT's defining achievement lies in its culture. The Division's commitment to openness, welcoming participants from all sectors, career stages, and backgrounds, fostered a dynamic and continuously renewing community. This approach enables BIOT to remain adaptive, innovative, and resilient.

Looking Forward

As BIOT looks toward the future, its key priorities are continued investment in Student Chapters and early-career engagement to ensure a vibrant and sustainable pipeline of scientific and community leadership. Global engagement will deepen, building on successes in India and Europe while exploring new regions for collaboration.

Scientifically, BIOT will continue to serve as a platform for emerging technologies, including artificial intelligence in biotechnology, cell and gene therapies, advanced biomanufacturing, and data-driven process development. By maintaining its role as an early adopter, BIOT will remain at the forefront of innovation.

Equally important will be the continued strengthening of community. Hybrid engagement models, enhanced communications, and intentional efforts to foster interaction across sectors at the regional level will further reinforce BIOT's identity as a place where ideas and people connect.

In a field defined by rapid evolution, BIOT's enduring strength lies in its openness – to new ideas, new technologies, and new participants. This “big tent” philosophy has shaped its past and will continue to guide its future, ensuring that BIOT remains a central and vibrant part of the ACS community for years to come.

DIVISION OF BIOCHEMISTRY & CHEMICAL BIOLOGY

Supporting the Next Generation of Scientists

The ACS Division of Biochemistry & Chemical Biology (BIOL) – originally the Division of Biological Chemistry – was founded in 1913 by chemists who recognized chemistry’s central role in biological systems.

From the outset, the Division’s membership and activities overlapped strongly with those of the American Society for Biochemistry and Molecular Biology (ASBMB) – originally the American Society of Biological Chemists (ASBC) – and many leaders served in prominent roles in both organizations. In the years before World War II, membership was modest. The renowned food biochemist Carl L. Alsberg was the first chairman. Throughout these early years, the Division served primarily as a forum for presenting scientific papers and facilitating communication among chemists and biochemists while membership remained relatively small.

In the 1940s and early 1950s, the Division was significantly impacted by the leadership of Erwin Brand of Columbia University. Brand’s leadership,

beginning in 1941, marked a turning point. Under his direction the Division grew rapidly – from about 263 members in 1941 to 1,785 by 1955 – and broadened its influence. Administrative roles were professionalized, and the Division became a catalyst for international organizations in biochemistry. Members of the Division played leading roles in the formation of the International Union of Biochemistry (IUB) in the early 1950s, negotiating representation alongside the International Union of Pure and Applied Chemistry (IUPAC). After Brand’s death in 1953, the Division established a travel award in his name to support young investigators’ participation in international congresses. The Division’s tradition of awarding travel awards to young investigators continues to this day.

Another important milestone in the history of the BIOL Division was the establishment of the journal *Biochemistry* in 1962, driven by Division advocacy within ACS and by a membership poll demonstrating strong support. Hans Neurath of the University of Washington became the journal’s founding editor and remained closely connected to the Division.

Federal funding surges and the molecular biology revolution of the 1950s–1960s transformed biochemistry into a high-visibility field. Division membership grew to about 3,000 by the late 1960s. The Division organized high-profile award symposia featuring scientists who later won Nobel Prizes and became more engaged with public policy and national scientific leadership. The Division cooperated with ASBC to coordinate meeting schedules and expanded

international outreach, including links to the Pan American Association of Biochemical Societies (PAABS). Advances in molecular biology, structural biology, gene sequencing, and bioinformatics shifted research emphasis throughout the 1970s–1990s. The Division responded to educational gaps between chemistry and biology by promoting undergraduate biochemistry education. By 2001, ACS required three credits of biochemistry in approved chemistry curricula. New textbooks and curricular materials emerged from Division members' efforts.

The Division entered the 21st century as an established interdisciplinary community focused on chemistry at the interface with biology. Key developments included a stronger emphasis on chemical biology alongside traditional biochemistry, expanded support for students and early-career scientists, modernization of communication and online resources, and broader efforts around mentoring and interdisciplinary programming. An important event for the Division occurred in 2006, when ACS Publications launched the journal *ACS Chemical Biology* with

Laura Kiessling as the founding editor. Another important recent change was the Division's rebranding from "Biological Chemistry" to "Biochemistry and Chemical Biology," reflecting how the field itself has shifted in recent years. Research areas highlighted at BIOL symposia at ACS Meetings & Expositions increasingly include chemical genetics, protein engineering, synthetic biology, RNA biology, bioorthogonal chemistry, systems biology, imaging technologies, and biomolecular therapeutics.

By the mid-2020s, the Division had grown to more than 4,000 members and positioned itself as one of ACS' central interdisciplinary communities bridging chemistry and biology.

Awards

Division awards play a strategic role in recognizing excellence and in shaping the direction, visibility, and impact of chemical biology research. The Division's awards portfolio reflects a deliberate multicareer-stage approach that supports scientists at every career stage.

Awards such as the DBC Young Investigator Awards (established in 2024), the Eli Lilly Award in

Biological Chemistry (1934), and the Pfizer Award (1936) identify independent early-career researchers who have demonstrated exceptional creativity and promise.

Awardees of the Pfizer Award include Thomas R. Cech (1985), who went on to win the Nobel Prize in 1989, and awardees of the Lilly Award include Phillip A. Sharp (1980) and Jennifer A. Doudna (2001), who were both awarded the Nobel Prize in 1993 and 2020, respectively. These awards are usually geared toward assistant professors, which is a critical career stage often characterized by high-risk science performed with minimal resources. Awards at this stage help establish the next generation of leaders in biochemistry and chemical biology by providing early-stage scientists with increased visibility for developing their professional network and enhanced competitiveness for external funding and tenure. By recognizing innovation early, these awards support these high-risk, high-impact endeavors within chemical biology research during critical career moments.

As scientists advance in their careers, Division awards shift toward recognizing sustained

and longer-term contributions that have ultimately reshaped chemical biology. Honors such as the Alfred Bader Award in Bioorganic or Bioinorganic Chemistry and the R. Bruce Merrifield Award acknowledge the importance of foundational discoveries that integrate structure, function, and mechanism. In particular, the Abeles and Jencks Award (established in 2022) highlights outstanding contributions to understanding biological processes at a mechanistic level, driving future innovation. Similarly, the Bristol Myers Squibb Award in Enzyme Chemistry and Chemical Biology (established in 2023) recognizes and honors transformative work in enzymology or chemical biology. Furthermore, until 2025, the Gordon Hammes Lectureship, along with various ACS Publications Lectureships, provided awardees with the opportunity and financial support to present their work at ACS Meetings & Expositions. These lectures are critical for disseminating cutting-edge research across ACS for fostering cross-disciplinary scientific pollination, inspiring new collaborations and

educating the broader society on cutting-edge science occurring in chemical biology. In this way, the awards extend beyond individual recognition and serve as vehicles for community-wide engagement and knowledge transfer. These awards, among others featured on our website, celebrate individual achievements in addition to highlighting scientific areas that are poised for continued growth and high research impact.

Equally important is the Division's commitment to supporting students and trainees. Student Travel Awards enable graduate students and postdoctoral researchers to participate in ACS Meetings & Expositions at national and local levels when it would otherwise not be possible.

By presenting their work and engaging with peers and leaders in the field, these students are given essential professional development opportunities and support that are needed to break into and persist in science. Undergraduate Awards recognize academic excellence and encourage continued participation in research. These programs represent a direct investment in the next generation of biochemistry and chemical biology researchers, ensuring that talented individuals are integrated into the scientific community early and provided with opportunities to grow for life-long contributions and membership. These early investments are critical, especially in periods of job insecurity and funding turmoil.

Awards provided by the ACS Division of Biochemistry and Chemical Biology recognize awesome science while supporting and encouraging those pursuing it.

In summary, awards provided by the ACS Division of Biochemistry and Chemical Biology recognize awesome science while supporting and encouraging those pursuing it. Through its awards, the Division has created a supportive and impactful environment for researchers at all career stages. Thus, excellence is not only celebrated in this Division but also translated into lasting scientific and societal impact.

New Initiatives

As noted above, the Division is in a constant state of evolution ranging from the name change in 2025 to the introduction of new awards such as the Abeles Award (started in 2024). In the last 10 years, the rate of change has accelerated, in part precipitated by the COVID-19 pandemic. The year 2020 was the first year online and hybrid programming at ACS Meetings & Expositions was initiated. New opportunities for members to interact were developed, including a virtual platform for networking using innovative iSee software as well as an online symposium geared toward graduate students in the fall. A symposium focused

on biological chemistry and industry was included in the program in 2022. In that same time frame, symposia geared toward young faculty and midcareer researchers were also added to the program lineup to provide valuable visibility for those scientists. While sessions focused on specific topics continued to be an important feature, a new symposium emphasizing emerging topics was added to the meeting program.

In 2022, the Division chair initiated a strategic planning session facilitated by ACS to help establish new goals and priorities for the Division. Out of that day-long event came numerous ideas for modernizing the Division. In response to this, the Division website was revamped to provide more information and more value for members. Besides a more modern look, the website features information about awards, meetings, resources, and journals plus vignettes about members and their activities as well as a social media feed via BLUESKY. Two new committees were added, including an awards committee focused

on identifying candidates for awards and creating panels to evaluate nominations. The second committee, communications, is charged with broad-scale communication and dissemination of Division information for members. Those activities include posting information on the website and via social media. The idea here is to use multiple mechanisms for communicating with Division members to reach the largest number of people. An important feature of the communications committee is that it includes students in prominent roles. Current goals include designing a new Division logo and generating additional content of interest to members.

The current membership of the Division is over 4,500 members, which indicates strong interest in biochemistry and chemical biology and reinforces the value and importance of this research area in the community of chemists at ACS. As members look to the future, it is likely that the Division will continue to serve as a significant mechanism for fertilizing new scientific ideas and fostering interpersonal interactions.

DIVISION OF CARBOHYDRATE CHEMISTRY AND CHEMICAL GLYCOBIOLOGY

Evolving Toward a Broader Scope

The ACS Division of Carbohydrate Chemistry and Chemical Glycobiology (CARB) stands today as a vibrant, outward-looking home for scientists exploring the chemistry and biology of carbohydrates, building on a century of evolution in scope, membership, and impact.

From 2002 to 2026, the Division has expanded decisively from a primarily carbohydrate chemistry identity toward a broader glycoscience scope with the inclusion of chemical glycobiology to its name, bylaws, programming, and community culture.

The Division traces its origins to 1919, when sugar chemists in the United States began organizing around common technical and scientific challenges, leading to the formation of a Sugar Section within ACS and then elevation to divisional status in 1921. Over the 20th century, its remit broadened from sugar technology to the full chemistry of carbohydrates, culminating in the adoption of the name Division of Carbohydrate Chemistry in 1952 after debates about merging with cellulose-focused groups. This progression mirrored the field's shift from industrial sugar processing and analytical methods toward sophisticated organic synthesis, structural analysis, and, increasingly, biological function.

By the early 2000s, the Division had matured into a central forum for carbohydrate chemistry, but it also faced the need to modernize its

internal structures and support early-career researchers. In 2003, CARB established the New Investigator Award to recognize scientists within the first seven years of independence, signaling a strategic investment in the next generation of glycoscientists. This award, renamed the David Y. Gin New Investigator Award in 2012, helped attract rising talents and raised the profile of innovative work at the chemistry–biology interface.

Administrative modernization also occurred. In 2011, the Division revised its bylaws, notably to allow electronic voting, which aligned governance with contemporary practices and lowered barriers to broader member participation. These changes, though procedural, were important in democratizing internal decision-making and supporting a more geographically and demographically diverse membership.

Throughout the 2000s and 2010s, the Division's programming increasingly reflected the growing recognition that carbohydrates or glycans are central players in biology, medicine, and materials science. The establishment of awards like the Derek Horton Award in Industrial Carbohydrate

Chemistry in 2016, honoring contributions from industrial scientists, highlighted the Division's effort to strengthen the connection of fundamental science with translational and commercial applications. By supporting both academic and industrial practitioners in the interdisciplinary field, CARB fostered cross-sector collaborations essential for turning glycoscience discoveries into technologies such as vaccines, biomaterials, and bioprocessing innovations.

This broadening of scope culminated in 2020, when a membership vote favored adopting the name "Division of Carbohydrate Chemistry & Chemical Glycobiology," explicitly recognizing that the Division's core mission extends beyond molecules to the complex biological systems in which glycans operate. The new name reflects the reality that many members now work at the interface of synthesis, enzymology, cell biology, and imaging – classic terrain for chemical glycobiology. It also captured the Division's forward-looking vision in the wake of its centennial celebrations at ACS Fall 2019 in San Diego, which were commemorated in a special issue of *The Journal of Organic Chemistry* ([volume 85, issue 24](#)).

The COVID-19 pandemic in 2020 accelerated changes in how the Division builds community. That year, CARB held its first fully virtual programming at one of the ACS Meetings & Expositions, maintaining scientific exchange despite global disruption. Virtual symposia and online discussions helped broaden participation, including from scientists who might previously have been limited by travel costs or geographic distance, thereby further democratizing access to the field.

The acceleration of advances in glycoscience in the past decade and a half is closely tied to the publication of the 2012 National Research Council's report, "Transforming Glycoscience: A Roadmap for the Future," which highlighted the timing for glycoscience to be advanced from a specialist pursuit into the scientific mainstream and emphasized that progress would require better tools, broader training, and deeper integration with biology, medicine, materials science, and engineering. The report's vision resonated strongly with the Division's own evolution as CARB expanded its programming, modernized its governance, and embraced a more inclusive identity that reflected the growing importance of chemical glycobiology and its integration with carbohydrate chemistry.

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This entrepreneurial layer is important for the Division because it broadens the community, creates new career paths, and strengthens the feedback loop between basic science and practical application.

In the years that followed, one of the clearest responses to the roadmap was a wave of innovation in carbohydrate synthesis. The long-standing difficulty of preparing structurally defined glycans had limited what researchers could ask in biology, but new efforts in automated glycan synthesis were explicitly aimed at making complex glycans more reproducibly accessible and at a pace better matched to modern discovery science. At the same time, chemoenzymatic methods using glycosyltransferases, glycosidases, and related tools increasingly streamlined access to human glycans, glycoproteins, and other glycoconjugates, reducing protecting-group complexity while enabling the preparation of defined complex structures in large compound libraries for biological studies. These advances have helped shift glycans from scarce specialist targets to experimentally tractable molecules that can be used in mechanistic studies, molecular recognition experiments, and translational research.

This growing access to well-defined glycans has in turn transformed adjacent fields, especially immunology. Modern glycoscience has revealed that glycans are not passive decorations but active regulators of immune recognition, tolerance, signaling, and inflammation, with implications for cancer, chronic infection, and autoimmune disease. Studies of antibody glycosylation and cell-surface glycans have shown how glycan structures can alter anti-cancer immune activity and shape therapeutic performance, helping to drive new approaches to immunotherapy and immune modulation. In that sense, the roadmap's call for cross-disciplinary engagement has been realized, not only in new methods but also in a richer understanding of how glycans function in clinically important biology.

The field's renewed momentum also fostered entrepreneurship. A new generation of glycan-focused companies has emerged to address needs in glycan synthesis, glycoanalysis,

diagnostics, immunotherapy, and enabling technologies, illustrating that glycoscience now supports not only academic discovery but also commercial innovation. The companies that have emerged reflect different parts of this ecosystem, from cancer immunotherapy to analytical platforms and synthetic access to complex oligosaccharides. This entrepreneurial layer is important for the Division because it broadens the community, creates new career paths, and strengthens the feedback loop between basic science and practical application.

The maturation of chemical glycobiology as a core pillar of the Division's identity was dramatically underscored by the recognition of Carolyn R. Bertozzi, a former Division awardee, with the 2022 Nobel Prize in Chemistry for the development of bioorthogonal chemistry. Dr. Bertozzi was the first woman to win the Horace S. Isbell Award in 1997, highlighting her early impact on the field. Her subsequent pioneering of bioorthogonal reactions for labeling glycans on living cells provided powerful tools to visualize and understand the dynamic roles of glycans in development, immunity, and disease, and sits squarely within the realm of chemical glycobiology that the Division now foregrounds.

Celebrating Bertozzi's Nobel within the Division context reinforces several themes central to the last two decades: the importance of fundamental synthetic innovation, the power of chemistry-enabled study of glycans, and the value of interdisciplinary collaborations linking organic synthesis, cell biology, and biomedical research. Her trajectory – from Isbell Award recipient to Nobel laureate – demonstrates how the Division's long-standing commitment to recognizing and nurturing excellence can ripple outward to transform broader science.

As CARB moves further into its second century, its identity as the Division of Carbohydrate Chemistry and Chemical Glycobiology positions it as a catalyst for cross-pollination among disciplines, a steward of a growing and diversifying community, and a champion of glycans as essential molecules in science and technology. In this way, the story of the Division is one of excellence, continuity, and continuous renewal and expansion honoring its roots in carbohydrate chemistry while embracing a broad, collaborative glycoscience future.

DIVISION OF CATALYSIS SCIENCE AND TECHNOLOGY

Expanding to Match a Burgeoning Field

The Division was launched in 2009, once it became clear that a large and well-defined community of catalysis researchers lacked a permanent home within the Society.

The Division of Catalysis Science and Technology (CATL) promotes fundamental and applied research in all aspects of catalysis, including molecular, biomolecular, and surface catalysis, as well as encompassing computational modeling and experimental studies.

The Division was formally launched in 2009. Its founders emerged from the Catalysis Secretariat, one of the interdisciplinary sections ACS had organized in the early 2000s to host sessions that did not fit neatly within a single Division. The Secretariat had drawn speakers from the intersection of the Inorganic (INOR), Colloids and Surface Science (COLL), Fuels (FUEL), and Petroleum (PETR) Divisions. As ACS moved away from organizing such sessions through Secretariats, it became clear that a large and well-defined community of catalysis researchers lacked a permanent home within the Society. The vision behind CATL was to provide exactly that. The timing proved opportune: Interest in catalysis had grown rapidly, driven by its central role in addressing sustainable chemistry and energy challenges, including electrocatalysis, photocatalysis, biomass utilization, and waste minimization.

The CATL Division was founded on a probationary basis in 2009. Israel Wachs worked with the last chair of the Catalysis Secretariat (Bing Zhou, Headwaters Technology) and spearheaded the overall organization efforts. Its formation preceded the launch of the field-leading *ACS Catalysis* journal in 2011, which both reflected and accelerated the growing vitality of the catalysis field. Chuck Peden of Pacific Northwest National Laboratory launched the probationary Division as its inaugural chair. After a one-year term, he was succeeded by Israel Wachs, who served consecutive two-year terms and shepherded CATL through its probationary phase as

membership grew from 194 in 2009 to more than 2,700 by the end of 2014. Those early years were focused on building awareness of the Division and raising funds to recruit for high-quality symposia at ACS Meetings & Expositions featuring leaders in the field. The close relationship between the Division and the journal is reflected in their co-sponsorship of the ACS Catalysis Lectureship.

As CATL “graduated” to full divisional status, it was led by a series of prominent chairs: Jingguang Chen, Michael Wong (who started the tradition of the popular CATL members’ reception), Daniel Resasco, and Aditya Bhan. Membership grew steadily throughout this period, reaching a peak of more than 3,800 in April 2020, driven by strong programming at ACS Meetings & Expositions that attracted a diverse range of early- and late-career catalysis researchers from around the world, as well as the Division’s support for regional catalysis meetings that extended its reach beyond the national stage. The Division also established the Early Career in Catalysis Award, first presented to Yuriy Roman in 2019, and the Exceptional Achievements in Catalysis Award, first presented to Francisco Zaera that same year. Both have continued to be among the most competitive recognitions in the field. Also in 2019, and shepherded by Karthi Ramasamy, the Division established a partnership with the Chemical Catalysis for Bioenergy Consortium (ChemCatBio) to fund Travel Awards supporting graduate students attending and presenting at ACS Meetings & Expositions. These student awardees are formally recognized during the Division’s Monday evening receptions at those meetings. Since their inception, these awards have helped hundreds of students advance their professional development through meeting participation.

Beginning in 2020, the Division experienced a sharp decline in membership due to the pandemic and the disruption of in-person meetings. Under the leadership of Bill Schneider and Eranda Nikolla, CATL staged a strong recovery, growing from a low of 2,600 members in April 2022 to over 3,800 as of April 2026. To stimulate reconnection after the pandemic, the Division introduced expanded all-member networking events at ACS Meetings & Expositions, where Travel Award recipients are recognized alongside the broader community. These events have reinforced the value of gathering in

Since their inception, the Division’s travel awards have helped hundreds of students advance their professional development through meeting participation.

Key drivers of the Division's evolution include the growing role of machine learning and artificial intelligence in catalysis research, rapidly shifting energy storage and conversion needs, and the imperative to design truly sustainable chemical processes.

person and helped integrate newer and younger members into the Division. A centerpiece of the Division's outreach to early-career researchers is the ACS CATL Virtual Summer School, launched in 2022, which brings together top researchers from academia, industry, and national laboratories to deliver educational lectures with extended discussion. Topics have spanned everything from the fundamentals of catalytic kinetics and thermodynamics to data science applications in catalysis. More recently, CATL has partnered with the Energy and Fuels Division (ENFL) to co-host the summer school, broadening both its topical scope and its audience.

Despite its strong trajectory in membership and scientific impact, CATL faces meaningful challenges ahead. Although the Division was conceived as a home to researchers from all branches of catalysis, it has become centered around heterogeneous catalysis. There are thus opportunities to increase engagement from researchers in molecular catalysis and biocatalysis. Broadening the Division's scope to bring it more fully in line with the breadth of the catalysis field itself will be a thrust as the field continues to evolve. Key drivers of that evolution include the growing role of machine learning and artificial intelligence in catalysis research, rapidly shifting energy storage and conversion needs, and the imperative to design truly sustainable chemical processes. Approaching the 20th anniversary of its founding, CATL is well positioned to serve as the community hub that brings together researchers across these frontiers and to adapt as new challenges emerge in the decades ahead.

Opposite page: U.S. Naval Academy midshipmen at Sci-Mix, ACS Spring 2022.
Photo credit: EPNAC.com



DIVISION OF CELLULOSE AND RENEWABLE MATERIALS

Inspiring Bio-Based Materials for a Sustainable Future

The ACS Division of Cellulose and Renewable Materials (CELL) has played a transformative role in advancing renewable materials science and engineering over the past two decades.

Although the Division itself was founded in 1920 and recently surpassed its centennial milestone, the period from 2002 to the present has been particularly significant, marked by remarkable growth in membership, expansion of scientific influence, strengthening of international collaborations, and a renewed commitment to sustainability and inclusivity. Through its scientific programming, educational initiatives, industrial partnerships, and global outreach, CELL has become a leading force in promoting bio-based solutions for a sustainable future.

One of the most visible indicators of CELL's success has been its extraordinary membership growth. In 2002, the Division had approximately 600 members. By 2026, membership

had increased to nearly 2,600, representing a more than fourfold expansion. This growth reflects the increasing global interest in renewable materials and sustainable technologies, as well as the Division's strategic evolution. One of the turning points was the renaming of the Division from the "Division of Cellulose, Wood and Fiber Chemistry" to the "Division of Cellulose and Renewable Materials." This change broadened the Division's scientific identity and made it more inclusive of emerging areas such as bio-based polymers, sustainable composites, cellulose nanomaterials, green chemistry, and circular materials science. The updated name better reflected the evolving scientific landscape and helped attract researchers from academia, government laboratories, and

industry who shared a common interest in renewable materials and sustainability.

International collaboration has been another defining achievement of the Division. CELL has cultivated strong relationships with major international organizations and conferences dedicated to polysaccharides, notably cellulose and carbohydrate chemistry. In particular, the Division has worked closely with the European Polysaccharide Network of Excellence (EPNOE), co-organizing EPNOE's biannual international conferences and participating actively in joint scientific activities. This partnership has strengthened transatlantic collaboration and facilitated the exchange of ideas between researchers in North America and Europe.

CELL has also maintained strong ties with the International Cellulose Conference held every five years in Japan. Members of the Division have frequently served on the conference's international advisory board, and CELL has consistently sent invited speakers and scientific representatives. In addition, the Division has participated in the advisory activities of the International Carbohydrate Symposium in partnership with the ACS Division of Carbohydrate Chemistry and Chemical Glycobiology (CARB). CELL, CARB, and the New Orleans Local Section hosted this international event in 2016 – the first time this conference returned to the U.S. since 1998. These collaborations demonstrate the Division's commitment to building a truly global scientific community focused on renewable materials and carbohydrate science.

Another important international contribution has been CELL's involvement in organizing the Gordon Research Conference on Polysaccharide Chemistry. The continued organization of this conference, including the upcoming meeting scheduled for 2027 in Santa Barbara, highlights the Division's leadership in fostering high-level scientific

dialogue and interdisciplinary collaboration.

The Division has also significantly expanded its support for students and early-career scientists. Recognizing that the future of renewable materials science depends on nurturing the next generation, CELL has increased the number of student awards, including graduate student awards and poster awards. These awards not only recognize scientific excellence but also encourage young researchers to engage actively with the scientific community. CELL also increased the number of Member-at-Large Executive Committee members by creating new positions for graduate and postgraduate students.

An innovative initiative was the creation of the "Undergraduate Spotlight" program in 2022. This program provides undergraduate and even high school students conducting research in cellulose and renewable materials with the opportunity to present both oral and poster presentations at ACS Meetings & Expositions. By introducing young researchers to professional scientific conferences early in their careers, the program promotes mentorship, confidence, and

long-term engagement with the field. Such initiatives demonstrate CELL's dedication to education, diversity, and the development of future scientific leaders.

The Division has also strengthened its visibility and communication strategies in recent years. Through the creation of a new website (acscell.org) and the establishment of a LinkedIn presence (www.linkedin.com/groups/13188244), CELL has modernized its outreach and improved communication with members worldwide. These digital platforms have enhanced the dissemination of scientific information, promoted networking opportunities, and increased engagement among students, researchers, and industrial partners. A recent support grant from ACS will further enable these communication efforts and contribute to the Division's growing impact.

Scientific programming has remained one of CELL's core strengths. Over the past two decades, the Division has organized numerous symposia and technical sessions at ACS Meetings & Expositions, many

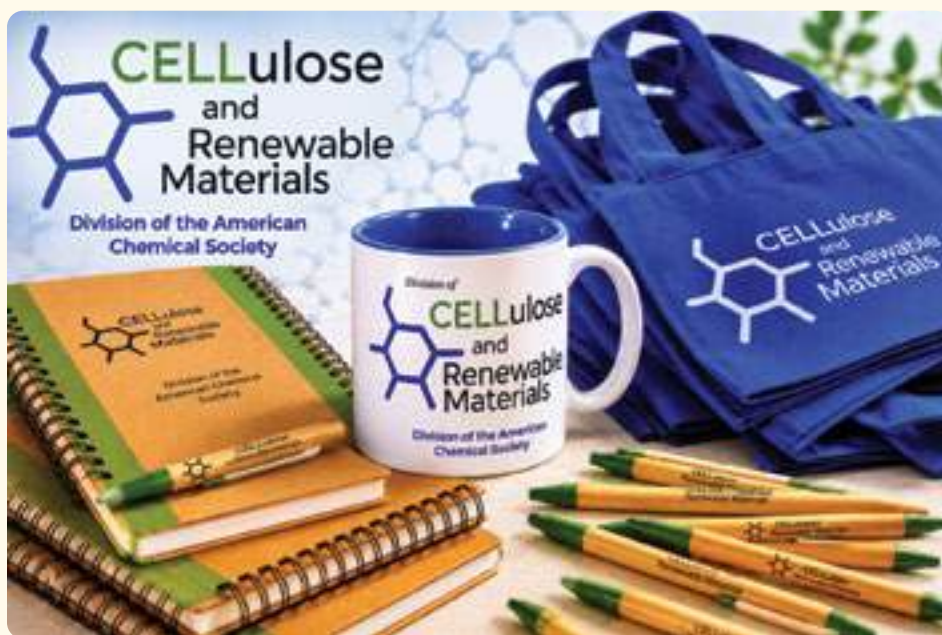


Photo credit: Division of Cellulose and Renewable Materials

of them in collaboration with other ACS Divisions such as PMSE (Polymeric Materials: Science and Engineering) and CARB. These joint sessions have encouraged interdisciplinary interactions and reflected the increasingly interconnected nature of renewable materials research. CELL has also collaborated with ACS Convergent Chemistry Communications on Natural Polymers and with the ACS Green Chemistry Institute (GCI) Natural Polymers Consortium (NPC) on joint programming initiatives. Such partnerships have helped bridge the gap between fundamental research, sustainability, and industrial applications.

In recent years, the Division has focused increasingly on industry engagement. The organization of Industrial Renewable Materials symposia has created opportunities for researchers from industry and academia to exchange ideas and identify practical solutions to sustainability challenges. In addition to adding graduate and postgraduate student Member-at-Large Executive Committee positions, CELL has also created an industry Member-at-Large position. These activities have strengthened the relevance of CELL within industrial sectors seeking renewable and biodegradable alternatives to conventional materials.

Financial support from industry has also been a major achievement. Since 2002, the Division has raised more than \$300,000 in sponsorships and support from individuals, research organizations, and industrial entities. These funds have helped sustain student programs, awards, symposia, and outreach activities while also reflecting the confidence that industry places in the Division's scientific leadership and vision.

A pivotal milestone in the Division's framework for honoring early-career excellence was the establishment of the KINGFA Young Investigator Award in 2014. This initiative officially secured an initial \$35,000 donation from Kingfa Sci. & Tech. Co. in November 2014, establishing a dedicated fund to recognize outstanding young scientists within the CELL community. This critical sponsorship was successfully brokered through the instrumental assistance of the late Professor Lina Zhang, academician of the Chinese Academy of Sciences from Wuhan University, who leveraged her connection with her former student, Dr. Delin Nie (deputy general manager at KINGFA), to finalize the historic agreement

alongside Dr. Lucian Lucia. This award not only exemplifies the Division's success in securing impactful industrial partnerships but also underscores its enduring global network and deep-seated dedication to elevating the next generation of renewable materials researchers.

Another important milestone was the publication of the special issue "Century of CELL" in the journal *Carbohydrate Polymers*. Although the Division's centennial celebration planned for 2020 was disrupted by the COVID-19 pandemic, the special issue served as an important tribute to the Division's achievements and contributions to sustainable materials science. The issue featured contributions from recipients of the prestigious Anselme Payen Award, KINFGA Young Investigator Award winners, and speakers from the Frontiers symposia. Collectively, these articles demonstrated the

breadth, scientific excellence, and societal relevance of research supported and promoted by the Division over the past century.

The recognition received by CELL through ACS awards further underscores its impact. In 2003 and 2015, the Divisional Activities Committee (DAC) awarded CELL the "Recognition of Innovation and Outstanding Services to Members of a Division." The 2016 ChemLuminary Award was a Joint Local Section Activities Committee (LSAC) and DAC Award for Outstanding Local Section–Division Collaboration. In 2026, the Division received a ChemLuminary Award recognizing its collaboration with CARB and highlighting the success of its interdisciplinary and cooperative approach to scientific programming and community building.

Overall, the achievements of the ACS Division of Cellulose and Renewable Materials from

2002 to the present reflect a remarkable period of growth, modernization, and global influence. Through expanding membership, fostering international collaborations, supporting students and early-career scientists, strengthening industry engagement, and promoting sustainable materials research, CELL has established itself as a leading scientific community dedicated to renewable materials innovation. As society increasingly seeks sustainable alternatives and circular material solutions, the Division's mission, "inspiring bio-based solutions for a sustainable future," has become more relevant than ever. With its strong scientific foundation, active global partnerships, and commitment to the next generation, CELL is exceptionally well positioned to continue shaping the future of renewable materials science for decades to come.

Overall, the achievements of the ACS Division of Cellulose and Renewable Materials from 2002 to the present reflect a remarkable period of growth, modernization, and global influence.

DIVISION OF CHEMICAL EDUCATION

Communication, Coordination, Inclusion: Cornerstones of the Division

Over the past two decades, the Division of Chemical Education (DivCHED) has evolved from a professional network supporting chemistry instructors into a collaborative and connected community that plays a central role in shaping chemical education.

Founded in 1921, the Division has long been committed to improving the teaching and learning of chemistry. From 2002 to 2026, it has expanded its reach and impact, becoming a more intentionally coordinated organization that connects research, assessment, and classroom practice on a national and increasingly global scale.

Today, DivCHED brings together educators and researchers across the full spectrum of chemical education, including high school teachers, two- and four-year college faculty, university instructors, educational researchers, and professionals from nonprofit and industry settings. Through its major programs, the *Journal of Chemical Education* (JCE), the ACS Examinations Institute, the Biennial Conference on Chemical Education (BCCE), and ChemEd X, the Division supports the advancement of chemical education in meaningful and sustained ways. At its core, this work is made possible through the contributions and leadership of its members.

Over this period, DivCHED has strengthened its presence as an inclusive and collaborative community. By bringing together educators and researchers from across the chemical education community, the Division supports the

advancement of both practice and scholarship of teaching and learning in chemistry. This shared commitment has positioned DivCHED as a valued contributor to the continued evolution of the field.

Division Focus and Evolution

DivCHED's mission, to foster a vibrant and inclusive community of educators and researchers dedicated to improving chemistry education, has remained constant even as its scope has grown. Initially focused on teaching improvement and the dissemination of instructional materials, the Division now plays a key role in discipline-based education research (DBER), assessment science, faculty development, and the broad dissemination of evidence-based practices.

A key aspect of this evolution has been the shift toward recognizing teaching as a scholarly, research-informed, and community-oriented endeavor. DivCHED has been an important component in this advancement by connecting research with classroom practice and encouraging the use of evidence in teaching. This work is driven by the Division's members, whose efforts collectively span the full cycle of educational innovation, from generating knowledge to assessing and improving student learning.

People, Leadership, and Committees

At its core, DivCHED remains a volunteer-driven organization. Its programs and initiatives are developed and sustained through the time, expertise, and leadership of its members. A large and active network of committees, boards, and working groups forms the backbone of the Division. These include groups focused on programming at ACS Meetings & Expositions, chemical education research, professional development, pre-college education, two-year college engagement, safety, awards, and regional activities. As an example, the Early Career Chemistry Education Scholars Committee plays an important role by engaging graduate students, postdoctoral scholars, and early-career faculty, helping to build the next generation of leaders in chemical education. Furthermore, two boards oversee key enterprises such as the JCE and the ACS Examinations Institute, respectively, ensuring continuity and quality across these efforts. Together, this distributed structure ensures that the Division's work reflects the full breadth of the chemical education community.

Members of the Division represent a wide range of professional settings, including high schools, community colleges, universities, and nonprofit, for-profit, and governmental organizations. This diversity strengthens the Division by bringing a variety of perspectives and experiences to its work.

As DivCHED has grown, its structure has become more coordinated, but its volunteer foundation remains central. Its continued innovation and impact reflect the collective leadership of its members, working together to advance chemistry education for all.

Major Milestones and Key Programs (2002–2026)

During this period, DivCHED has strengthened both its organizational structure and the reach of its core programs. While maintaining its volunteer-driven foundation, the Division has adopted a more coordinated approach to governance, including boards overseeing major activities and increased financial oversight as a 501(c)(3) organization.

This evolution is closely connected to the continued development of several key programs. The JCE, launched in 1924, expanded its reach following its 2010 co-publication with ACS Publications and is the largest chemistry education journal in the world. The ACS Examinations Institute has grown as a national authority in assessment, providing standardized tools to benchmark student learning and support evidence-based instruction.

ChemEd X represents an important step in expanding digital engagement, offering peer-reviewed, classroom-ready resources that connect research to practice. Initially focused on supporting high school educators, it has recently expanded to include resources for college and university instructors.

The BCCE, first held in 1970, has also continued to grow in scale and impact. Bringing together educators and researchers from across educational levels and professional roles, the conference fosters collaboration and exchange. Its format, combining research presentations, workshops, demonstrations, curriculum exchange, and networking, supports engagement with both theory and practice while strengthening a sense of community.

The Division serves as important infrastructure for the field of chemical education and as a bridge across the ACS Divisions.

DivCHED's programming at ACS Meetings & Expositions further extends these efforts, creating opportunities for educators and researchers to engage with chemical education research across disciplines. These meetings also serve as an important venue for governance, bringing together committees, boards, and leadership to coordinate activities and advance Division priorities.

Together, these programs and activities form a connected system through which DivCHED supports scholarship, assessment, and community. In doing so, the Division serves as important infrastructure for the field of chemical education and as a bridge across the ACS Divisions.

Future Directions: Strategic Planning and Communication

As DivCHED looks ahead, it continues to respond to evolving educational needs by focusing on communication, coordination, and inclusion. The Division's Strategic Plan provides a framework for this work, emphasizing professional development, member engagement, and effective communication. Implementation is guided by the Strategic Plan Oversight Committee (SPOC),

established in 2025 and carried out through volunteer-led strategy teams. Early efforts have included updates to the Division's website, expanded learning opportunities, community-building events, and improved access to resources.

Additional initiatives, supported by ACS grants, are strengthening ethics education and enhancing the Division's digital communication infrastructure. These efforts include collaboration with other ACS Divisions and improvements to online platforms to increase accessibility and engagement.

Looking forward, DivCHED is working to strengthen collaboration across its committees and leadership groups. By improving coordination and maintaining strong volunteer engagement, the Division is well positioned to respond to emerging challenges while continuing to support educators across all levels.

Conclusion

From 2002 to 2026, DivCHED has grown into a coordinated, community-driven organization that supports the advancement of chemical education through scholarship, assessment, and shared practice. Through the sustained efforts of its members, the Division has played a leading role in shaping how chemistry is taught and learned across diverse educational settings. This ongoing work reflects both the growth of the Division and the enduring commitment of its community. As the field continues to evolve, DivCHED remains well positioned to support educators and to help shape the future of chemistry education that serves all learners.



DIVISION OF CHEMICAL HEALTH & SAFETY

From Compliance to Culture: How CHAS Helped Transform Chemical Safety

Focus and Mission in the Chemistry Enterprise

The [Division of Chemical Health and Safety \(CHAS\)](#) is the Society's dedicated hub for advancing laboratory safety and health in the chemistry enterprise. Founded in 1979 with critical support from notable leaders such as former ACS President Glenn T. Seaborg, CHAS has for decades championed safety as part of excellence in chemistry. The Division's mission is to provide authoritative technical resources and mentorship in chemical health and safety for all, and its vision of "improving people's lives through the power of best chemical health and safety practices" guides activities. CHAS maintains a membership of about 1,500 professionals who are passionate about protecting people and the environment across all aspects of chemical research, education, and industry.

Programming at ACS Meetings & Expositions is one of the Division's major activities. CHAS symposia and panel discussions are focused on incident case studies, regulatory updates, emerging issues like nanomaterials, leadership, reproductive safety, and chemical safety education. Many CHAS symposia are recognized as part of the ACS Presidential series, ensuring that safety is prominently featured at meetings. The Division actively collaborates with partner organizations both internal and external to ACS.



CHAS' professional workshops cover topics on laboratory waste management, reactive chemical hazards, protective equipment, chemical hygiene responsibilities, and risk assessment. Now online, their workshops equip chemists and safety professionals with practical knowledge such as preparation for the [Chemical Hygiene Officer](#) certification exam.

Growth, Programs, and Milestones

CHAS built on its foundation by expanding outreach activities. When possible, CHAS members organize events at ACS Regional

Meetings, thus allowing Local Sections and smaller institutions to benefit from CHAS expertise. CHAS offers seed grants for those planning events at ACS Regional Meetings. CHAS regularly develops and delivers outreach as part of the [ACS Webinar](#) series.

The Division supports safety education for students and educators in K–12, undergraduate, graduate, and two-year programs. Division members consistently advocate for academic departments to treat safety education as fundamental to the chemistry curriculum. Our educational and outreach efforts influence how safety is taught. Input from educators helps shape CHAS outreach efforts, such as funding from an [Innovative Project Grant](#) (IPG) that is being used to survey academic researchers on their safety information practices.

By 2010, CHAS members were advocating a shift in safety education from “rules to risk” through the RAMP (Recognize hazards, Assess risks, Minimize risks, Prepare for emergencies) framework, a risk management model they developed. ACS has embraced the model and now owns the copyright for [Laboratory Safety for Chemistry Students](#), currently in its third edition and available as a free eTextbook.

Member Services and Recognition

Leveraging technology of the time, CHAS created a listserve for members. The DCHAS-L listserve connects members from academia, industry, and government laboratories globally and enables rapid dissemination of safety alerts, discussions of laboratory incidents and near misses, lessons learned, safety tips, and crowdsourced solutions

to safety challenges. Several DCHAS-L incident reports involving mishandling of flammable solvents in K–12 classrooms and outreach settings, along with the U.S. Chemical Safety and Hazard Investigation Board (CSB) report findings, led CHAS members to write a [summary reference paper](#) for educators and volunteers.

CHAS established the [Journal of Chemical Health & Safety](#), which became a key membership benefit and a primary conduit for scholarly articles on chemical safety. The journal featured research on monitoring, laboratory ventilation, emergency response, cultivating safety culture, safety education, and improvements in safety equipment. Its impact extended beyond CHAS membership via library subscriptions and online access. In 2020, the journal transitioned to ACS Publications as [ACS Chemical Health & Safety](#), where it has become a fully integrated scholarly outlet within the world’s largest chemistry publisher. Acquiring the journal underscored ACS’ acknowledgment of chemical safety as an essential scholarly discipline and its commitment to supporting a product of the Division. The journal is now globally available and barrier-free under the Diamond Open Access model.

During COVID, CHAS implemented “[CHAS Chats](#),” an inclusive dialogue-driven series featuring real-world safety scenarios that kept members engaged. This successful program is now widely used by the [CHAS 2-year College Community of Practice](#). The Division’s awards program encourages member excellence by shining a spotlight on Division leaders. CHAS offers [seven awards](#) in addition to Fellows recognition. CHAS organizes a social networking and recruiting event for members at ACS Meetings & Expositions.

Grounded in a strong culture of safety, CHAS will continue to address the technical, human, and organizational aspects of safety science.

Leadership in Safety Culture

Since 2010, CHAS and its allies have influenced the culture of safety at the highest levels of ACS and the broader chemistry community. High-profile laboratory incidents resulting in death and severe injury exposed gaps in academic safety practices, galvanizing the scientific community to drive safety improvements in academic laboratories. In 2011, the [CSB](#) asked ACS to develop risk management guidance for academic researchers. CHAS members, in partnership with the ACS Committee on Chemical Safety (CCS), led the effort and produced the report “[Identifying and Evaluating Hazards in Research Laboratories](#).” It is currently being updated to incorporate RAMP. CHAS organized a [symposium](#) and participated in a [press conference](#) to launch the publication at ACS Fall 2013.

CHAS members, in collaboration with the CCS, served on the ACS Safety Culture Task Force to create the 2012 report “[Creating Safety Cultures in Academic Institutions](#).” This provides practical guidance on strengthening safety culture in universities and colleges. The report emphasizes that working safely is a core ethical responsibility of chemical education. After years of advocacy from CHAS and other groups, [ACS executive](#)

[leadership](#) formally recognized the centrality of safety by adding it to the ACS core values and strategic plan.

In 2017, a new requirement directed authors to include a [safety statement](#) in journal articles describing experimental work. This was a direct result of collaboration between CHAS and ACS publications. In 2019, CHAS members wrote a [Communicating Safety Information](#) section, which provides guidance on writing safety statements, for the *ACS Guide to Scholarly Communication*. This supports the Division’s position that risk assessment should be built into professional practice and chemical education, not an afterthought.

[ACS Presidential Safety Summits](#) were established in 2018 to shape ACS strategies and safety initiatives, including the then newly formed ACS Office of Safety Programs. CHAS members serve on the steering committees and participate as subject matter experts and facilitators at the summits. Summit themes have included defining strategic safety goals, strengthening chemical safety education and communication, supporting safety education for Ph.D. chemists entering industry, and supporting [Laboratory Safety Teams \(LSTs\)](#).

CHAS has had a profound impact on the chemistry enterprise by ensuring that the next generation of research chemists practice risk-based safety. In 2021, funding from an [IPG](#) supported educational RAMP workshops for LST leaders. CHAS has provided a home for LSTs, helping to expand this grassroots movement. CHAS members mentor [Peer-Led Workshops](#) that teach risk assessment and safety culture. Begun in 2018, they are presented by graduate students for graduate students.

In 2019 CHAS received two [ChemLuminary Awards](#), highlighting its outstanding programming and collaborative safety initiatives aimed at early-career chemists. That year CHAS celebrated its 40th anniversary with a symposium reflecting on the evolution of safety within ACS.

In the industrial and governmental sectors, CHAS serves as a conduit for sharing best practices that improve process chemical safety management. As the legal cannabis industry emerged, CHAS established the CANN subdivision, providing a home within ACS for scientists working on cannabis testing, product chemistry, and related public health issues – all within a framework of rigorous safety and quality standards.

Using their collective expertise, CHAS members have worked with ACS leadership to evaluate and reimagine how all ACS programming and content could promote best safety practices and improve the safety culture. Safety briefings in conference orientations, enforcement of safety requirements

in meeting demonstration workshops, and standardized messaging in safety resources are all tangible outcomes of the work.

CHAS members have played a key role in collaborating with ACS committees to develop vital safety resources. Notable contributions include updating [Safety in Academic Chemistry Laboratories, 8th Edition](#) with the CCS and adding a chapter on safety to the Committee on Professional Training's [ACS Guidelines for Bachelor's Degree Programs](#).

A Forward Look

CHAS remains a vibrant, innovative, and forward-thinking Division. Grounded in a strong culture of safety and now firmly established as a core professional value, CHAS will continue to address the technical, human, and organizational aspects of safety science. The future will likely see CHAS deepening its role in ACS strategic initiatives on sustainability and education. As ACS now formally “embodies safe, ethical, and responsible practices” in its core values, CHAS will serve as a key driver in translating that value into action.

When asked in an [interview in 1998](#), “Do you have any ideas on what the ACS should be doing to stress the importance of chemical health and safety?” Dr. Seaborg replied, “Perhaps articles like this might give publicity to it.” In presenting this short history of the Division’s work, we hope that this article will continue to stress the importance of chemical safety to ACS and the broader chemistry enterprise.

DIVISION OF CHEMICAL INFORMATION

From Documentation to the Digital Age

From 2002 to 2026, the ACS Division of Chemical Information (CINF) maintained its historic strengths in chemical literature, patents, indexing, databases, scholarly communication, and information practice while expanding decisively into cheminformatics, research data, open science, standards, machine learning, and artificial intelligence.

That evolution reflects CINF's distinctive role within ACS. The Division is defined not by one chemical subdiscipline but by the infrastructure that enables chemistry to be found, organized, interpreted, shared, and reused. During this period, CINF helped carry chemical information work from an era of printed resources and expert intermediaries into one increasingly driven by networked data, interoperable identifiers, computational workflows, and algorithmic discovery.

Several institutional milestones marked this transition. CINF revised its mission in 2004 and developed strategic plans in 2007 and 2017 that emphasized collaboration, outreach, interactive programming, professional development, and recognition of excellence. The Division established the Lifetime Membership Award in 2006; strengthened its fundraising committee and sponsor relationships; piloted electronic balloting in 2007; and received three ChemLuminary Awards, one in 2005 and two in 2007. CINF members contributed expertise to numerous ACS

committees, including the annual compilation of resources for Earth Day (2004–2009) and National Chemistry Week (2003–2009). These activities show a Division investing not only in technical programming but also in governance, continuity, member service, and the professional community.

CINF's documentary record also became more digital and durable. In spring 2010, *Chemical Information Bulletin* (CIB) transitioned from print to an online-only format. Material from *CINF E-News*, begun by Bruce Slutsky in 1999 as a post-national meeting publication, was folded into the summer and winter issues, and CIB began publishing four issues per year. CINF also signed an agreement with the University of North Texas Digital Library to digitize and archive CIB from volume 1, published in 1949, and arranged for divisional materials formerly collected by Val Metanomski to be preserved at the Chemical Heritage Foundation. These steps, alongside website migrations and newer discussion platforms, improved access to CINF's institutional memory and positioned the

The Division is defined by the infrastructure that enables chemistry to be found, organized, interpreted, shared, and reused.

Division for a digital communications environment. Moreover, Wendy Warr & Associates offered a “Chemical Information and Computation” series of competitive intelligence reports tied to each of the ACS Meetings & Expositions.

Programming has consistently been a core, highly visible contribution of CINF. Scientific presentations at ACS Meetings & Expositions continue to be a major member benefit. The Division has participated actively in the Multidisciplinary Program Planning Group (MPPG) since its inception in 2007, with Guenter Grethe serving as MPPG chair for a period. CINF Division and program chairs wrote a series of reports and interviews for CIB and *Chemical & Engineering News* highlighting trends in the technical program and the growing importance of chemical data, computational tools, and new measures of scholarly impact. That direction later became evident in the 2016 and 2023 Data Summits and in recent programming on artificial intelligence, natural language processing, open source software, machine learning, and data-centric chemistry – all aligned with the CINF mission statement: “It’s all about the (chemical) data!”

Education and professional development were equally central. The 2003 workshop “Teaching

chemical information: Tips and techniques” reflected CINF’s long-standing commitment to instruction. In 2006, CINF participated in the Biennial Conference on Chemical Education at Purdue University with programs on incorporating chemical information into curricula and teaching copyright and plagiarism. To broaden access to scientific content, the Division launched a series of free webinars with recordings subsequently made available. Innovative Project Grants supported educational and outreach efforts, including podcasting technical sessions, Careers Vignettes, a Best Presentation Award pilot, website redesign, CINFlash eight-minute presentations, and a collaborative repository of teaching materials. By 2010, that repository, developed with the Chemie Information Computer (CIC) Division of the German Chemical Society (GDCh), was known as XCITR: eXplore Chemical Information Teaching Resources.

Collaboration became a defining theme of CINF work after 2002. The CIC–CINF relationship, the first Division-to-Division collaboration between ACS and GDCh, began in 2004 and included meetings in the United States and Germany, joint symposia, and shared teaching resources.

CINF also collaborated or co-sponsored symposia with CHAS, COMP, CHED, MEDI, AGRO, TOXI, COMSCI, WCC, IUPAC, the InChI Trust, the Chemical Structure Association (CSA) Trust, the International Conference on Chemical Structures, the Blue Obelisk community, the Special Libraries Association Chemistry Division (SLA DCHE), and the Association for Information Science & Technology (ASIS&T). Work with CHAS was especially visible through Innovative Project Grants; the Fall 2017 Chemical Safety Information symposium; *Journal of Chemical Health & Safety* articles, including a baseline survey of academic chemical safety information practices; and the Fall 2021 “CSL in a Box” introduction to the Chemical Safety Library. In collaboration with the SLA DCHE, CINF organized biannual symposia and published *Information Competencies for Chemistry Undergraduates* Wikibook editions in 2007 and 2011. These partnerships show how chemical information became infrastructure for many parts of chemistry.

CINF’s publication record during this period further demonstrates its breadth. ACS Symposium Series volumes associated with CINF covered a wider range of topics, including intellectual property, fragment-based drug design, data management,

the history of chemical information, science and law, molecular design, authorship and credit, and machine learning in materials informatics. Beginning in 2011, comprehensive Herman Skolnik Award Symposium reports by Wendy Warr also became an important record of divisional scholarship, first appearing in CIB, funded by sponsors, and second on the CINF website, supported internally by the Division.

CINF also cultivated a lively professional community. From the 2000s through the mid-2010s, receptions, luncheons, award ceremonies, and social networking events helped welcome new members and maintain professional ties. Harry’s Party, founded in 1964 by Harry M. Allcock, remained a beloved Monday evening tradition and continued after his retirement until 2012. The CINF Luncheon, the earliest and longest-running social gathering, featured invited keynote speakers, member honors, and awards. Notably, the Division’s membership has been increasing. Around 2013, CINF waived student membership dues, encouraging greater student participation at SciMix and beyond. Awards and scholarships such as the Herman Skolnik Award, Lucille M. Wert Award, Scholarships for Scientific Excellence, Val Metanomski Meritorious Service Award, Lifetime

The people associated with CINF illustrate the Division’s unusual combination of informatics, librarianship, data, and scholarly communication.

Membership Award, and CINF Functionary Aid recognized both research achievement and sustained service. CINF members also contributed to ACS governance through committee leadership, including roles connected with publications, nomenclature, ethics, and Local Section affairs.

The people associated with CINF illustrate the Division's unusual combination of informatics, librarianship, data, and scholarly communication. Recent Herman Skolnik Award winners such as Patrick Walters, Alexandre Varnek, Matthias Rarey, and Antony Williams represent cheminformatics, molecular design, open data, and computational discovery. ACS Fellows and leaders, including Bonnie Lawlor, Grace Baysinger, Judith Currano, Andrea Twiss-Brooks, Rachelle Bienstock, Connor Coley, Leah McEwen, Carmen Nitsche, Wendy Warr, and Gary Wiggins, reflect the equally important traditions of chemistry librarianship, information policy, scientific publishing, data standards, education, and service. Seen in the context of ACS' 150th anniversary, CINF's 2002–2026 history is part of the larger story of how chemistry entered the digital age while continuing to depend on people, institutions, and communities that make chemical knowledge usable.

Selected ACS Symposium Series Publications 2002–2026

- 1 Twiss-Brooks, A., Ed. *Special Topics in Intellectual Property*; ACS Symposium Series 1055; American Chemical Society: Washington, DC, 2010.
- 2 Bienstock, R. J., Ed. *Library Design, Search Methods, and Applications of Fragment-Based Drug Design*; ACS Symposium Series 1076; American Chemical Society: Washington, DC, 2011.
- 3 Xiao, N.; McEwen, L. R., Eds. *Special Issues in Data Management*; ACS Symposium Series 1110; American Chemical Society: Washington, DC, 2012.
- 4 McEwen, L. R.; Buntrock, R. E., Eds. *The Future of the History of Chemical Information*; ACS Symposium Series 1164; American Chemical Society: Washington, DC, 2014.
- 5 Town, W. G.; Currano, J. N., Eds. *Science and the Law: Analytical Data in Support of Regulation in Health, Food, and the Environment*; ACS Symposium Series 1167; American Chemical Society: Washington, DC, 2014.
- 6 Town, W. G.; Currano, J. N., Eds. *Science and the Law: How the Communication of Science Affects Policy Development in the Environment, Food, Health, and Transport Sectors*; ACS Symposium Series 1207; American Chemical Society: Washington, DC, 2015.
- 7 Bienstock, R. J.; Shanmugasundaram, V.; Bajorath, J., Eds. *Frontiers in Molecular Design and Chemical Information Science – Herman Skolnik Award Symposium 2015: Juergen Bajorath*; ACS Symposium Series 1222; American Chemical Society: Washington, DC, 2016.
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DIVISION OF CHEMICAL TOXICOLOGY

Molecules, Mechanisms, and Mission: Growth and Discovery in the Division

A Division Built on Chemical Mechanisms

The ACS Division of Chemical Toxicology (TOXI) held its inaugural symposia at ACS Fall 1996 in Orlando, filling a genuine gap in the Society's scientific landscape. Although ACS Divisions addressed organic chemistry, biochemistry, medicinal, and environmental chemistry, no dedicated forum existed for scientists whose primary focus was the molecular mechanisms by which chemicals damage living systems. Richard N. Loeppky, whose work on nitrosamine carcinogenesis had brought this absence into sharp relief, founded the Division to unite chemists and biochemists committed to asking not merely what is toxic, but why and how at the molecular level.

The founding leaders deserve recognition. Lawrence J. Marnett served as the Division's first Secretary and Treasurer for 11 years while simultaneously founding and editing *Chemical Research in Toxicology* (*Chem Res Toxicol*). Stephen S. Hecht served as the first program chair and later became the second chair. Together, Loeppky, Marnett, and Hecht established the intellectual standards and organizational foundations on which everything that followed was built. By 2002, the Division had already established itself as an intellectually distinctive home.

The years 2002–2026 represent the Division's period of full scientific maturity. Membership grew from a few hundred dedicated researchers into a community of more than 1,400 scientists spanning academia, industry, government agencies, and regulatory bodies. That breadth reflects the reach of the field itself: TOXI members bring expertise in mass spectrometry, synthetic chemistry, structural biology, enzymology, computational modeling, proteomics, metabolomics, molecular epidemiology, and bioanalytical chemistry to bear on shared questions about how chemicals damage living systems and how those systems respond.

Milestones and Programmatic Achievements (2002–2026)

Central to TOXI's identity has been its stewardship of *Chem Res Toxicol*, the primary publication venue for mechanism-focused toxicology since 1988. The journal has been guided by three editors: founding editor Marnett, followed by Hecht, and currently Shana Sturla. In 2022, the Division celebrated the journal's 35th anniversary with a virtual symposium honoring Marnett's founding contribution. *Chem Res Toxicol* today carries an impact factor approaching 4.0, holds Q1 status in both toxicology and chemistry, and maintains an h-index of 183.

The Founders' Award, established in 2008, has become one of TOXI's most celebrated traditions. Each recipient delivers the Richard Loeppky Lecture and organizes a symposium in their honor at ACS Meetings & Expositions. Awardees from 2008 through 2025 – Lawrence Marnett, Stephen Hecht, Richard Loeppky, F. Peter Guengerich, Thomas Baillie, Steve Tannenbaum, Paul Hollenberg, Arthur Grollman, Nicholas Geacintov and Suse Broyde, Ian Blair, Judy Bolton, Trevor Penning, Pete Dedon, John Essigmann, Cynthia Burrows, Yinsheng Wang, Amanda Bryant-Friedrich, Shana Sturla, and Kent Gates – have collectively defined the mechanistic landscape of chemical carcinogenesis, DNA adduct formation, oxidative stress, drug metabolism, and DNA damage and repair.

The *Chem Res Toxicol* Young Investigator Award provided critical recognition for early-career scientists whose work showed exceptional promise. Early recipients such as Sturla, Yinsheng Wang, and Penny Beuning went on to assume sustained leadership roles within TOXI, demonstrating that the award has functioned not merely as recognition but as a launching pad for long-term Division leadership.

TOXI programming at ACS Meetings & Expositions has continuously evolved to reflect scientific advances and emerging public health priorities, encompassing DNA damage and repair, reactive metabolites, environmental carcinogens, tobacco-specific nitrosamines, oxidative stress, epigenetic modifications, and drug-induced organ toxicity. A joint session with MEDI on Drug-Induced Liver Injury, led for 20 years by researchers from Vanderbilt

(Fred Guengerich) and Bristol Myers Squibb (Nicholas Meanwell), exemplifies the Division's commitment to bridging academic discovery and translational application.

The ACS Spring Digital Meeting, launched during the COVID-19 pandemic and sustained as a permanent fixture, democratized access for members and students unable to attend in-person meetings. The establishment of ACS-IndiaTox further extended this global reach, culminating in an inaugural in-person conference in India in fall 2024 – a concrete demonstration of the Division's recognition that chemical toxicology is a global challenge requiring a global scientific community.

Scientific Themes Defining the Era

The scientific agenda of TOXI from 2002 to 2026 was shaped by the interaction of technological revolutions and public health imperatives. The maturation of high-resolution mass spectrometry – capable of identifying and quantifying DNA adducts, protein modifications, and metabolites at femtomolar concentrations – transformed the Division's analytical repertoire. Methods pioneered by TOXI members for adductomics opened new windows into how tobacco carcinogens, environmental pollutants, endogenous reactive species, and therapeutic drugs alter DNA.

Tobacco toxicology remained a focus throughout. TOXI members made foundational contributions to understanding the chemistry, metabolism, and DNA-damaging properties of tobacco-specific nitrosamines NNK and NNN, polycyclic aromatic

hydrocarbons (PAHs), and reactive aldehydes in cigarette smoke. As electronic cigarettes emerged as a major public health phenomenon in the 2010s, Division researchers were among the first to characterize e-cigarette aerosols; identify novel toxicants, including acrolein and propylene glycol oxidation products; and assess their capacity to form DNA adducts and induce cellular stress – positioning TOXI scientists as authoritative voices in regulatory conversations about nicotine products.

Computational approaches rose to prominence alongside experimental work. QSAR modeling, molecular dynamics simulations of carcinogen-DNA adduct conformations, toxicogenomic pathway analysis, and machine learning for reactive metabolite prediction became integral to how Division members framed research questions. Joint symposia with Biochemistry and Chemical Biology (BIOL), Environmental Chemistry (ENVR), and Chemical Information (CINF) reinforced TOXI's interdisciplinary reach across the broader ACS community.

A Living Intellectual Lineage: The Leaders of TOXI

One of TOXI's most striking features across its 30-year history is its intellectual genealogy – a mentorship chain connecting the Division's founders to its present stewards.

Richard Loeppky, the founding chair, set the tone through his work on nitrosamine chemistry. Stephen Hecht built one of the most productive programs in tobacco carcinogenesis and mentored future leaders, including Shana Sturla

and Thomas Spratt. Neil Castagnoli brought expertise in neurotoxic nitrogen compounds and mentored Lisa Peterson, a future chair. Gerry Wogan's contributions to aflatoxin biology helped define the Division's mechanistic paradigm, a tradition extended by John Groopman, a subsequent chair, through his work on aflatoxin biomarkers and molecular epidemiology.

F. Peter Guengerich represents the most connected node in this network. His foundational contributions to cytochrome P450 biochemistry were matched by his mentorship of two subsequent chairs – Lisa Peterson and Dan Liebler – making him a generational anchor of Division leadership. Trevor Penning, trained by Paul Talalay, contributed decades of scholarship on PAH metabolism and aldo-keto reductases. Nicholas Geacintov's structural studies of PAH-DNA adducts shaped understanding of mutagenesis and repair across the entire era.

Natalia Tretyakova, trained by James Swenberg and Steve Tannenbaum – early contributors to TOXI – brought exceptional mass spectrometry expertise to the chair role. Sturla, mentored by Hecht, developed innovative approaches to interrogating how DNA damage leads to mutations. Mike Stone and Thomas Spratt continued this trajectory through structural and mechanistic studies of DNA damage and repair. Chair-elect Michael Trakselis, working at the interface of DNA replication and repair, stands ready to carry this lineage into TOXI's fourth decade.

This succession – bound by mentorship and shared scientific commitments – is among the Division's most enduring achievements.

The Division of Chemical Toxicology was founded on the conviction that understanding the molecular mechanisms of toxicity is not merely an academic pursuit – it is the scientific foundation on which rational approaches to human and environmental health must be built.

Looking Forward

TOXI commemorates its 30th anniversary at ACS Fall 2026 in Chicago at a remarkable scientific juncture. Tools ranging from single-cell omics and cryo-electron microscopy to AI-driven chemical space exploration and organ-on-a-chip systems offer unprecedented power to interrogate chemical-biological interactions at every level of organization.

Emerging exposures – microplastics and their chemical additives, PFAS, nanomaterials, and aerosol mixtures from next-generation nicotine and cannabis products – demand exactly the mechanistic, chemistry-first approach that has always been TOXI's hallmark. The integration of AI and machine learning into toxicological prediction and chemical safety assessment represents both opportunity and responsibility; TOXI's tradition of pairing experimental chemistry with quantitative analysis positions it as a natural partner in the transition toward new approach methodologies that reduce reliance on animal testing.

The launch of *ACS ES&T Toxicology* – a new journal sitting at the intersection of environmental and human health, and integrating chemistry with chemical risk assessment, ecology, public health, and epidemiology – signals growing recognition across the scientific community that mechanistic

toxicology is indispensable to addressing planetary health challenges. TOXI and its flagship journal *Chem Res Toxicol* are well positioned to engage productively with this broader ecosystem.

TOXI's growing international reach through ACS-IndiaTox and the virtual symposium program is helping to move the Division toward a truly global scientific community. Chemical exposures do not respect national borders, and nurturing those international connections will be among the Division's most consequential contributions in the years ahead.

The Division of Chemical Toxicology was founded on the conviction that understanding the molecular mechanisms of toxicity is not merely an academic pursuit – it is the scientific foundation on which rational approaches to human and environmental health must be built. That mission has always demanded discipline: All advances must remain grounded in the two pillars of toxicology – hazard identification and risk assessment – keeping findings anchored in biological and human relevance. Without this discipline, even the most elegant mechanistic chemistry risks misdirecting public health concerns. TOXI enters its fourth decade with that founding conviction intact, its scientific community vibrant, and its relevance to 21st-century challenges greater than ever.

DIVISION OF CHEMISTRY AND THE LAW

Fostering Collaboration and Professional Development

Over time, CHAL's programming has expanded to encompass a broad range of topics, including expert testimony, forensics, regulatory law, intellectual property, chemical tort liability, environmental law, government regulation, criminal law, professional ethics, and labor law.

The Division of Chemistry and the Law (CHAL) was established in 1980 as a subdivision of the Division of Chemical Information (CINF), largely through the efforts of Howard Peters.

Peters initially recruited members primarily from the Santa Clara Valley Local Section and then steadily expanded CHAL's geographic reach. As interest grew, he organized a committee to develop programming for ACS Meetings & Expositions. CHAL became a probationary Division in 1982 and was granted full divisional status in 1985.

Before CHAL's creation, ACS had no Division dedicated to programming at the intersection of chemistry and the legal profession. Although many of CHAL's founding members – including Peters – were intellectual property practitioners, early recruits also brought expertise in regulatory and compliance matters. Over time, CHAL's programming has expanded to encompass a broad range of topics at this intersection, including expert testimony, forensics, regulatory law, intellectual property, chemical tort liability, environmental law, government regulation, criminal law, professional ethics, and labor law.

CHAL's membership spans all chemical disciplines and includes professionals from diverse organizational backgrounds who share an interest in the legal dimensions of chemistry. Accordingly, the Division develops programming not only for its own members but also for the broader ACS community. Over the past 25 years, CHAL has presented career workshops on opportunities in the legal

profession; mock trials demonstrating what it is like to testify as a witness; sessions on the rights and responsibilities of chemists in intellectual property; webinars addressing current legal issues; and seminars on workplace rights, including harassment.

In addition to technical programming, CHAL fosters networking among members interested in chemistry and the law. A key feature is the Division's reception at each of the ACS Meetings & Expositions, traditionally held Monday evening before Sci-Mix. CHAL also holds monthly Executive Committee meetings that are open to all members and prospective members. To keep its community informed, the Division publishes a semiannual newsletter highlighting recent activities and developments in the field.

To better recognize outstanding service to the Division and ACS, CHAL has established three awards. The Roger D. Middlekauf Award, named for a deceased former chair of the Division, is periodically awarded to a CHAL member who has given outstanding contributions and service to the Division. The Howard and Sally Peters Award is periodically awarded to an ACS member who has pursued a non-traditional career in chemistry and has contributed exceptional time and energy to ACS. The Judge Pauline Newman Award, named for the lawyer and jurist currently serving as a U.S. Circuit Judge of the United States Court of Appeals for the Federal Circuit, has only been awarded once in its history and is reserved for the most exceptional members of the profession.

In 2025, CHAL held its first strategic planning retreat in several years. With guidance from two ACS-appointed facilitators, 11 participants engaged in a day-and-a-half discussion of the Division's strengths, weaknesses, and goals. This process resulted in several key priorities for the coming years: (1) growing and retaining membership through stronger stakeholder engagement; (2) delivering diverse programming that appeals across the ACS community; and (3) enhancing collaboration with other ACS units and external organizations on legal issues.



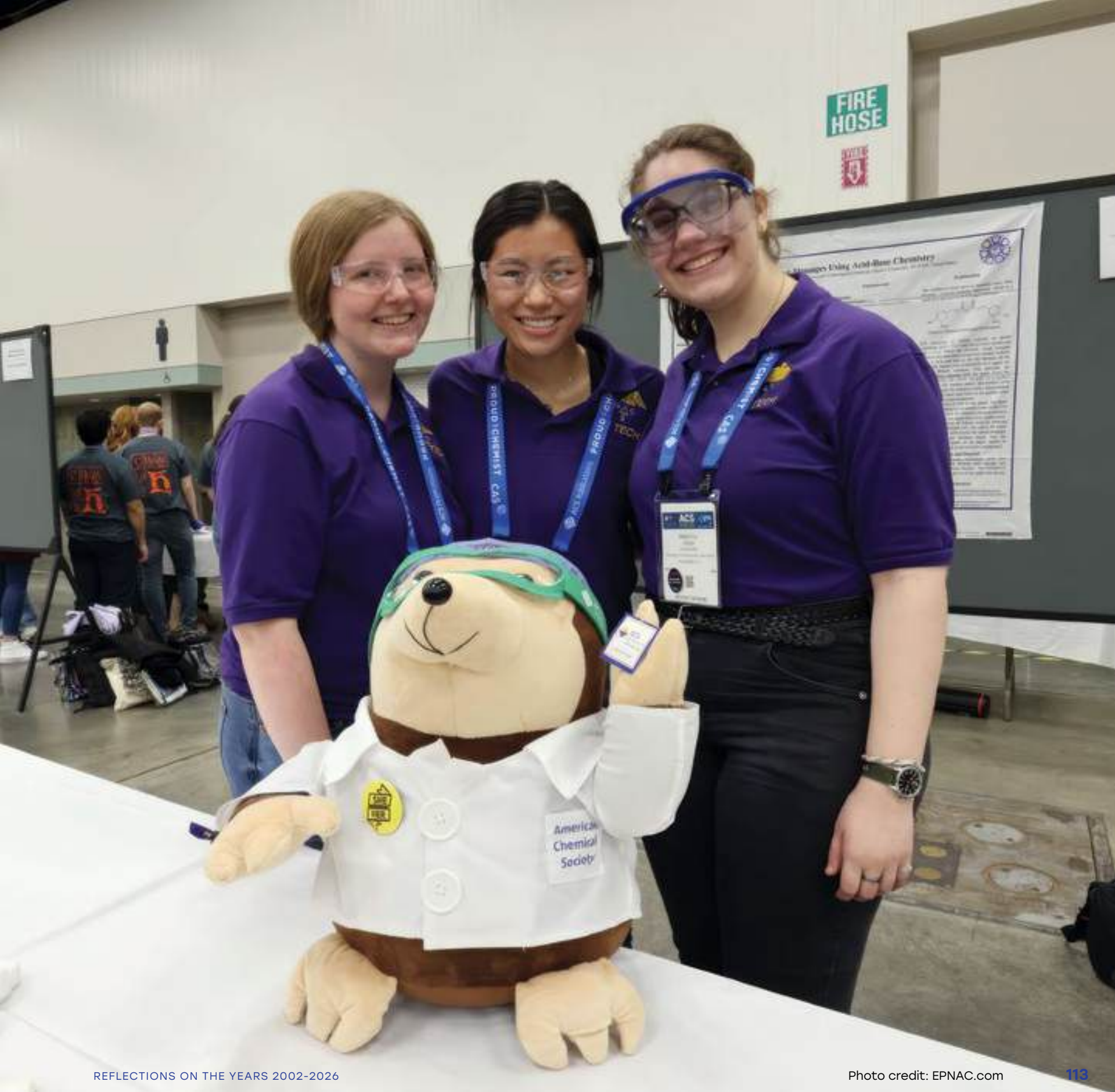
Howard and Sally Peters present the Howard and Sally Peters Award to Lee Latimer at ACS Fall 2025 in Washington, D.C.

Photo credit: Matthew Hlinka

By fostering collaboration, supporting professional development, and anticipating changes in both the scientific and legal landscapes, CHAL seeks to remain a dynamic and forward-looking Division that will serve its members and the broader ACS community for decades to come.

In 2026, CHAL will launch its new Forensics subdivision. The Division has observed growing interest in forensic science – particularly among early-career scientists and ACS members – as both a discipline and a career path. Historically, forensic programming has been dispersed among several Divisions, including CHAL, without a central home within ACS. The new subdivision aims to bring these professionals together in a cohesive community, facilitate connections, and support the continued growth of forensic chemistry within the Society.

Looking to the future, CHAL is well positioned to deepen its role as the premier forum within ACS for issues at the intersection of chemistry and the law. Building on its strategic priorities, the Division aims to expand its reach through increased engagement with students, early-career professionals, and interdisciplinary practitioners while continuing to deliver high-quality relevant programming across emerging areas such as data governance, artificial intelligence, global regulatory harmonization, and evolving standards for scientific evidence. CHAL also intends to strengthen partnerships within ACS and with external legal, scientific, and policy organizations to amplify its impact and visibility. By fostering collaboration, supporting professional development, and anticipating changes in both the scientific and legal landscapes, CHAL seeks to remain a dynamic and forward-looking Division that will serve its members and the broader ACS community for decades to come.



DIVISION OF COLLOID AND SURFACE CHEMISTRY

Bridging Disciplines and Building Community

One of the defining insights emphasized in recent reflections about the Division's scope is the ubiquity of colloid and interface science.

The ACS Division of Colloid and Surface Chemistry (COLL), formally established in 1926, emerged from an earlier scientific movement already underway.

The first National Colloid Symposium, held in 1923 at the University of Wisconsin, brought together a small visionary group of researchers who recognized that interfaces govern a vast range of physical and chemical phenomena. Since then, COLL has grown into one of the most interdisciplinary and societally relevant communities within ACS.

Colloid and surface chemistry is fundamentally concerned with interfaces – regions where distinct phases meet – and the complex physicochemical phenomena that arise at these boundaries. These include interfacial forces, adsorption, wetting, phase changes, and self-assembly, spanning molecular- to macroscopic-length scales. The field encompasses dispersions such as emulsions, foams, suspensions, and aerosols, as well as soft matter systems. Between 2002 and 2026, the scientific scope of the Division has broadened significantly while maintaining strong roots in classical interfacial science. Foundational areas have been complemented by rapid growth in emerging topics including nanomaterials, biomaterials, and biointerfaces. Advances in experimental techniques and computational modeling have further enabled detailed exploration of interfacial phenomena across scales.

One of the defining insights emphasized in recent reflections about the Division's scope is the ubiquity of colloid and interface science. The impact of the field extends far beyond the laboratory,

shaping products and technologies encountered daily. This pervasive influence has become increasingly visible over the past two decades, particularly as global challenges have intensified. Advances in interfacial science underpin critical developments in health, including drug delivery systems and diagnostic technologies, as well as in energy applications such as catalysis and electrode/electrolyte interfaces in batteries. Environmental challenges, particularly those related to water purification and pollutant remediation, rely heavily on an understanding of interfacial processes. At the same time, the design of sustainable materials and formulations increasingly depends on precise control over colloidal and interfacial interactions. In this sense, colloid and surface chemistry serves as a bridge across disciplines, connecting fundamental science with technologies and industries that affect daily life on a global scale.

The Division's programming at ACS Meetings & Expositions mirrors this trajectory, maintaining continuity through established symposia while incorporating emerging topics proposed by expert Division members. This structure, which traces its origins to earlier leadership initiatives, has proven remarkably effective in sustaining engagement across generations of researchers.

The Colloid and Surface Science Symposium (CSSS), first held in 1923 and renamed in 1976, remains the flagship meeting of the community and a defining feature of the Division's identity. Its remarkable continuity underscores its importance as both a scientific forum and a community anchor. A defining aspect is its emphasis on students and early-career researchers. The structure of the meeting encourages direct interaction across career stages, creating an environment where scientific exchange is both rigorous and accessible. This has helped sustain a strong sense of belonging within the community. As reflected in recent accounts, participants often view the symposium not simply as a conference but as a central gathering place – one they remain committed to supporting throughout their careers.

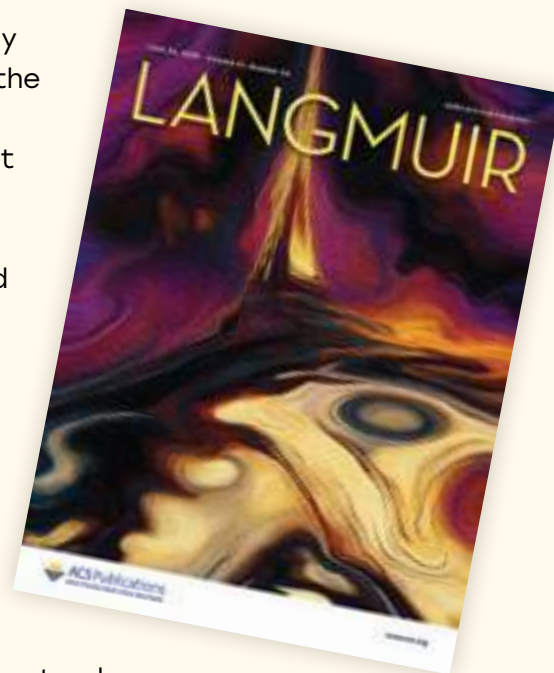
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The field of colloid and surface chemistry connects fundamental science with technologies and industries that affect life on a global scale.

In the period from 2002 to 2026, the symposium has continued to evolve into a vibrant, multi-session event while preserving its distinctive emphasis on accessibility, student participation, and close interaction among attendees. With participation typically around 500 individuals representing a broad national and international community, the CSSS exemplifies the interdisciplinary spirit that has long characterized colloid and surface science. It also highlights the balance between fundamental inquiry and practical application that defines the field.

The Division's contributions to knowledge dissemination are closely linked to the success of *Langmuir*, the ACS journal dedicated to surfaces and colloids. Since its establishment in 1985, *Langmuir* has served as a central platform for publishing advances in interfacial science, and its continued prominence during the 2002–2026 period reflects both the vitality and diversity of the field. In parallel, conferences such as the symposia at ACS Meetings & Expositions and CSSS provide complementary venues for exchange, enabling rapid dissemination of ideas and fostering collaborations that often extend beyond traditional disciplinary boundaries.

Recognition of excellence has also been a defining feature of this period. Several important awards were established between 2002 and 2026, including the Unilever Award, the Technology Award, and the Emerging Investigator Award, each highlighting different dimensions of achievement in colloid and surface science.



Particularly notable is the introduction of the PUI Award, which recognizes students at primarily undergraduate institutions and underscores the Division's commitment to inclusive excellence in both research and education. These newer awards complement long-standing honors such as the ACS Award in Colloid or Surface Chemistry and the Arthur W. Adamson Award, together forming a comprehensive framework for recognizing impact across career stages and sectors.

From 2002 to 2026, the ACS Division of Colloid and Surface Chemistry has demonstrated adaptability and impact in challenging times. Building on a rich history that began with the first symposium in 1923 and the formal establishment of the Division in 1926, COLL continues to define and expand the boundaries of interfacial science. Its contributions resonate across disciplines and industries, reflecting a field that is both fundamentally rich and profoundly relevant.

The future of COLL will be shaped by both continuity and innovation. Emerging tools, including data-driven approaches and advanced characterization techniques, offer new ways to explore complex interfacial systems. At the same time, the Division remains committed to fostering an inclusive and supportive community, ensuring that the next generation of scientists is equipped to lead in an increasingly complex scientific landscape. Therefore, the Division remains well positioned to advance science, foster community, and address the pressing challenges of our time in sustainability, energy, and health.

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DIVISION OF ENERGY & FUELS

Advancing Energy Science for a Changing World

ENFL expanded its scientific scope, strengthened its international reach, elevated emerging areas of energy research, and fostered a vibrant and inclusive professional community dedicated to the future of energy.

The ACS Division of Energy & Fuels (ENFL) has played a central role in advancing the science and technology of energy production, conversion, utilization, and sustainability throughout the first quarter of the 21st century.

Building on nearly a century of history rooted in fuel chemistry and petroleum science, the Division has evolved into a broad and interdisciplinary scientific home for researchers addressing some of society's most pressing energy challenges. Between 2002 and 2026, ENFL expanded its scientific scope, strengthened its international reach, elevated emerging areas of energy research, and fostered a vibrant and inclusive professional community dedicated to the future of energy.

The origins of the Division date to 1925, when the Fuel and Gas Chemistry Division was officially established to support growing scientific interest in coal, gasification, combustion, and industrial fuels. Over subsequent decades, the Division became a leading forum for research in fossil energy, catalysis, and fuel chemistry. Several milestones laid the foundation for modern ENFL, including the establishment of the Henry H. Storch Award in Energy Chemistry in 1964 to recognize distinguished contributions to fuel science and catalysis and the founding of the journal *Energy & Fuels* in 1987, which rapidly became one of the premier journals in energy research.

At the same time, the Division of Petroleum Chemistry (PETR) has a distinguished legacy within ACS, tracing its origins to 1922, when it officially separated from the Industrial & Engineering Chemistry Division with 35 charter members, becoming ACS's 12th Division. Just two years later, in 1924, PETR inaugurated its Division Dinner – an enduring tradition that has now been celebrated for more than a

century. PETR quickly became a leader in disseminating technical knowledge: By 1930, the Division was publishing full preprints of all papers presented at its meetings, setting a precedent for scholarly communication in ACS. Its commitment to excellence was further recognized in 1948 with the establishment of the ACS Award in Petroleum Chemistry, later renamed in 1997 as the George A. Olah Award in Hydrocarbon or Petroleum Chemistry to honor one of the field's most influential scientists.

One of the defining milestones of this era occurred in 2012, when the Fuel and Gas Chemistry Division and the Division of Petroleum Chemistry merged to form the modern Division of Energy & Fuels. This merger represented more than an organizational restructuring; it symbolized the convergence of historically distinct scientific communities into a unified Division prepared to address the increasingly interconnected challenges of global energy systems. The new ENFL Division embraced both traditional and emerging energy technologies, recognizing that future energy solutions would require scientific innovation across the full spectrum of energy resources and conversion pathways.

Following the merger, ENFL experienced substantial growth in technical breadth and membership engagement. The Division became a leading scientific platform for discussions on sustainable energy transitions, low-carbon technologies, and advanced materials for energy applications. Programming increasingly featured topics such as carbon capture and utilization, sustainable aviation fuels, hydrogen economies, artificial photosynthesis, electrification technologies, and circular carbon systems.

The journal *Energy & Fuels* also experienced remarkable growth during this period. As one of ACS Publications' flagship journals in the energy field, it expanded its global influence and publication impact. The journal became a highly respected outlet for fundamental and applied research spanning fossil energy, renewable fuels, catalysis, energy storage, combustion science, and environmental impacts associated with energy technologies. Its growth mirrored the broader expansion of energy science itself and reinforced the Division's international visibility.

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ENFL symposia and publications have regularly featured contributions from leaders in catalysis, materials chemistry, combustion science, and sustainable energy technologies, including researchers associated with Nobel Prize-winning advances.

Recognition of scientific excellence has remained a defining characteristic of ENFL. The Henry H. Storch Award in Energy Chemistry continued to honor leaders whose work transformed fuel chemistry, catalysis, and energy science. Other awards, including the Richard A. Glenn Award, highlighted innovation in fuels and lubricants research and recognized contributions that bridged industrial practice and academic discovery. In 2021, the Division established the ENFL Mid-Career Award to recognize scientists who had already achieved distinguished accomplishments while continuing to demonstrate exceptional leadership and innovation in energy research. This addition reflected the Division's commitment to supporting scientific excellence across all career stages.

The Division has also benefited from the participation of internationally recognized scientists whose work has fundamentally shaped modern energy research. ENFL symposia and publications have regularly featured contributions from leaders in catalysis, materials chemistry, combustion science, and sustainable energy technologies, including researchers associated with Nobel Prize-winning advances in catalysis, electrochemistry, and materials science. Through these connections, ENFL has maintained a strong reputation as a premier forum for cutting-edge energy science.

Throughout the 2002–2026 period, the Division demonstrated increasing commitment to supporting students, early-career researchers, and diverse scientific participation. ENFL expanded opportunities for student presentations, poster competitions, travel awards, and professional networking. The Division's activities fostered mentorship and community building while helping to prepare the next generation of scientists and engineers to address global energy challenges.

The evolution of ENFL also paralleled major societal and technological transitions. The rise of shale gas, advances in battery technologies, increasing electrification, and global push toward decarbonization fundamentally altered the research landscape. ENFL adapted by creating programming that addressed both the opportunities and challenges associated with energy transitions. Researchers within the Division contributed to advances in catalytic conversion processes, sustainable fuels, carbon management strategies, electrochemical systems, and renewable energy integration.

The COVID-19 pandemic further highlighted the resilience and adaptability of the Division. During this period, ENFL successfully maintained scientific engagement through virtual programming and hybrid meeting formats, ensuring continuity in collaboration and knowledge exchange despite unprecedented disruptions to the global scientific community. The Division emerged from this period with renewed emphasis on accessibility, global participation, and innovative approaches to scientific communication.

As ENFL approaches the future, the Division is uniquely positioned to lead scientific discussions surrounding the next generation of energy technologies. The coming decades will require transformative advances in sustainable fuels, carbon-neutral chemical processes, long-duration energy storage, hydrogen systems, advanced nuclear technologies, carbon dioxide utilization, and resilient energy infrastructures. ENFL's interdisciplinary foundation and broad technical expertise make it an ideal platform for addressing these complex challenges.

The Division is expected to continue expanding its international collaborations and strengthening partnerships among academia, industry, government laboratories, and policymakers. Emerging research areas such as artificial intelligence for energy discovery, molecular-scale energy conversion, sustainable materials design, and integrated circular carbon economies will likely become increasingly central to the Division's activities. At the same time, ENFL remains committed to its long-standing mission of promoting rigorous scientific inquiry and fostering professional connections across the energy research community.

From its origins in fuel chemistry to its current role as a broad and forward-looking energy Division, ENFL reflects the evolution of energy science itself. The Division's history demonstrates a remarkable capacity to adapt to changing scientific priorities while maintaining a strong commitment to excellence, innovation, and community. As ACS celebrates its 150th anniversary, the Division of Energy & Fuels stands prepared to help shape the future of global energy research and the scientific solutions needed for a more sustainable world.

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Inspiring Sustainable Solutions

Many groundbreaking technical advancements have been encouraged or recognized by prestigious publications, programs, and awards sponsored by the Division of Environmental Chemistry.

During recent decades, the 3,000 members of the Division of Environmental Chemistry (ENVR) have made great advances in understanding the fundamental science of global environmental systems, developing solutions to diverse environmental concerns, and informing the public of the need for change in multidisciplinary environmental thinking. It is easy to forget that similar advances were made in the beginning of the Division in 1913.

Throughout its first century, ENVR took on the environmental challenges of the day. Focal areas of the past that are just as important today included development of sophisticated new analytical techniques for identifying the presence of pollutants in the environment; assessing the potential adverse effects of environmental contaminants; understanding chemical transport and transformation in water, soil, and air; promoting the prevention of environmental pollution; and inspiring solutions to the restoration of environmental quality. This science-based focus and legacy has encouraged and supported the development of both cost-effective treatment technologies and replacements for chemicals of concern. More recently, the holistic integration of all these facets is influencing green and sustainable chemistry advances.

Many groundbreaking technical advancements have been encouraged or recognized by prestigious publications, programs, and awards sponsored by the Division of Environmental Chemistry. As in the beginning of the Division, the multidisciplinary nature of environmental progress led to dispersal of knowledge over many journals. ENVR was active in launching the ACS journal *Environmental Science & Technology* (ES&T) in 1967. The relationship between ENVR and ES&T has strengthened over the years, and currently the ACS Award for Creative Advances in Environmental

Science and Technology is co-sponsored by ENVR and ES&T. Other early-career awards – including the C. Ellen Gonter Environmental Chemistry Award for outstanding research papers and the Merit award for first-time presenters within ENVR sessions, the American Water Works Association Larson Aquatic Research Support Grants, and the Graduate Student Exchange Program with SETAC (Society of Environmental Toxicology and Chemistry) – honor excellent students and early-career professionals. The more recent Kenneth G. Hancock Memorial Award for undergraduates represents an important collaboration between the Division, the National Institute of Standards and Technology (NIST), and the ACS Green Chemistry Institute.

As the Division continues another century of service to its membership, it strives to recognize the complex nature of environmental problems and aspires to be the premier global professional organization providing a dynamic, interactive, and integrated community for those applying chemistry to understanding and solving environmental and sustainability issues. With a new generation of Division leadership and a recently completed strategic planning exercise, we identified many challenges and opportunities to better serve the environmental community. While our Division's strengths in programming, engagement, and providing resources are recognized by our membership, there are also many opportunities to better serve our community. These include: (1) increasing awareness of environmental challenges; (2) improving local, regional, and international engagement; (3) involving industry members via external groups; and (4) supporting young professionals and students. To better serve our community, last year we introduced three new awards: the Dionysios Dionysiou Established Investigator Award, the Environmental Chemistry Engagement and Impact Award, and the Rising Star in Environmental Chemistry Award. These new awards celebrate research and education efforts of early- and mid-career Division members while also recognizing their leadership, creativity, and impact in advancing engagement in environmental chemistry and engineering. As we move forward to address new and emerging environmental issues, our Division will continue inspiring sustainable solutions to environmental challenges. Our community can count on our unwavering passion for chemistry, focus on members, safety, ethics, and membership engagement. We will continue empowering the environmental profession to advance research, innovation, education, and public awareness.

As the Division continues another century of service to its membership, it strives to recognize the complex nature of environmental problems and aspires to be the premier global professional organization.

DIVISION OF GEOCHEMISTRY

Advancing Knowledge of Earth's Chemistry to Benefit Humanity

The ACS Geochemistry Division (GEOC) will celebrate its 50th anniversary in 2028! It was established in 1978 and held its first official programming activities at ACS Fall 1979.

In its earliest conception, the Geochemistry Division was envisioned to enable geochemists to have a voice within ACS and to create a space for them to focus on exclusively geochemical topics. Early topics included a heavy emphasis on organic geochemistry, volcanism, and spectroscopic characterization of natural samples. However, since those early days, the focus of the Division has evolved and expanded to now cover understanding the fundamental chemistry of our planet and other bodies in space planets. Topics now include all chemical transformations that involve natural matter and interactions of natural matter with engineered molecules in the environment: adsorption at mineral–water interfaces; nucleation, growth, aggregation, and dissolution; the chemistry of natural organic matter; redox chemistry; biogeochemical processes; global elemental cycling; isotope geochemistry; and high-resolution characterization of Earth materials.

More recently, the Division has begun to address how chemistry may impact other physical processes in natural matter transformations, including how chemistry is coupled to mechanics,

flow, and thermal effects in rocks. Another major focus is on applications of geochemistry in energy and environmental issues, including critical minerals, geothermal energy, and the geochemistry of energy-related fluids and contaminants (hydrogen, CO₂, hydrocarbons, radionuclides, etc.). Topics and interests no doubt will continue to evolve over time because human interaction with the chemistry of our dynamic planet and beyond is always changing!

The GEOC Division has been home to about 500–800 members over the years. Notable members include past winners of the biennial Geochemistry Division Medal. Over the past 25 years, the medal has been awarded to John Hayes (2003), Pat Hatcher (2005), Robert Aller (2007), Fred MacKenzie (2009), John Tossell (2011), George Luther (2013), Don Sparks (2015), Sue Brankley (2017), Everett Shock (2019), Mike Hochella (2021), Vicki Grassian (2023), and Janet Hering (2025). The Division has played a critical role in submitting nominations for geochemists to become ACS Fellows, including R. Lee Penn (2015), William H. Casey (2019), Young-Shin Jun (2019), James Kubicki (2021), and Anastasia Ilgen

(2025). While recognizing the achievements of its advanced career members, the Division also plays a critical role in enabling the success of the next generation of geochemists through its student and early-career travel awards as well as its best student presentation recognition that is given at ACS Meetings & Expositions to promising early-career scientists.

Initiatives of the GEOC Division include efforts to highlight the vibrancy of the geochemistry community through programming at ACS Meetings & Expositions featuring scientific contributions from a variety of perspectives. These include, for example, a focus on workforce development through seminars devoted to geochemistry research at primarily undergraduate institutions (PUIs), undergraduate research at U.S. national laboratories, and research initiatives that involve local communities. Others include dozens of books, special issues, and collections in scientific journals focused on symposia topics. The Division even started its own journal in 2000, *Geochemical Transactions*!

Ongoing projects include plans to create new awards aimed at highlighting research carried out by early- and mid-career geoscientists, including students and postdoctoral scholars. Other projects aim to increase the visibility of GEOC posters at ACS Meetings & Expositions and to explore opportunities for collaboration with *ACS Earth and Space Chemistry*, the ACS journal that aligns most closely with the mission of GEOC.

Over the next 25 years, the GEOC Division will continue to be at the center of several critical societal and technological challenges, including climate change and climate mitigation; sustainable sourcing of high-technology materials; production of abundant, sustainable energy and water; geo-engineering; and extraterrestrial exploration. We are excited to explore how geochemistry can help address these challenges and opportunities!

The GEOC Division is a vibrant, welcoming community united by a shared passion for the chemistry of our natural environment. If your interests include the chemistry of our planet, we invite you to join our Division, explore our symposia, and attend our Division Social at ACS Meetings & Expositions. All are welcome!

Over the next 25 years, the GEOC Division will continue to be at the center of several critical societal and technological challenges.

HISTORY OF CHEMISTRY DIVISION

Honoring the Past, Training for the Future

As illustrated by its vision statement, “Inspiring chemistry’s future by preserving its past,” ACS’ History of Chemistry (HIST) Division has a proud tradition of celebrating chemistry’s past while also looking forward in terms of expanding the current knowledge of the field and its history through dedicated historical scholarship.

These efforts date back to the founding of HIST in 1922, with the HIST Centennial celebrated by the Division in 2022. In the process, HIST strives to not only serve ACS as a source of historical knowledge, but also expand the capabilities of its membership to carry out history research and actively contribute to the evolving nature of historical scholarship.

Among the various efforts dedicated to historical scholarship during the last 25 years, the most important continues to be the Division’s journal, the *Bulletin for the History of Chemistry*. Established in 1988, the *Bulletin* is published as two issues each year, consisting of original peer-reviewed articles detailing the history of all aspects of early chemical technology, alchemy, chemistry, and the related molecular sciences, as well as editorials and book reviews. The *Bulletin* and its publication have not been a static effort, however, and the last 25 years have seen various important changes. Originally available only in print, the *Bulletin* transitioned to an online format in 2007, starting with volume 31. All back issues were available online while the *Bulletin* was still

available as a hard-copy journal. Then, in 2012, it was decided to make all issues except the last three years open access and fully available to non-members. All such open access issues were also OCR processed for text recognition and fully searchable. Starting in 2025, all papers were assigned DOIs (digital object identifiers) as persistent links to their respective electronic articles. Finally, as part of the centennial celebration in 2022, a special HIST Centennial Issue of the *Bulletin* was published as an extra issue with 16 articles by historians and chemist-historians that focused on their ideas and visions for the future study of the history of chemistry. The *Bulletin* continues to remain the only U.S.-published journal dedicated to the history of chemistry.

Of course, a point of pride has been the strong technical programming offered by HIST at ACS Meetings & Expositions. Such programming has included symposia on a wide number of historical topics, as well as frequent collaborations with other Divisions and designated ACS Presidential symposia. Although many presentations

eventually result in articles published in the *Bulletin*, HIST also has a strong track record of publishing dedicated symposia volumes. The bulk of these volumes were published as part of the ACS Symposium Series, with 19 volumes published since 2022. Notable examples include *100+ Years of Plastics. Leo Baekeland and Beyond* (2011), *The Foundations of Physical Organic Chemistry: Fifty Years of the James Flack Norris Award* (2015), and *Chemical Technology in Antiquity* (2015), as well as the two-volume set: *The Posthumous Nobel Prize in Chemistry. Volume 1. Correcting the Errors and Oversights of the Nobel Prize Committee* (2017) and *The Posthumous Nobel Prize in Chemistry. Volume 2. Ladies in Waiting for the Nobel Prize* (2018). However, with changes in publication trends and the move away from physical books by ACS, HIST also started publishing symposia volumes with other publishers. This began with *Igniting the Chemical Ring of Fire: Historical Evolution of Chemical Communities of the Pacific Rim* (World Scientific, 2018) and *Archaeological Chemistry: A Multidisciplinary Analysis of the Past* (Cambridge Scholars Publishing, 2020) before settling on a new home with Springer's *Perspectives on the History of Chemistry* book series. Two volumes have been published to date: *150 Years of the Periodic Table: A Commemorative Symposium* (2021) and *The Birth of the 3rd Dimension in Chemistry* (2025).

Major activities aimed at celebrating chemistry's past have included work related to ACS' National Historic Chemical Landmarks (NHCL) program. Established by ACS in 1992, the NHCL program was restructured to create a NHCL subcommittee in 2000 that would report to the Board of Directors via Public Affairs and Public Relations (PAPR). Because this subcommittee would

evaluate nominations, make recommendations for Landmarks, and submit nominations to the Board of Directors for approval, PAPR desired representation from HIST, and it was initially recommended that the HIST chair serve on the subcommittee. Since that time, the HIST chair has not always served on the subcommittee, but HIST has consistently had strong representation on the subcommittee, with about 50% of its members coming from HIST. In addition, the last three chairs of the subcommittee have been prominent members of HIST. In 2017, HIST organized and hosted a symposium celebrating the 25th anniversary of the NHCL program.

A related program, Citation for Chemical Breakthrough (CCB) Awards, was also started by HIST in 2005. This program recognizes breakthrough publications, books, and patents worldwide in the fields of science embraced by ACS, with the term "breakthrough" referring to advances that have been revolutionary in concept, broad in scope, and long term in impact. The CCB Awards are presented to the institutions at which the work was performed, with 90 awards presented to date. It should be noted that these awards are international in scope, with many international locations commonly recognized.

Another strong activity of HIST has been its various divisional awards to recognize excellence in historical scholarship. The most important of these was established as the Dexter Award for Outstanding Achievement in the History of Chemistry in 1956, and the award has since gone through several name changes. This began with the award's transition from the Dexter Award to the Sidney M. Edelstein Award in 2002, followed

It is our continued goal to further build upon these efforts in order to share the joy of the history of chemistry with all those active in the ACS as a whole.

by a second name change to the HIST Award in 2013, before becoming the current Joseph B. Lambert HIST Award for Outstanding Achievement in the History of Chemistry in 2023. Even so, no distinction is made between winners of the various iterations of the award, and this is all viewed as one continuous tradition that started with the first Dexter Award. Overall, this award is international in scope and has recognized both chemist-historians and classically trained historians. It has long been considered one of the most prestigious awards recognizing work in the history of chemistry.

Other important divisional awards include the Outstanding Paper Award, established in 1984. This award recognizes the best paper published in the *Bulletin* during the previous three years and was formally changed to the current Paul R. Jones Outstanding Paper Award in 2019 to recognize the many contributions of Paul to the HIST Division and the *Bulletin*. The newest award, the HIST Fellow, was then added in 2022. The designation of HIST Fellow recognizes HIST members who have made a significant impact on the advancement of history in the chemical sciences, as well as dedicated service to the Division. To date, 16 members have been honored as HIST Fellows.

In addition to these various activities, efforts to train chemists to carry out historical research have been developed in recent years. This began with an educational HIST Tutorial on Tips and Advice for Starting Historical Research in 2019, with the slide deck then made available on the HIST website as a general resource. This was followed by a day-long Workshop on Traditional Research Methods in History at ACS Spring 2023 in Indianapolis. This involved individual educational presentations by seven formally trained science historians covering methods specifically for application to historical research. Current efforts are now being made to build upon these activities to generate a permanent resource for chemists looking to begin work in history.

As illustrated by the above activities, the last 25 years have been both very active and productive for HIST. It is our continued goal to further build upon these efforts in order to share the joy of the history of chemistry with all those active in the ACS as a whole. While many of us place significant efforts on historical scholarship, everyone in HIST is always happy to simply share stories and discuss how chemistry came to be the powerful science that it is.

Opposite page: ACS Fellow Mary Virginia Orna (2010) welcomes Milton I. Levenberg, one of the 2022 ACS Fellows.
Photo credit: EPNAC.com



Putting the Central Science to Work

The Industrial & Engineering Chemistry (I&EC) Division of ACS stands as a testament to the enduring power of applied science. Established in 1908 as the first formal Division within ACS, I&EC has spent over a century fulfilling its core mission: “Putting science to work.”

By acting as a critical bridge between fundamental research and pragmatic technology, the Division has consistently helped individuals convert scientific discoveries into commercially relevant products and processes. As the Division navigated the complexities of the 21st century – specifically, the transformative period from 2002 to 2026 – it embraced new initiatives, celebrated major milestones, and continually adapted to meet the evolving needs of its diverse membership across industry, academia, and national laboratories.

A Century of Leadership and the 2008 Centennial

The early 2000s marked a period of strategic reflection and celebration for the I&EC Division. In 2002, an update to the Division’s history, authored by former Chairs Dave Gushee and Steve Cooke, reaffirmed the organization’s stated objective: “to support programs that promote the science, techniques, and technology of chemical process and product development.” This reaffirmation set the stage for a momentous occasion – the Division’s centennial celebration in 2008.

Under the leadership of 2008 Chair Gregg Lumetta, the centennial was not merely a retrospective but a springboard for future innovation. To commemorate this milestone, the Division published *Symposium Series 1000: Innovations in Industrial and Engineering Chemistry: A Century of Achievements and Prospects for the New Millennium*, edited by William H. Flank, Martin A. Abraham, and Michael A. Matthews. This publication highlighted the Division’s legacy of diversification into emerging areas – a hallmark of I&EC that has led to the spin-off of at least 11 other ACS Divisions over its history.

The centennial year also featured significant cooperative programming. ACS Spring 2008 in New Orleans was held in conjunction with the American Institute of Chemical Engineers (AIChE) meeting. This collaboration, spearheaded by leaders like Spiro Alexandratos and Martin Abraham, resulted in several jointly organized symposia, underscoring the deep ongoing relationship between chemists and chemical engineers.

Recognizing Excellence: The I&EC Fellow Awards

A major initiative launched during this era was the establishment of the I&EC Division Fellow Awards in 2007. Initiated through the efforts of Spiro Alexandratos, these awards were designed to recognize scientists and engineers who have made significant innovative contributions to applied chemistry and chemical engineering.

The awards program rapidly expanded to encompass five distinct categories, ensuring recognition across different career stages and geographic boundaries:

1. **I&EC Division Fellow:** Recognizing established professionals for innovative contributions, with patents given equal weight to peer-reviewed literature.
2. **Early-Career Fellow:** Highlighting the achievements of individuals under the age of 40.
3. **Professional Fellow:** Honoring significant contributions to the profession.
4. **Applied Chemical Technology Fellow:** Recognizing specific technological applications.
5. **International Fellow:** Acknowledging the global nature of the chemical enterprise.

Between 2007 and 2023, the Division honored numerous luminaries. Notable recent awardees include Ryan P. Lively and Brent Shanks (2023 I&EC Division Fellows), Mou Paul (2022 I&EC Division Fellow), and Ana C. Alba-Rubio (2023 Early-Career Fellow). These awards, presented annually at ACS Meetings & Expositions held in the spring, not only celebrate individual achievement but also highlight the vital role of industrial chemistry in solving real-world problems. The current I&EC leadership has charged the Awards Committee to complete the selections for the 2024–2026 classes of Fellows to continue this tradition of recognizing excellence.

Fostering the Next Generation

Recognizing that the future of industrial chemistry relies on a robust pipeline of talent, the I&EC Division placed a heavy emphasis on student engagement and mentoring between 2002 and 2026. Building on the momentum of the 1990s – which saw I&EC pioneer student poster sessions that eventually evolved into the popular ACS SciMix events – the Division formalized several student-centric initiatives.

A cornerstone of this effort is the Graduate Student Award Symposium, typically held at ACS Meetings & Expositions in the fall. This symposium provides a dedicated platform for graduate students to present their research to a mixed

The Division actively promoted mentoring programs, leveraging the expertise of its accomplished members and I&EC Fellows to guide early-career professionals navigating the transition between academia, national laboratories, and industry.



I&EC Executive Committee meeting on a video call, May 20, 2026.
Photo credit: Industrial & Engineering Chemistry Division

audience of academic and industrial chemists. The Division supports these students by covering registration costs, providing partial travel support, and offering cash awards and plaques for the best presentations.

Furthermore, the Division actively promoted mentoring programs, leveraging the expertise of its accomplished members and I&EC Fellows to guide early-career professionals navigating the transition between academia, national laboratories, and industry. By offering free membership to undergraduate and graduate students alike, I&EC ensured that financial barriers did not impede professional development. I&EC is also sponsoring a full-day graduate student-

led symposium organized by the ACS Graduate Student Symposium Planning Committee at ACS Fall 2026 in Chicago.

Publication and Communication in the Digital Age

The 2002–2026 period also witnessed a significant evolution in how the I&EC Division communicated with its members and the broader scientific community. The Division's flagship associated journal, *Industrial & Engineering Chemistry Research (I&EC Research)*, experienced explosive growth. To accommodate the increasing volume of high-quality submissions, the journal transitioned to a biweekly publication schedule

in 2001. The digitization of the ACS Journal Archives in 2002 and the implementation of online manuscript submission in 2003 dramatically accelerated the dissemination of applied chemical research. In 2009, *I&EC Research* celebrated its own centennial. Editor Donald R. Paul marked the occasion with a special editorial and a series of scholarly review papers reflecting on a century of impact while looking forward to future innovations.

Simultaneously, the Division modernized its internal communications. Transitioning away from purely print media, the Division maintained an active online presence, publishing semi-annual newsletters digitally. The Division also embraced social media platforms like LinkedIn, X, YouTube, Instagram, and Facebook to facilitate continuous engagement among its geographically dispersed membership.

A Forward-Looking Perspective: 2026 and Beyond

As the I&EC Division looks beyond 2026, its role as the nexus between fundamental science and industrial application is more critical than ever. The global challenges of the 21st century – ranging from climate change and sustainable energy to critical minerals, advanced manufacturing, and clean water – require the exact multidisciplinary pragmatic approach that I&EC has championed for over a century. Moving forward, the Division is well positioned to lead in several key areas:

First, the integration of artificial intelligence and machine learning (AI/ML) into chemical engineering processes will likely become a major focus requiring new symposia and collaborative efforts to educate the workforce. Second, advanced manufacturing and critical minerals and materials will play an increasingly vital role as industry faces mounting pressure to develop sustainable circular economies. Third, the boom in AI/ML data centers drives the accelerated development of semiconductor processing, chip making, and electricity generation. Finally, as the chemical enterprise becomes more globally interconnected, global outreach efforts will be essential in fostering cross-border technological solutions. We will leverage the ACS Divisional Activities Committee (DAC) Communications Grant to revamp the Division's website and modernize digital newsletters, enhancing engagement with global and early-career members.

ACS Meetings & Expositions owe much of their structure and success to the divisional framework pioneered by I&EC in 1908. Today, under the leadership of dedicated officers like 2026 Chair De-en Jiang and the current Executive Committee (see a screenshot from a recent EC meeting), the Division continues to adapt and evolve. By remaining true to its motto – “Putting science to work” – the Industrial & Engineering Chemistry Division ensures that it will remain a driving force for technological advancement and industrial innovation well into its second century for “the central science” – chemistry.

DIVISION OF INORGANIC CHEMISTRY

Dynamism and Dedication Drive the Division

The origins of ACS' Division of Inorganic Chemistry (DIC) can be traced back to 1957, when ACS authorized the formation of a Division of Inorganic Chemistry.

The early history of DIC up to around 1988 is well documented by an excellent review.¹ The history of DIC was more recently celebrated at its 50th and 65th anniversaries, the latter in a symposium entitled "Accelerating Past 65 – Inorganic Chemistry and its Division are Driving Fast and Furious into the Future!" at ACS Spring 2022. This headline event featured Professor Harry Gray (CalTech) speaking on the history and origins of the Division, as well as pairs of past subdivision chairs who presented the history and future prospectus of the Organometallic, Solid State, Bioinorganic, Nanoscience, Coordination, and Sustainable Energy & Environment subdivisions.

As ACS turns 150 this year, we are delighted to have this opportunity to reflect on some of the more significant

highlights of DIC history since 2002. During this time DIC has undergone a remarkable evolution, transforming from a highly active Division into a strategically driven, community-oriented organization with broad scientific and societal impact. From expanding scientific programming and strengthening student engagement to navigating financial challenges and embracing interdisciplinary growth, DIC's development reflects both the dynamism of inorganic chemistry and the dedication of its members and volunteers. The vibrancy of DIC is also reflected in the fact that each year the Division nominates its exceptional volunteers and members for recognition as ACS Fellows. Usually at least two members are selected annually, but in 2023, five DIC members received this honor.

In the early 2000s, the Division's primary focus was on strengthening its presence within ACS Meetings & Expositions. Programming served as the backbone of DIC's identity, and considerable



Professor Harry Gray presenting on the history of DIC at ACS Spring 2022.

Photo credit: John Protasiewicz



Left: DIC leadership team with ACS facilitators at the 2014 strategic planning retreat in Estes Park, Colorado.

Photo credit: John Protasiewicz



Right: DIC leadership team with ACS facilitators at the 2022 strategic planning retreat in Chicago, Illinois.

Photo credit: Wayne Jones and Larry Krannich

effort was devoted to organizing symposia that reflected the breadth of inorganic chemistry. The Division's subdivision structure at this time was organized around core areas of organometallic chemistry, bioinorganic chemistry, and solid-state/materials chemistry. Inorganic chemistry, however, was becoming increasingly diverse, leading the Division to respond to the needs of the inorganic community by the addition of three new subdivisions: Nanoscience in 2003, Coordination Chemistry in 2012, and Sustainable Energy and Environment in 2016. Such changes would ensure that programming captured both foundational and emerging areas of the field.

Equally important during this time were the Division's commitment to and emphasis on early-career engagement, which has become a defining and distinguishing feature of DIC. Students represent the future of chemistry and have always been an emphasis for DIC.

During this period, DIC established and expanded student travel awards to provide critical support for graduate and undergraduate researchers to present their work at ACS meetings. On the 15-year anniversary of these travel awards, DIC's efforts on this front were recognized with the 2015 ChemLuminary Award for Outstanding Technical Division Career Program (impacting 750 students over a 15-year

period). In 2010, the ACS DIC Undergraduate Research Award was established. Since 2008, DIC has enjoyed a strong partnership with the Interactive Online Network of Inorganic Chemists (IONiC) and the Virtual Inorganic Pedagogical Electronic Resource (VIPeR), which has served to improve inorganic chemistry education, acting as its educational digital library and community hub.

DIC also works to support inorganic chemists at all career stages. The Young Investigator Awardee (YIA) program serves as an example of a DIC effort with high impact for mid-career chemists. Since the inception of YIA in 2005, DIC has recognized eight postdocs and/or graduate students each year as YIAs

and has provided them with an opportunity to present their early-career work in a special symposium. At ACS Fall 2016, DIC organized a symposium, “Where Are They Now,” bringing together 14 former YIAs from the previous 10 years to showcase their diverse career paths and to offer advice to younger chemists. The special event resulted in both an article in *Chemical & Engineering News*,² “The inorganic kids are alright,” and recognition with another ChemLuminary Award for Outstanding Technical Division Career Program from ACS.

For the last 20 years, DIC has faced many challenges, and of particular concern were issues surrounding declining membership and financial stability. This led the DIC leadership team to hold two strategic planning retreats during this time period. The first, in June 2014, assembled a set of current and past DIC leadership and ACS facilitators in Estes Park, Colorado, to build a strategic plan (photo at top left, p. 135). This plan led to a number of action items. These included new strategies for membership recruitment, seeded by an ACS Innovative Project Grant (IPG), which were launched by DIC.

The impacts of these initiatives were immediate and led to a ~31% increase in new student member applications in just one year. For this effort DIC received yet another ChemLuminary Award for Most Unique Project as Funded by a Division IPG in 2016.

The 2014 retreat allowed the Division to conduct a thorough review of its finances and to develop and implement measures to control spending, ultimately achieving revenue neutrality. Importantly, efforts to fundraise for awards were successful and helped relieve DIC financial strains. The modernization of the Division’s bylaws (its first update in decades) was also undertaken at this time.

Given the positive impacts of this strategic planning process, DIC planned to do so again in 2020. The arrival of COVID-19, however, required many changes, including deferral of the planning workshop to fall 2022 (photo at top right, p. 135). Although DIC has long embraced use of the internet to its advantage (note that DIC was the first ACS Division to pioneer electronic voting for electing officers in the mid-1990s), COVID-19 greatly accelerated the search for



Announcement for the first Periodic TableTalks.

new ways to keep its members connected. DIC innovated what proved to be hugely popular, the Periodic TableTalks. These webinars brought together pairs of speakers, new and established scholars from academia and industry or national labs, representing each of the DIC subdivisions. These events continue to draw attendees with diverse academic and professional backgrounds from all over the world, including both the Northern and Southern hemispheres. The availability of the webinars as recordings also enhanced accessibility for those who could not attend live events.

After its 2022 strategic planning workshop, DIC introduced another way to meet the needs of its community with the Physical Inorganic Tutorial Seminar series. These recorded webinars brought together leading experts in various inorganic techniques, offering not only presentations on cutting-edge research but also comprehensive educational tutorials covering everything from foundational concepts to the latest advancements. The series has garnered significant interest, not only from the broad inorganic community but also the physics community. Each seminar effectively emphasized a fundamental understanding of physical techniques, with presenters successfully highlighting both the underlying principles and their current developments. In 2023, DIC was recognized as a ChemLuminary Award Finalist for this initiative.

Another key outcome of the strategic planning workshop in 2022 was the decision to implement a sustainable value proposition for DIC membership. Among the various membership groups within DIC are industrial and national laboratory members who historically have had limited engagement with

leadership and DIC activities. The Division thus expanded its efforts to involve the non-academic segment of its membership more actively. Notably, the Division established its first award for an industrial scientist in 2022 – the Early Career Industrial Investigator Award. Furthermore, in 2025, the Division created the Technology Advisory Board. Its mission is to foster an integrated ecosystem in which industry, national laboratories, and academia collaborate seamlessly to advance inorganic chemistry through symposia, networking, and other events.

As we consider the future, the lessons of this period remain highly relevant. The Division's success has depended on its willingness to evolve and adapt, to engage broadly, and to think strategically about its role within both ACS and the

The Division's success has depended on its willingness to evolve and adapt, to engage broadly, and to think strategically about its role within both ACS and the greater scientific landscape.

greater scientific landscape. Supporting the practitioners of inorganic chemistry at all levels, from undergraduate students to Nobel Prize winners (nine Nobel Prizes have been awarded having inorganic chemistry as a central theme during this time period), the ACS Division of Inorganic Chemistry is well positioned and stands ready to continue leading the field into new and exciting directions.

Acknowledgments

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DIVISION OF MEDICINAL CHEMISTRY

Nurturing New Leaders and an Increasing Global Presence

The ACS Division of Medicinal Chemistry (MEDI) was founded in 1909, and its members are at the forefront of drug discovery, medicinal chemistry, and chemical biology.

As of this writing, MEDI has about 5,200 members. The Division's centennial history is covered in a 2009 article (*J. Med. Chem.* **2009**, 52, 7333–7338). The Division provides comprehensive programming at the twice-annual ACS Meetings & Expositions, the biennial National Medicinal Chemistry Symposium (NMCS, organized since 1948), and the annual Medicinal Chemistry Frontiers meeting (co-organized with the European Federation for Medicinal Chemistry and Chemical Biology). Since 2002, 25 MEDI chairs, many councilors, and volunteers have contributed to the Division's well-being – too many to mention. Thanks to all of them for their service!

MEDI Division members enjoy exceptional benefits, including the annual publication *Medicinal Chemistry Reviews*, an outstanding approximately 900-page volume that provides timely critical reviews of important topics in medicinal chemistry and celebrated its 60th anniversary in 2025; the opportunity to nominate colleagues and students for awards and fellowships; the chance to attend webinars, ACS Meetings & Expositions, NMCS, and Frontiers meetings on current topics in the field, organized and presented by experts from industry and academia; the chance to network with colleagues online and in person; and many more.

Notable Milestones 2002–2026

Medicinal Chemistry Reviews: Annual Reports in Medicinal Chemistry was MEDI's flagship publication, published annually starting in 1965 and always free to MEDI members. Elsevier owned the copyright and did not allow MEDI to publish it independently. We initiated the name change to *Medicinal Chemistry Reviews*, which ensured that MEDI held full ownership. It is available electronically to all MEDI ACS members, and a paper copy is also available for purchase. *Medicinal Chemistry Reviews* remains the preeminent medicinal chemistry review publication today.

Website Revamp: The MEDI Division was the first ACS Division to host its own website in 1994. The website was most recently updated in 2020. The Division website serves as the central communications hub, offering information on membership, activities, awards, applications, deadlines, and news. For more information about the Division, please visit www.acsmedi.org.

Webinar Series: The MEDI Division organizes and hosts a webinar series on hot topics in medicinal chemistry and chemical biology, featuring leaders in the field. Webinars are free for MEDI members to watch, and replays are available on demand on the Division's website. Approximately three webinars are held each year. The first webinar in the series, held on September 26, 2024, focused on the power of machine learning in drug discovery. The sixth edition of the series, titled Aspects of Conformational Control in Drug Design, was held on June 17, 2026.

Greater Involvement of Women Medicinal

Chemists in MEDI Leadership: It took 67 years for the first female MEDI chair to be elected. Barbara Roth served as chair in 1977. It took another 21 years for the next three women to be elected: Annette Doherty (1999), Jane Aldrich (2000), and D. Amy Trainor (2001). Fifteen years later, Wendy B. Young was elected. In recent years, several women were elected: Amanda Bryan Friedrich (2022), Maria-Jesus Blanco (2023), Gunda I. Georg (2024 and 2026), Nicole Goodwin (2027), and Katerina Leftheris (2027). These articles provide more information about women medicinal chemists: *J. Med. Chem.* **2020**, 63, 1777–1778 and *J. Med. Chem.* **2023**, 66, 3651–3655.

Young Medicinal Chemists Committee (YMCC): A committee representing early-career medicinal chemists was formed in 2018. The YMCC is part of the MEDI Division, established to ensure that MEDI meets the needs of all medicinal chemists, including students and early-career scientists (*J. Med. Chem.* **2022**, 65, 6353–6355). There is no age limit for membership. This is intentional, and the programming is relevant to chemists who are

starting out in the field. This is achieved through online programming for early-career researchers, mentoring and networking opportunities, and a new collaboration with the Young Scientists Network of the European Federation for Medicinal Chemistry and Chemical Biology (EFMC–YSN) to support an international exchange program between the United States and Europe (*J. Med. Chem.* **2023**, 66, 11591–11592).

2024 Bylaw Changes: We implemented equal five-year terms for elected academic and industrial chairs. Previously, the academic chair served a three-year term and the industrial chair served a five-year term that included two years as program chair. We also implemented overlapping terms for the junior and senior program chairs. The officers of the MEDI Division now include the chair, the vice chair (who is also the Long-Range Planning Committee [LRPC] chair), a junior program officer, a senior program officer, the secretary, and the treasurer.

Globalization Efforts: Globalization was a major topic at the Division's first strategic planning meeting in Detroit in June 2006 and remains a focus to this day. MEDI has established relationships with the European Federation for Medicinal Chemistry and co-organizes the annual EFMC–ACSMEDI Medicinal Chemistry Frontiers Meetings, which rotate between the U.S. and Europe. We have also begun establishing relationships with the Brazilian Chemical Society and Asian Federation for Medicinal Chemistry (AFMC) in Southeast Asia through scientific symposia exchanges at the AFMC International Medicinal Chemistry Symposium (AIMECS).

ACS Meetings & Expositions Presence: The MEDI Division prides itself on continuing to offer cutting-edge programming at ACS Meetings & Expositions, led by an accomplished group of scientists on the LRPC. Recent ACS statistics show that, among all Divisions, MEDI has the most participants at ACS Meetings & Expositions. A big thank you to our members, who make this possible!

Celebrating ACS on Its 150th Anniversary: The Division has organized and presented several special sessions at ACS Meetings & Expositions to mark the occasion. These sessions included “The Heart of Drug Discovery – Cardiovascular and Metabolic Innovation” at ACS Spring 2026 in Atlanta; “Innovation in Antibacterial and Antiparasitic Drug Discovery” at the 2026 National Medicinal Chemistry Symposium in Atlanta; and “The Impact of Antiviral Drugs on Human Health” and “Transformative Advances in Oncology Drug Discovery” at ACS Fall 2026 in Chicago.

Awards and Recognition Programs

MEDI provides fellowships to support the training of future medicinal chemists and several awards to recognize the contributions of outstanding scientists to the advancement of the discipline, as outlined below:

Predoctoral Fellowships

Since 1991, MEDI has awarded fellowships to predoctoral students at U.S. institutions. Supported in part by Genentech, the program has been instrumental in cultivating leaders across the pharmaceutical industry, academia, and regulatory agencies, including Nobel laureate Carolyn Bertozzi.

David W. Robertson Award (2005)

Recognizes outstanding contributions to medicinal chemistry by early-career scientists.

The Division of Medicinal Chemistry
and its members will continue to play
a leading role in discovering revolutionary
new medicinal agents that have a
major impact on human health.

MEDI Hall of Fame (2006)

Established to honor the lifetime achievements of prominent scientists, the MEDI Hall of Fame has inducted over 120 members to date. New members are inducted annually at the ACS Meetings & Expositions held in the fall.

Robert M. Scarborough Award (2007)

Honors major contributions to drug discovery or to the advancement of medicinal chemistry.

Philip S. Portoghesi Lectureship (2010)

Recognizes early-career investigators for significant research impact while strengthening ties to the *Journal of Medicinal Chemistry*.

Gertrude Elion Award (2023)

Celebrates excellence in medicinal chemistry and honors Elion's pioneering contributions to rational drug design and drug discovery.

Patrick Woster Service Award (2025)

Recognizes sustained, impactful service to the Division.

Looking Forward

The Division of Medicinal Chemistry and its members will continue to play a leading role in discovering revolutionary new medicinal agents that have a major impact on human health. The design, synthesis, and development of novel therapeutics will remain a cornerstone of medicinal chemistry. In addition to traditional small-molecule drug discovery, new modalities such as PROTACs, antibody-drug conjugates, peptide drugs, drugs beyond the rule of five (bRo5), RNA-based drugs, antisense oligonucleotides, and CAR-T-cell therapy are being pursued. AI-powered methods will greatly influence target selection and accelerate drug discovery, expanding the role of medicinal chemists. Through our programming at ACS Meetings & Expositions and Frontiers meetings, webinars, and the authoritative *Medicinal Chemistry Reviews*, we will keep our members up to date on these developments. The MEDI Division will continue to provide networking opportunities, the YMCC committee will continue to support early-career medicinal chemists, and we will continue our global outreach.

Advancing Our Science in a Rapidly Changing World

Nuclear chemistry is what nuclear chemists do – and that encompasses a wide range of science. An integral component of nuclear chemistry is radiochemistry, the use of radioactivity to study chemical phenomena.

Over the 13 decades since Pierre and Marie Curie coined the term “radioactivity,” the efforts of nuclear chemists and nuclear physicists to understand the fundamental properties of nuclei have converged into a unified field: nuclear science.

Research in nuclear chemistry is diverse, but it is broadly centered on solving fundamental problems and deepening our understanding of atomic structure and behavior. Nuclear chemists approach these challenges by drawing on traditional subdisciplines of chemistry, including organic, inorganic, analytical, physical, theoretical, biochemical, and environmental.

Notable Examples of Nuclear Chemistry

Elucidating Biochemical Pathways

One example was the identification of carbon atom positions in the steps of photosynthesis. This was achieved through radiochemical labeling. By tracking carbon-14 incorporation into intermediates, Melvin Calvin and colleagues determined how carbon atoms move through biological pathways. Other notable studies include the use of ^{32}P , ^{35}S , and ^3H .

Discovery of New Elements and Isotopes

Researchers such as Glenn T. Seaborg, Darleane Hoffman, Albert Ghiorso, Charles D. Coryell, and Heino Nitsche have contributed to the synthesis and characterization of new elements and isotopes, including their chemical properties, purification methods, and potential industrial applications.

Neutron Activation Analysis

This nondestructive analytical technique enables precise determination of elemental composition by measuring induced radioactivity following neutron irradiation.

Development of Radiotracers for Medicine

Nuclear chemists design and produce radiotracers used in medical imaging and therapy, particularly in oncology. This work encompasses isotope production, target processing, radiochemical separations, molecular radiolabeling, in vitro and in vivo evaluation, stability studies, and early-stage clinical translation. Key contributors include Silvia S. Jurisson, Suresh C. Srivastava, Carolyn J. Anderson, Jason S. Lewis, and Henry VanBrocklin.

Research in nuclear chemistry is diverse, but it is broadly centered on solving fundamental problems and deepening our understanding of atomic structure and behavior.

Instrumentation Development

Advances in detectors and measurement systems allow precise characterization of nuclear decay modes, emissions, and related properties.

Environmental and Recycling Applications

Nuclear chemists develop methods to isolate, quantify, and remove radioactive nuclides from environmental matrices, waste streams, and recyclable materials.

Actinide Chemistry

Fundamental studies of actinide elements focus on their electronic structure, bonding, and oxidation states and how these properties influence stability, decay pathways, and excited-state behavior.

Over the past two and a half decades, ACS' Division of Nuclear Chemistry and Technology (NUCL) has undergone a few changes while remaining grounded in its core mission. Founded in 1965, the Division celebrated its 60th anniversary in 2025, marking six decades of advancing nuclear and radiochemistry.

Historically, NUCL has focused on organizing symposia at ACS Meetings & Expositions,

promoting nuclear and radiochemistry research, and fostering professional networks among scientists in academia, government laboratories, and industry. A cornerstone of our educational efforts has been the Nuclear Chemistry Summer School, established in 1984 to address declining educational opportunities and a steadily increasing average age within the U.S. nuclear and radiochemistry workforce. Designed to introduce undergraduate students to the field and encourage workforce entry, the program has operated at two U.S. sites since 1989 and continues to adapt in response to disruptions such as the COVID-19 pandemic and funding uncertainties.

A major milestone occurred in 2004, when financial responsibility for the Glenn T. Seaborg Award for Nuclear Chemistry – an ACS National Award established in 1953 – transitioned to the NUCL Division. Since that time, ensuring the award's long-term financial stability has been a recurring priority. This responsibility prompted a broader shift toward fiscal stewardship, with Division leadership emphasizing sustainable financial planning and prioritizing long-term strategic goals over short-term initiatives.



Members of the Division of Nuclear Chemistry & Technology gathered in March 2026 in Atlanta to network and socialize on the first night of ACS Spring 2026. Photo credit: Neil Vasdev

During this period, the Division's scientific programming became more coherent and thematically consistent. Core areas such as radiochemical separations, actinide chemistry, nuclear forensics, radiopharmaceutical chemistry, artificial intelligence/machine learning uses, and isotope production have emerged as recurring focal points at ACS Meetings & Expositions. This continuity reflects both the maturation of the field and the Division's role in maintaining intellectual cohesion within nuclear chemistry – a field that bridges a variety of traditional chemistry subjects.

The COVID-19 pandemic required rapid adaptation as NUCL – alongside the broader ACS – shifted to virtual and hybrid programming formats. Although initially driven by necessity, these changes provided valuable insights into accessibility, participant engagement, and modes of scientific communication. Virtual programming expanded the Division's reach but also underscored the irreplaceable value of in-person interaction for collaboration and networking. The Nuclear Chemistry Summer School similarly transitioned to a virtual format during this period, an effort that presented substantial challenges but ultimately

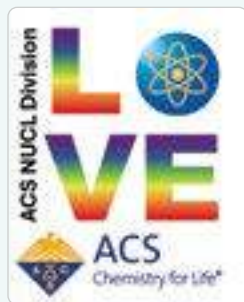
improved operational efficiency when in-person programming resumed.

As ACS Meetings & Expositions returned to in-person formats, ACS began reevaluating the role of hybrid participation. Despite efforts to maintain virtual components, participation remained limited because of technical challenges and reduced demand. Although ACS continues to offer fully virtual programming options, the NUCL Division has largely refocused on in-person engagement, aligning with member preferences and prioritizing the benefits of direct scientific exchange.

Strategic planning in recent years has emphasized increasing early-career participation, enhancing career-relevant programming, and strengthening connections within the Division community. At the same time, evolving ACS policies and meeting structures have introduced new challenges for long-term planning, requiring the Division to remain adaptable and forward-looking.

The Division has also implemented several organizational improvements aimed at increasing efficiency and transparency. These include modernizing its website, formalizing officer roles and responsibilities, and standardizing operational processes. The establishment of the Community & Belonging Committee represents a significant step toward fostering an inclusive and supportive professional environment, reflecting member-driven priorities around retention, engagement, and recognition.

In parallel, NUCL has taken concrete steps to secure the future of the Glenn T. Seaborg Award by establishing a



dedicated investment account and launching a member-led fundraising campaign. These efforts reflect the Division's commitment to sustaining its flagship recognitions and ensuring continued excellence in the field.

Recent years have also seen the emergence of new training programs, research consortia, and institutional partnerships focused on workforce development, project execution, and funding sustainability. In this evolving landscape, NUCL has played a key role as a convening body – providing platforms for researchers at all levels to share results, coordinate efforts, and foster interdisciplinary collaboration across traditional chemistry boundaries.

Looking ahead, the NUCL Division remains committed to advancing nuclear and radiochemistry in a rapidly changing world. From isotope production and radiochemical separations to nuclear safeguards, forensics, radiopharmaceuticals, and fundamental science, the field continues to expand with new opportunities. As barriers to innovation decrease, the need for a well-trained workforce and a strong professional community becomes increasingly critical.

ACS' NUCL Division is uniquely positioned to serve as this connective framework – supporting knowledge exchange, professional development, and collaboration both within the United States and internationally.

DIVISION OF ORGANIC CHEMISTRY

A Legacy of Prize-Winning Science

The Division of Organic Chemistry (ORGN), officially chartered in 1910 under Edward Curtis Franklin, is today the largest ACS Division.

For over 115 years, it has served as the intellectual home of organic chemists across academia, industry, and government, connecting its members through landmark programs, world-class science, and a deep commitment to education.

The National Organic Chemistry Symposium has consistently featured the world's most distinguished organic chemists.

Celebrating a Century of the National Organic Chemistry Symposium

The centerpiece of the Division's identity is the National Organic Chemistry Symposium (NOS), which held its inaugural meeting in Rochester, New York, in 1925. Now in its second century, the NOS remains the premier biennial event in organic chemistry. In 2025, the 49th NOS was held at Rensselaer Polytechnic Institute (RPI) in Troy, New York, returning to upstate New York to mark the symposium's 100th anniversary. This event draws organic chemists from across the globe. Looking ahead, the 50th NOS is scheduled for the University of Minnesota in Minneapolis in 2027, a milestone that will celebrate both the symposium and the enduring vitality of organic chemistry.

The NOS has consistently featured the world's most distinguished organic chemists. The Roger Adams Award, established in 1959 and presented biennially at the NOS, recognizes outstanding lifetime contributions to organic chemistry. Several Roger Adams Award recipients have also been Nobel laureates, reflecting the award's prestige. Among them are Carolyn R. Bertozzi (2023 Roger Adams Awardee), Robert H. Grubbs (2011), Ryoji Noyori (2001), K. Barry Sharpless (1997), Elias J. Corey (1993), George Olah (1989), Donald J. Cram (1985), George Wittig (1973), Herbert C. Brown (1971), Robert B. Woodward (1961), and Sir Derek H. R. Barton (1959).



2025 Graduate Research Symposium Organic Chemistry Group, San Diego State University, San Diego, CA.

Photo credit: Division of Organic Chemistry

Nobel Laureates Within the Division

The Division can claim a remarkable tradition of Nobel Prize-winning science. Organic chemists who have been longtime members of ORGN or featured speakers at its symposia include:

- ▶ Robert Burns Woodward (1965, total synthesis of complex natural products)
- ▶ Herbert C. Brown and Georg Wittig (1979, development of the use of boron- and phosphorus-containing compounds in organic synthesis)
- ▶ Roald Hoffmann (1981, theory concerning the course of chemical reactions)
- ▶ Donald J. Cram and Charles J. Pedersen (1987, development and use of molecules with structure-specific interactions of high selectivity)
- ▶ E.J. Corey (1990, retrosynthetic analysis)
- ▶ George A. Olah (1994, contribution to carbocation chemistry)
- ▶ K. Barry Sharpless (2001 and 2022, one of only five scientists ever to win two Nobel Prizes in Chemistry, for asymmetric catalysis and click chemistry)

- ▶ Robert H. Grubbs (2005, olefin metathesis)
- ▶ Richard F. Heck (2010, Pd-catalyzed cross-couplings in organic synthesis)
- ▶ J. Fraser Stoddart (2016, molecular machines)
- ▶ Benjamin List and David W.C. MacMillan (2021, asymmetric organocatalysis)
- ▶ Carolyn R. Bertozzi (2022, bioorthogonal chemistry)

These laureates represent the full breadth of organic chemistry, from total synthesis and catalysis to chemical biology and molecular design, underscoring the Division's role as the meeting ground for the field's most transformative ideas.

Growing Portfolio of Programs and Initiatives (2002–2026)

During the period covered by this book, ORGN significantly expanded its programming and currently supports approximately 20 active programs. Beyond the NOS, the Division's flagship initiatives include the following:

- ▶ The Graduate Research Symposium (GRS), launched in 2010, annually convenes 50–75 of the nation's top doctoral students in organic chemistry for professional development and peer exchange with industry and academic leaders.
- ▶ The Paul G. Gassman Distinguished Service Award, established in 1994 and endowed in 2007, recognizes outstanding service to the organic chemistry community and is presented biennially at the NOS.
- ▶ The Edward Leete Award, established in 1995, honors exceptional contributions to both teaching and research in organic chemistry, reflecting the Division's commitment to recognizing scientists who inspire the next generation.



Morten Meldal (2022 Nobel laureate).
Photo credit: Division of Organic Chemistry

- ▶ The Technical Achievement Award in Organic Chemistry (TAOC) has honored professional chemists with bachelor's- or master's-level training since 1992.
- ▶ The Early- and Mid-Career Investigator Awards have recognized the creativity and productivity of organic chemists in non-academic settings since 2007 and 2021, respectively.
- ▶ The Undergraduate Award in Organic Chemistry, the Summer Undergraduate Research Fellowship (SURF) program (initiated in 2009), and travel fellowships continue to pipeline the next generation of organic chemists into the field.
- ▶ A growing partnership has emerged between Empowering Women in Organic Chemistry (EWOC), formalized in 2019, and the world's largest annual gathering of women in organic chemistry.
- ▶ Mentorship initiatives at all levels, including Biopharma and Academia 101 as well as Future Pharma Innovators, have partnered with multiple ACS Divisions and committees.

Award-Winning Digital Presence and Open Science

In 2017, ORGN relaunched its mobile-responsive website at organicdivision.org, which has become one of the most visited online resources for organic chemists worldwide. In 2020, the Division unveiled a companion site, organicchemistrydata.org, which consolidates legacy and active data resources, including reaction databases, spectroscopy references, and specialized compound information. The Division also hosts the *Virtual Organic Textbook*, originally developed by Professor William H. Reusch at Michigan State University. In response to the COVID-19 pandemic, ORGN made all video content available for free in 2020 and launched a Virtual Symposium Series. Both are innovations that permanently broadened access to organic chemistry education.

Nobel laureates in ORGN represent the full breadth of organic chemistry, underscoring the Division's role as the meeting ground for the field's most transformative ideas.

DIVISION OF POLYMER CHEMISTRY

Division of Polymer Chemistry at 75: Community, Continuity, and the Next Quarter-Century

The Division of Polymer Chemistry (POLY) traces its origins to the 1946 High Polymer Forum, an effort to gather the polymer papers then scattered across five ACS Divisions into one place where they could be heard together.

That impulse – to give a dispersed community a common home – led to the formation of a Division, organized as a probationary unit in 1950 under Founding Chairman Carl S. Marvel, with Herman F. Mark as secretary-treasurer. The Division was granted full status in 1951. Seventy-five years later, the mission its founders set down – to advance the science of polymerization and the chemistry and physics of polymeric materials, and to promote basic research in the field – remains essentially unchanged. The quarter-century from 2002 to 2026 has been the period in which POLY carried that founding purpose into a new era shaped by global scientific challenges, digital communication, changing career paths, and a renewed focus on the community that has always been its defining strength.

POLY remains a central home for the full breadth of polymer chemistry – synthesis, characterization, theory, processing, and the translation of fundamental discovery into materials that shape modern life. From 2002 to 2026, that breadth expanded substantially as polymer scientists helped shape advances in controlled polymerization, macromolecular architecture, biomaterials, membranes, electronic

and energy materials, sustainable polymers, and the circular economy. POLY's role has been to create the spaces where that evolving field comes together: technical symposia, workshops, webinars, student programs, awards, and professional networks that allow ideas and people to move across disciplinary boundaries. The Division brings academia, industry, and government to the same table, most visibly through its Industrial Advisory Board, which gives industrial scientists a standing voice in POLY's programming, awards, and education. POLY also reaches well beyond its own membership, frequently partnering with neighboring ACS Divisions such as PMSE, COLL, CELL, and BIOT (among others) on joint symposia and co-located programming – underscoring the breadth of polymer science and its connections across the chemical enterprise. That reach extends internationally as well, through ties to the Pacific Polymer Federation, the International Union of Pure and Applied Chemistry (IUPAC), and polymer societies across the Americas and Asia. POLY's mission has been to keep the field connected and to make sure the next generation of polymer scientists can find their way into it.

The Division brings academia, industry, and government to the same table, most visibly through its Industrial Advisory Board, which gives industrial scientists a standing voice in POLY's programming, awards, and education.

If one thread runs through this period, it is that POLY is, above all, a community. First-time attendees and new POLY members consistently describe their first experience at one of the ACS Meetings & Expositions the same way: walking through or presenting at a poster session and being welcomed, often personally, by scientists whose papers they had only read. This environment is intentionally sustained year after year by volunteers, a dedicated business office, and simple traditions – the POLY membership desk, the socials, the informal introductions that happen between sessions – that turn ACS Meetings & Expositions into something closer to a reunion. Much of what the Division accomplished between 2002 and 2026 was an effort to formalize and extend that welcoming culture.

This culture directly shaped POLY's sustained investment in students and early-career scientists, which became a defining priority of this era. Beginning in 2004, the Division launched the Excellence in Graduate Polymer Research Symposium, inviting departments nationwide to nominate their strongest polymer graduate students for a dedicated platform of talks,

posters, and networking. The symposium grew from a few dozen participants to cohorts of more than 50, and it was repeatedly designated as an ACS Presidential Event, drawing ACS Presidents to meet the students directly. In 2005, the Undergraduate Research in Polymer Science Symposium gave undergraduates their own stage at ACS Spring 2005 – organized continuously by the University of Southern Mississippi – and now attracts student presenters from across the country and beyond who are paired with industry-sponsored career panels. On a larger scale, the student-organized National Graduate Research Polymer Conference (NGRPC) brought hundreds of graduate and undergraduate researchers together in a student-run setting, exceeding 500 attendees in some years, and added a Three-Minute Pitch competition to sharpen how young scientists communicate their work. Underpinning all of it, student chapters put down roots on campuses nationwide; in 2011, POLY and PMSE merged their chapters into a single joint network supported by special-projects grants, a student advisory board, and annual recognition of the strongest chapters. Together these programs created a clear pipeline – from a first

undergraduate poster, to graduate recognition, to leadership and service – that has shaped a generation of polymer scientists.

Technical programming is a core strength for POLY, and during these years the Division both sustained its signature formats and built new ones. Its topical workshops, a tradition since 1979, remained a flagship – multi-day meetings focused on challenges defining the field, from fuel cells and water purification to sustainable polymers and plastics circularity. In 2017, POLY launched its Webinar Series, a free and widely attended program that brought leading polymer scientists to a global online audience and that quickly became one of the Division's most visible offerings. When the pandemic forced ACS programming online in 2020, those digital capacities helped POLY sustain its symposia, judging, student competitions, and webinars through a period of disruption.

As the ACS Meetings & Expositions structure has continued to evolve, POLY has been deliberate about preserving the interactions that define the Division – particularly the poster sessions, hallway conversations, and informal introductions that bring students, early-career scientists, and senior leaders into the same space. POLY also modernized how it shares technical content and supports polymer education, retiring the print *Polymer Preprints* in favor of digital meeting abstracts and reimagining its long-standing POLYED efforts as the Macromolecular Alliance for Community Resources and Outreach (MACRO). These changes helped keep a 75-year-old organization current while preserving the continuity that members value.

Polymer chemistry's prominence has been reflected in the people who have called POLY home and in the awards through which the Division recognizes the field. POLY's heritage runs through giants of polymer science – with Herman Mark and Carl Marvel among its founders and Nobel laureate Paul Flory, an early POLY chairman and the first recipient of the Herman F. Mark Polymer Chemistry Award. The same tradition continued into this period. Robert H. Grubbs, whom POLY honored with the Herman F. Mark Polymer Chemistry Award in 2000, went on to share the 2005 Nobel Prize in Chemistry, and the Division's awards have continued to recognize scientists whose work has shaped modern polymer chemistry, including Krzysztof Matyjaszewski, Joseph DeSimone, Zhenan Bao, and Craig Hawker (among many others).

Just as important, POLY broadened the ways it recognizes excellence. It added the Mark Scholar Awards in 2006, recognizing excellence in research and leadership across career stages through Young Scholar, Scholar, and Senior Scholar designations. Building on a long-standing slate that honors research and leadership, creativity in younger scientists, polymer education, industrial innovation, and sustained service, the Division established the POLY Fellows Program in 2009 to recognize members who advance polymer science through scientific accomplishment and service to the profession. The Young Industrial Polymer Scientist Award, recognizing industrial innovation and creativity by early-career scientists, was established in 2016. Together, these awards recognize the diverse contributions required to sustain a vibrant scientific community.

Polymer science is only growing more central to society's pressing challenges ... and POLY intends to remain where that science is shared and where its newest practitioners are welcomed.

POLY marks its 75th anniversary in 2026, and the Division has spent much of the year listening to its members. The "POLY Pathways – Tell Your POLY Story" campaign has invited members to share how they found POLY and why they stayed engaged. Many of the initial storytellers are longtime members, but their accounts return to a common starting point. For most, active involvement in POLY began because someone reached out personally to invite them to a business meeting, introduce them to a colleague, or include them in organizing a symposium. The connections that followed were often career-defining, and many describe their service to the Division as among the most rewarding work of their careers. POLY is also engaging its membership in new ways: In April 2026, it launched a series of virtual town halls – open member-driven listening sessions rather than business meetings that are designed to reach members between ACS Meetings & Expositions. The first town hall drew a strong, engaged turnout and candid discussion of what would make the Division stronger, with further sessions to follow.

Looking ahead, the task is to give the next generation of polymer scientists the same experiences. Polymer science is only growing more central to society's pressing challenges – sustainability, health, energy, infrastructure, and the circular economy – and POLY intends to remain where that science is shared and where its newest practitioners are welcomed. The priorities its members named point the way: lowering the barriers to getting involved, creating visible roles for early-career scientists, building engagement beyond ACS Meetings & Expositions, and recognizing excellence more broadly through an evolving awards model. After 75 years, POLY's impact extends beyond any single program or award. Its real strength remains its community. Moving forward, the Division's priority is to ensure that its community remains as open, as generous, and as vital for the next generation as it was for the last.

DIVISION OF POLYMERIC MATERIALS

A Century of Excellence and Vision for the Next 100 Years

Today, PMSE stands as a crossroads connecting researchers from academia, industry, and government to solve pressing societal challenges through polymeric materials.

ACS' Division of Polymeric Materials: Science and Engineering (PMSE) achieved a major milestone in 2024, celebrating its 100th anniversary of technical programming.

Founded in 1923 as the Paint and Varnish Section, the Division has evolved from a specialized industrial group into a vibrant, global community at the forefront of polymer science and engineering. While its early decades laid the foundation for the plastics and coatings industries, the last 25 years have been characterized by a dramatic expansion in scope, a focus on interdisciplinary innovation, and the establishment of robust programs to nurture the next generation of scientific leaders. Today, PMSE stands as a crossroads connecting researchers from academia, industry, and government to solve pressing societal challenges through polymeric materials.

The Division's journey toward its current identity was marked by several name changes to reflect the rapidly advancing scientific landscape. The PMSE name was formally adopted in 1982, reflecting its shift in specialization from traditional organic coatings and plastics toward cutting-edge macromolecular topics that underpin next-generation technologies.

In the 21st century, the PMSE technical focus has broadened to include:

- ▶ **Sustainability and Circular Economy:** Addressing global concerns like microplastics and advancing the development of bio-based, degradable, and recyclable polymers.

- ▶ **Advanced Materials for Electronics and Energy:** Researching polymer electrolytes, hybrid functional materials, and high-performance polymers for energy storage and next-generation electronics.
- ▶ **Biotechnology and Medicine:** Developing precision molecules, dynamic assemblies, and biomaterials for health care applications.
- ▶ **Digitalization and AI:** Leveraging automation and artificial intelligence to accelerate the discovery, processing, and fabrication of new polymeric materials.

The 21st century has also seen the inauguration of several flagship PMSE programs. Key initiatives during this period include:

- ▶ **PMSE Fellows Program:** Established in 2000 to recognize members who have made outstanding contributions to the science and engineering of polymeric materials and demonstrated notable service to the Division. To date, over 125 members have received this prestigious lifetime honor.
- ▶ **Student Engagement:** PMSE/POLY Student Chapters were piloted and established in collaboration with the POLY Division in 2010, fostering a local sense of community and leadership for the next generation of scientists while broadening their scientific networks through interactions with other chapters.
- ▶ **Support for Early-Career Researchers:** The Young (now Early) Investigator Symposium was launched in 2011, followed by the Future Faculty Symposium in 2018 and the Emerging Professionals Symposium in 2026, all designed to provide high-profile platforms for emerging leaders.
- ▶ **International Expansion:** The Division's global footprint grew significantly with the first joint symposium between PMSE and the Polymer Division of the Chinese Chemical Society (CCS-PD) in Chengdu, China, in 2012. This momentum has continued with other international polymer societies; for example, in fall 2026, a landmark joint meeting will be held in Busan, South Korea, to celebrate the 50th anniversary of the Polymer Society of Korea (PSK).

PMSE has evolved from a traditional ACS Division into a unified, accessible, and collaborative ecosystem at the forefront of polymer science and engineering.

Moreover, PMSE has evolved from a traditional ACS Division into a unified, accessible, and collaborative ecosystem.

- ▶ **Unified Programming:** The PMSE/POLY Joint Committee streamlined our presence at ACS Meetings & Expositions, eliminating redundancy and creating a cohesive, high-impact technical front.
- ▶ **Broadened Access:** Through K-12 and public outreach initiatives and more recently Regional Ambassadors as described below, the Division has decentralized expertise, bringing polymer science to classrooms and local communities to secure the field's future.
- ▶ **Continuous Dialogue:** By leveraging webinars and multi-sector panels, PMSE transitioned into a year-round "think tank" that bridges the gap between industry, academia, and government.

The 2024 centennial served as a focal point for reflecting on a century of progress while charting a course for the future. The celebration was marked by ambitious programming at ACS Spring 2024, featuring dedicated symposia and historical retrospectives. A highlight of the centennial was the "Future of Plastics" panel discussion, which explored critical directions such as energy, sustainability, medicine, and complex molecular architectures. The Division also used this milestone to showcase the achievements of "Future Leaders of Polymeric Materials Science and Engineering" – graduate students and postdocs whose significant contributions represent the Division's promising future.

In late 2023, PMSE leadership held a strategic planning retreat to identify goals for the next five years. This plan has already birthed several high-impact initiatives:

- ▶ **Awards and Recognition Committee:** Established to ensure fair and transparent protocols for all Division awards, reflecting a commitment to inclusive and diverse recognition.

- ▶ **Regional Meeting Ambassadors:** PMSE's goal is to facilitate technical programming in polymer material science and engineering at all ACS Regional Meetings, led by Regional Meeting Ambassadors.
- ▶ **The Breakthroughs in Polymers (BIP) Forum:** A new initiative focused on the professional development of early-career scientists working in industry and government laboratories was launched in 2025, addressing a historical need to better serve non-academic members.
- ▶ **New Member Portal:** A dedicated web portal is being launched to create a robust communication ecosystem, allowing members to share job postings, manage awards, and engage in dynamic discussion boards.

As PMSE enters its second century, its vision is clearly defined: "Creating a better tomorrow for all through polymeric materials and engineering." The Division is heading toward a future where polymer science is inextricably linked with global sustainability goals, digitalization, and interdisciplinary breakthroughs in health care and electronics. The Division is committed to growing an inclusive, global community that fosters partnerships across borders and sectors. The foundations laid over the past century will guide the Division as it continues to catalyze innovations that improve the quality of life globally.

This article was written with the assistance of Gemini, with prior publications providing source material:

[PMSE in the Next 100 Years: Shaping the Future of Polymers](#), *Chemistry of Materials* editorial

[A Celebration of PMSE's Centennial: Honoring the Legacy and Promising Future of Polymeric Materials](#), *Macromolecules* editorial

[Happy centennial to the American Chemical Society's "Polymeric Materials: Science and Engineering" Division!](#), *Polymer* special issue preface

The Division is heading toward a future where polymer science is inextricably linked with global sustainability goals, digitalization, and interdisciplinary breakthroughs in health care and electronics.

DIVISION OF PROFESSIONAL RELATIONS

A Quarter-Century of Advocacy, Inclusion, and Career Development

The American Chemical Society celebrates its sesquicentennial (ACS150) by honoring the scientific milestones that have transformed global society.

The ACS Division of Professional Relations (PROF) serves as a critical guardian of the most vital resource in the chemical enterprise: its people. PROF is home to 92 ACS Fellows. Unlike disciplinary Divisions focused on technical aspects, PROF specializes in the professional, ethical, economic, and social relations of chemical scientists. The Division bridges the gap between fundamental laboratory work and real-world career survival, equity, and advancement. Its mandate encompasses three core pillars: engaging members across all career stages, developing resources for personal and professional success, and advocating for the values and rights of chemical professionals both within and outside the Society. By focusing on non-technical skills – ranging from diversity, accessibility, ethical leadership, and safety culture to career transitions and workplace equity – PROF ensures that the chemical workforce remains resilient, inclusive, and socially responsible. PROF focuses on the following three goals: (1) Increase and enhance member involvement, (2) provide and promote resources for professional and personal success across career stages and goals, and (3) represent the values and needs of members on professional matters inside and outside of ACS.

To achieve these goals, PROF hosts seven diverse subdivisions: Chemists with Disabilities, Ethics, International Chemists, ACS Pride (formerly GTCA), Minority Affairs, Women Chemists, and Younger Chemists. Notable initiatives include the ACS Pride Merck Graduate Research Award and the PROF Leadership Development Award. The creation of the Committee on the Advancement of LGBTQ+ Chemists (CALC) is a direct result of PROF's subdivision ACS Pride, which is home to numerous diverse chemistry professionals.

Division Milestones and Historic Anniversaries

The 2002–2026 time frame represents a period of profound institutional maturation and strategic expansion for the Division. Founded originally in 1972, PROF officially celebrated its golden 50th anniversary in 2022. This milestone allowed the Division to reflect on a half-century of progressive advocacy while positioning its modern initiatives to align seamlessly with the national ACS150 celebrations in 2026. Over this 25-year window, PROF transitioned from a subgroup concerned primarily with traditional employment contracts into the central umbrella

community for diverse subdivisions within ACS. It now serves as the operational home for specialized focus groups, including:

- ▶ The Gay and Lesbian Chemists and Allies subdivision (now widely recognized as ACS Pride). ACS Pride promotes inclusion, advocacy, recognition, mentorship, networking, and diversity of lesbian, gay, bisexual, transgender, queer, and questioning chemical scientists.
- ▶ International Chemical Sciences Chapters liaisons.
- ▶ Minority Affairs, Younger Chemists, and Women Chemists alignment groups.
- ▶ The modernization of the Division's internal framework culminated in a full rebranding initiative, cementing its slogan, "Elevating Professionalism," as the guiding tenet for all modern programming at ACS Meetings & Expositions.

Transformational Initiatives and Projects

During this period, PROF spearheaded several initiatives designed to meet the evolving socioeconomic needs of scientists. In the mid-2000s, the Division radically expanded its PROF programming grants. These grants provided seed funding to Local Sections for events targeting networking, alternative career paths, and technical professional skills-building workshops. As systemic diversity and inclusion became paramount, PROF accelerated its advocacy by creating high-impact equity programs. A landmark achievement of this era was launching the ACS Pride Merck Graduate Research Award. Run in

continuous collaboration with industrial partners, this program recognizes outstanding scientific achievements and professional contributions from LGBTQ+ graduate students. It provides critical funding, visibility, and mentorship pipelines to help students transition smoothly into industrial and academic leadership roles. Furthermore, to combat the professional isolation caused by shifting workforce dynamics in the early 2020s, the Division established its digital portfolio. This included the Exceptional Leaders Talk Series and a continuous, open access national webinar program. These platforms democratized elite career coaching, intellectual property guidance, and workplace safety strategies for global chemical practitioners who could not physically attend national meetings.



Members of a strategic plan working group for ACS' proposed Committee on the Advancement of LGBTQ+ Chemists gather in front of the ACS headquarters building in Washington, D.C.

Photo credit: Sam Brunclik

Recognition and Legacy Links

The human-centric focus of PROF has attracted some of the most socially impactful figures in modern scientific history. The Division's highest honor, the Henry Hill Award, recognizes individuals who have served the chemical profession in a unique and distinguished manner. This award directly channels the legacy of Henry A. Hill, the first African-American ACS President as well as a pioneer in championing workplace safety standards and professional freedom for industrial chemists. In March 2026, PROF proudly named Dr. Cary Supalo as the 2026 Henry Hill Award recipient. Dr. Supalo's pioneering work in developing accessible laboratory technologies for blind and visually impaired students perfectly embodies the modern ethos of the Division. By honoring advocates who dismantle physical and social barriers within the laboratory, PROF consistently translates the high-minded concepts of equity into concrete accessible tools that empower scientists worldwide. The Division also honors institutional excellence through the Lou Sacco Award, which has been awarded to nine recipients. This distinction recognizes members who have dedicated significant portions of their careers to meritorious and exemplary volunteer service within the professional relations sphere. The PROF Leadership Development Award is another excellent effort to honor younger chemistry professionals. This award sponsors one professional every year to participate in the annual ACS Leadership Institute.

Forward-Looking Perspective: The Next Horizon

As PROF looks beyond the ACS150 milestone, the professional landscape of chemistry is experiencing disruption from automation, remote collaboration, and artificial intelligence. The future of the Division lies in redefining what it means to be a professional scientist in a digital era. PROF is positioning itself to lead the conversation on the ethical implementation of machine learning in molecular and drug discovery, ensuring data integrity, human oversight, and equitable access to computational tools. Strategically, the Division is heading toward an advocacy model that embraces intersectional career paths. The next generation of chemists will not remain in single-sector roles for life; they will pivot dynamically between startups, public policy, and cross-border academic collectives. PROF will expand its digital mentorship accelerators and international partnerships to build a borderless, recession-proof safety net for chemists. By continuing to champion the human element, PROF will ensure that the next 150 years of chemical innovation remain safe, equitable, ethical, and open to all.

Opposite page: At the ACS Office of Philanthropy donor reception during ACS Fall 2022 in Chicago, Susan Ainsworth (left), manager of donor communications, organized a program featuring ACS Bridge Fellow Javier Sanlley-Hernandez, ACS Scholar Jayda Jackson, endowment donor Dr. Sharon Haynie, and then-CEO Thomas Connelly. Photo credit: EPNAC.com



RUBBER DIVISION, ACS

Strengthening the Bonds Between Science and Industry: The Evolution and Future of the Division

For more than a century, Rubber Division, ACS has served as a bridge between scientific discovery and industrial application in the rubber community.

The Division has advanced the science, technology, and business of rubber and related elastomeric materials while fostering collaboration among researchers, manufacturers, educators, and students around the world. Over the years, Rubber Division, ACS experienced a period of remarkable transformation marked by strategic growth, modernization, educational expansion, and renewed focus on community and innovation.

One of the Division's most enduring contributions to the scientific community has been the continued success of its journal, *Rubber Chemistry & Technology*. In 2003, the organization celebrated 75 years of publishing the journal, which remains the premier scientific publication dedicated exclusively to rubber science and elastomer technology. For generations, *Rubber Chemistry & Technology*

has provided a platform for groundbreaking research, material innovations, and technical advancements that continue to shape industries ranging from transportation and health care to aerospace and energy. The journal's longevity reflects the Division's steadfast commitment to scientific excellence and knowledge sharing.

As the rubber industry evolved, Rubber Division, ACS recognized the importance of strengthening its identity and broadening its reach. In 2014, the organization undertook a major rebranding initiative for its annual event. Previously known by a lengthy title that attempted to encompass all event components, the conference was reintroduced as the International Elastomer Conference. The streamlined name and cohesive branding strategy modernized the

event's image while reinforcing the organization's focus on elastomer science, technology, and business. A new logo and newly branded marketing assets created a stronger, more recognizable identity that positioned the conference for future growth and global engagement.

Education and workforce development became an increasingly important strategic

Photo credit: Rubber Division, ACS



priority throughout the following years. In 2016, Rubber Division, ACS established the Elastomer Training Center, a centralized hub dedicated to advancing education for students, industry professionals, and educators. Located within the organization's headquarters at the time, the center expanded the Division's already robust training offerings by providing in-person learning opportunities, new course topics, and access to experienced instructors. The Elastomer Training Center strengthened the Division's role as a premier provider of continuing education and technical development within the rubber industry.

That same year, the organization introduced another transformative initiative by launching a corporate membership program. Prior to 2016, membership had been structured solely around individuals. Recognizing the importance of deeper engagement with industry partners, Rubber Division, ACS created a tiered corporate membership model that offered both traditional membership benefits and enhanced opportunities and value for organizational involvement. This



An initiative to cover travel expenses encourages student participation in conferences, making it easier for them to network and explore possibilities within the industry. Photo credit: Rubber Division, ACS

initiative strengthened industry collaboration, expanded the Division's network, and provided companies with greater visibility and participation within the rubber community.

Growth continued in 2018 when Rubber Division, ACS achieved a milestone that symbolized both stability and progress. After leasing office space throughout its entire 108-year history, the organization purchased and renovated a 7,500-square-foot building to serve as its permanent headquarters. The new facility provided expanded office space, collaborative work environments, and an enhanced Elastomer Training Center capable of supporting future educational and operational growth. Becoming "homeowners" represented

more than a real estate investment. It demonstrated the organization's confidence in its future and its commitment to serving the industry for generations to come.

The Division also continued to expand its efforts to foster inclusion, mentorship, and community engagement. In 2019, it introduced WORD, the Women of Rubber Division initiative, designed to bring together women from across the rubber industry. Initially launched as a conference program featuring keynote speakers, panel discussions, and networking opportunities, WORD evolved in 2021 to include virtual WORD Conversations. These discussions created valuable opportunities for women to connect, share

experiences, seek guidance, and build professional relationships beyond the annual conference setting. WORD has become an important example of the Division's dedication to creating a more inclusive and supportive professional community.

Another significant initiative launched in 2019 focused on cultivating the next generation of rubber professionals. Through the annual conference student initiative, college and university students were invited to attend the International Elastomer Conference free of charge, with sponsorship support covering transportation, lodging, and meal expenses. By connecting students directly with industry professionals, technical and educational sessions, and networking opportunities, the program introduced young scientists and engineers to the possibilities within the rubber industry. Many participants have since pursued careers in our industry as a direct result of their experiences at the conference, demonstrating the long-term impact of the initiative.

In 2021, Rubber Division, ACS reaffirmed its purpose and strategic direction through the adoption of a new mission and vision and introduction

of a set of core values. The organization's mission, "To educate, connect, and grow the evolving elastomer industry," reflects its commitment to serving as both a technical authority and a collaborative community. Its vision positions the Division as "the premier resource that strengthens the bonds between science and industry for a thriving elastomer community." Supported by core values emphasizing excellence, innovation, diversity, inclusion, and passion for knowledge, these guiding principles continue to shape every aspect of the organization's work.

That same year, the Division celebrated its 200th Technical Meeting, another historic milestone in its long-standing commitment to scientific advancement. Technical programming hosted by Rubber Division, ACS has long been recognized for its quality, depth, and practical relevance. Researchers, innovators, and industry leaders from around the world continue to share groundbreaking discoveries and emerging technologies related to elastomer materials, manufacturing processes, sustainability, and product performance. In 2026, the organization will host its 210th

Technical Meeting, underscoring the enduring importance of technical exchange within the rubber community.

Collaboration across scientific disciplines also expanded during this period. Rubber Division, ACS co-sponsored a joint symposium with the ACS Division of Cellulose and Renewable Materials at ACS Spring 2023. The symposium, titled "Cellulose Derived Reinforcing Fillers & Additives for Sustainable Elastomers," marked the first Rubber Division, ACS organized session at an ACS Meetings & Expositions in decades. The event highlighted growing interest in sustainability and demonstrated the Division's renewed commitment to interdisciplinary engagement within the broader ACS community.

The year 2025 emerged as one of the most transformative in the organization's recent history. Among its most ambitious achievements was the launch of the Global Polymer Summit, created through a partnership between Rubber Division, ACS and Crain Communications/ Rubber News. Responding to industry demand for a premier single comprehensive annual gathering, the Global Polymer Summit unified the International



Photo credit: Rubber Division, ACS

Elastomer Conference and the International Tire Exposition & Conference into one integrated event experience. The result was a seamless platform that brought together the broader tire and rubber industries through technical programming, collaborative discussions, and an expansive exhibition. This milestone reflected the Division's ability to innovate strategically while strengthening industry connections on a global scale.

Also in 2025, Rubber Division, ACS celebrated the 50th anniversary of its Expo and honored several exhibitors who had supported the event for decades. The Division also expanded its presence within ACS by participating in five of six ACS Regional Meetings, creating new opportunities for collaboration with other Divisions and increasing visibility for rubber science within the larger chemistry community.



Recognizing the growing importance of emerging technologies, the Division embraced artificial intelligence as a professional development priority. In 2025, 100% of staff achieved Association AI Professional certification, preparing the organization to responsibly integrate AI into its operations, communications, and industry initiatives. That same year, Rubber Division, ACS introduced ElastIQ, an AI-powered chatbot designed to help users navigate learning opportunities, events, and resources through the organization's website. These advancements demonstrated the Division's willingness to adapt and evolve alongside technological change.

The organization also deepened its commitment to outreach by establishing a dedicated full-time Outreach Director position in 2025. This initiative significantly expanded engagement efforts with students, educators, professionals, companies, and

local communities, reflecting a broader vision for industry awareness and workforce development.

As Rubber Division, ACS looks toward the future, its priorities remain firmly centered on education, connection, and growth. The organization is committed to strengthening partnerships throughout the elastomer industry while inspiring and developing the next generation of rubber chemists, engineers, and innovators. Through expanded outreach, enhanced educational offerings, technological innovation, and continued collaboration across disciplines, Rubber Division, ACS will continue evolving alongside the industry it serves.

For more than 100 years, Rubber Division, ACS has strengthened the bonds between science and industry. Its history reflects an organization willing to embrace change while remaining grounded in its core mission of advancing knowledge and community. As the rubber industry continues to transform in response to new technologies, sustainability challenges, and global opportunities, Rubber Division, ACS stands prepared to lead, educate, and innovate well into the future.

SMALL CHEMICAL BUSINESSES DIVISION

Supporting Entrepreneurship and Innovation

SCHB serves as a clearinghouse for information about services available to members engaged in or planning to start small chemical businesses.

The Small Chemical Businesses Division (SCHB) of ACS was established in 1978 to support the needs of chemists working in small enterprises, including self-employed chemists.

We assist this constituency with the legal, social, educational, legislative, regulatory, and economic aspects of their unique professional status through programming at ACS Meetings & Expositions, online webinars, networking events, training and mentorship opportunities, and social media outreach on topics of importance.

The purposes of SCHB are to:

- ▶ Aid in the formation, development, and growth of small chemical businesses.
- ▶ Address the legal, social, educational, legislative, regulatory, and economic needs of self-employed chemists and ACS members who are employed by small chemical businesses.
- ▶ Encourage, promote, and organize personal interaction among members of the Division and other chemists, institutions, or organizations interested in the promotion of free enterprise among chemists.
- ▶ Serve as a clearinghouse for information about services available to members engaged in or planning to start small chemical businesses.
- ▶ Provide a liaison between small chemical businesses needing part-time employees and chemistry students needing income and experience.
- ▶ Develop symposia and general sessions with subjects or topics related to the needs and interests of small chemical businesses at ACS Meetings & Expositions or at Division meetings.

- ▶ Foster communication among its members by publishing the substance of its programs, symposia, and general sessions as mentioned above by publishing a newsletter, and by other modes as may be deemed appropriate.
- ▶ Provide the expertise and experience of its members to the Society and for the betterment of the public.

Historically, the Division was officially formed in 1978. Its roots go back to September 1977, when Dr. Alexandra Melnyk (then Alternate Councilor of the Columbus Section) circulated a study to ACS officials on “ACS and Chemists in Business for Themselves,” which earned her an invitation to an executive session of the Committee on Chemistry and Public Affairs (CCPA), on Feb. 25, 1978. After CCPA had heard her eloquent plea for some attention to the needs of chemical entrepreneurs, Dr. Bill Bailey suggested that these small business chemists should try to organize a Division within ACS.

Dr. Melnyk brought this idea home to Columbus, where a local business group of 16 members already existed, and started a campaign to get the necessary 50 signatures of ACS members on a petition to go before Council. They easily got more than 150 signatures from 17 states, though only 87 could be validated before the spring deadline. A program, budget, and slate of officers were prepared. To further emphasize the need for such a Division, the founding group organized a symposium on “Concerns of Developing Chemical Businesses,” which the CCPA and the Division of Industrial and Engineering Chemistry (I&EC) kindly agreed to cosponsor and support.

At ACS Fall 1978 in Miami Beach, the founding group asked the Divisional Activities Committee (DAC) to recommend the petition to Council, which they did. On Sept. 12, 1978, a symposium was held, and it was an unqualified success – with around 60 attendees, although the location was honestly hard to find. The next day, Council voted to establish the “Division of Small Chemical Businesses” (SCHB). And the story continues to this day, with a vibrant and progressive Executive Committee and programs spanning many other Divisions across ACS.



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