Division of Organic Chemistry

S. Silverman and E. McLaughlin, Program Chairs

SUNDAY MORNING

Section A

Orange County Convention Center
Room W230A

New Reactions & Methodology

S. M. Silverman, Organizer
T. J. Henderson, Presiding


9:00 ORGN 4. Sustainable p-hydroxycinnamic acids synthesis through proline-mediated Knoevenagel reaction. C. Peyrot, A. Peru, L. Mouterde, F. Allais


10:00 ORGN 7. Unusual products from the thionation of bicyclic ketones. T. Nguyen, J.D. Williams


10:40 ORGN 9. Am I a chemist, an engineer, or an architect? How to redesign natural porphyrins as organocatalysts. M. Kielmann, M. Roucan, S. Connon, M.O. Senge

11:00 ORGN 10. Electrode material selective functionalization of styrenes with oxygen: Olefin cleavage and synthesis of tetrahydrofuran derivatives. Y. Imada, Y. Okada, K. Chiba

Section B

Orange County Convention Center
Room W230B

Metal-Mediated Reactions & Syntheses

S. M. Silverman, Organizer
T. Diao, Presiding

8:20 ORGN 12. (Cyclopentadienone)iron-catalyzed lactonizations of symmetrical and unsymmetrical diols. T.W. Funk

8:40 ORGN 13. Taming rhodium(II) carbenes with tethered, axial coordination. A. Darko, W. Sheffield, D. Cressy, A. Abshire, C. Zavala

9:00 ORGN 14. Transition-metal catalyzed synthesis of unsymmetrically substituted triazolium salts. J.L. Bolliger


9:40 ORGN 16. Complexities of carbonyl-Lewis acid interactions in catalytic systems. C. Hanson, M. Psaltakis, S. Siddiqi, J. Cortes, J.J. Devery

10:00 ORGN 17. Novel design and preparation of a triazole-based tridentate ligand. Q. Xing, X. Shi


10:40 ORGN 19. Synthetic utility of boracarboxylated styrene derivatives. T.M. Perrone, B.V. Popp


Section C

Orange County Convention Center
Room W230C

CH Activation

S. M. Silverman, Organizer
K. Olsen, Presiding

8:40 ORGN 22. Reactivity of hypercoordinated iodanes in C-H functionalization. A. Stirling

9:00 ORGN 23. Newly discovered ruthenium Formato catalyst MCAT-53 for versatile and practical synthesis of biaryls through C-H activation. A. Mehta, B. Saha, A. Koohang, M. Chorghade

9:20 ORGN 24. closo-Borate anions activate C-H bonds in hydrocarbons in the gas phase. X. Ma, J. Liu, J. Warneke, J. Laskin, H.I. Kenttamaa


10:00 ORGN 26. Selective synthesis of mono-functionalized naphthalenediimides by copper-catalyzed C-H activation. J.J. Reczek


11:00 ORGN 29. Palladium-catalysed C(sp^3)–H arylation of primary amines using a catalytic alkyl acetal to form a transient directing group. S. St John-Campbell, A.K. Ou, J.A. Bull


Section D

Orange County Convention Center
West Hall F3

Opportunities & Challenges in Carbohydrates

Cosponsored by CARB‡
H. M. Nguyen, Organizer, Presiding

8:30 Introductory Remarks.

8:35 ORGN 31. Chemical probes of immunity. L.L. Kiessling

9:05 ORGN 32. Radical SAM enzymes in the biosynthesis of sugar-containing natural products. H. Liu

9:35 ORGN 33. Carbohydrate probes for chemoproteomics. S.D. Townsend

10:05 Intermission.

10:20 ORGN 34. Synthesis as an enabling technology for understanding glycan function and assembly. T.L. Lowary
10:50 ORGN 35. Opportunities and challenges in automating chemistry in batch and flow: The case of carbohydrates.  
N.L. Pohl

Section E

Orange County Convention Center  
West Hall F4

James Flack Norris Award in Physical Organic Chemistry

M. Jeffries-EI, Organizer, Presiding  
S. Wiskur, Presiding

8:00 Introductory Remarks.

8:05 ORGN 36. Diarenoindacenes and diindenoarenes: From quinoidal electron-accepting materials to stable organic diradicals.  
M.M. Haley

8:35 ORGN 37. Probing and harnessing the hydrophobic and Hofmeister effects.  
B.C. Gibb

9:05 ORGN 38. Application of supramolecular sensing to epigenetics.  
M. Waters

S.H. Gellman

10:05 Intermission.

10:20 ORGN 40. Autocatalytic models for symmetry breaking and the emergence of biological homochirality.  
D.G. Blackmond

10:50 ORGN 41. Integrating data science with physical organic chemistry.  
M.S. Sigman

11:20 ORGN 42. Award Address (James Flack Norris Award in Physical Organic Chemistry sponsored by the ACS Northeastern Section). Physical organic chemistry in the analytical sciences.  
E.V. Anslyn

Wolfrom Award

Sponsored by CARB, Cosponsored by CELL, MEDI, ORGN and PROF

Horton Award

Sponsored by CARB, Cosponsored by CELL, MEDI, ORGN and PROF

SUNDAY AFTERNOON
Section A

Orange County Convention Center
Room W230A

New Reactions & Methodology

S. M. Silverman, Organizer
C. Brindle, Presiding

1:00 ORGN 43. Multidirectional desymmetrisation of pluripotent building block en route to the asymmetric/diastereoselective synthesis of complex nature-inspired scaffolds. T.H. Altel

1:20 ORGN 44. α-Keto-β-diimines: Straightforward synthesis and applications. M. Tripathi, D. Martin

1:40 ORGN 45. Stereoselective one-pot deconjugation, aldol, and stabilized Peterson olefination of α-trialkylsilyl-β-alkyl-α, β-unsaturated esters. M. Probasco, D. Johnson, M.P. Jennings

2:00 ORGN 46. Light-driven intermolecular charge transfer induced reactivity of ethynylbenziodoxol(on)e and phenols. B. Liu, C. Lim, G. Miyake


3:20 ORGN 50. Direct substitution of alcohols to form new C-X and C-C bonds. L. Geary


4:00 ORGN 52. Recent advances in nickel-catalyzed amide C–N bond activation. J.E. Dander, N.K. Garg


4:40 ORGN 54. Bisulfite removal of aldehydes using liquid-liquid extraction and the effect of salt age. C. Brindle, W. Patterson, M. Furigay, M.M. Boucher

Section B

Orange County Convention Center
Room W230B

Asymmetric Reactions & Syntheses
1:00 ORGN 55. Copper(I)-catalyzed [3 + 3]-cycloaddition of enoldiazocarbonyl compounds: An efficient tool for the synthesis of chiral oxazines and pyrazines. K. Marichev, M. Doyle

1:20 ORGN 56. Phase transfer-catalyzed phospha-Michael additions: An asymmetric approach to phosphinate esters. K. Yadavalli, S.D. Lepore

1:40 ORGN 57. Recent studies on Lewis base catalyzed carbon-heteroatom bond formation. S. Sun

2:00 ORGN 58. Catalytic asymmetric synthesis of cyclopentanones and furans from ketenes. N. Kerrigan, M. Mondal, M. Panda

2:20 ORGN 59. Catalyst optimisation for asymmetric synthesis by ligand chirality element addition. C.J. Richards, R.A. Arthurs

2:40 ORGN 60. Metal-catalyzed hydrofunctionalizations. N. Shaozhen, R. Davison, V.M. Dong

3:00 ORGN 61. Synergistic palladium/enamine catalysis for asymmetric hydrocarbon functionalization of inactive alkene with ketone/aldehyde. C. Wei, X. Ye, X. Shi


3:40 ORGN 63. Enantioselective carbofunctionalization of alkenes. T. Diao

4:00 ORGN 64. Discovery of a chiral amphiphilic iridium catalyst for carbon-heteroatom bond formation: Reactions of amines, anilines, indoles, and other various nucleophiles. J. Zbieg

Section C

Orange County Convention Center
Room W230C

CH Activation

S. M. Silverman, Organizer
G. Hughes, Presiding

1:20 ORGN 65. Amino acid ligands accelerate enantioselective C-H functionalization via di-palladium catalysts. J. Gair, J. Lewis


2:00 ORGN 67. δ C–H (hetero)arylation via Cu-catalyzed radical relay. Z. Zhang, L.M. Stateman, D.A. Nagib
2:20 ORGN 68. Overcoming the limitations of γ, and σ-C–H arylation of amines through ligand development. Y. Chen, J. Yu

2:40 ORGN 69. Accelerated asymmetric δ-lactam synthesis with a monomeric streptavidin artificial metalloenzyme. I. Hassan, A. Ta, M. Danneman, N. Semakul, M. Burns, B. Mcnaughton, T. Rovis

3:00 ORGN 70. Aliphatic C–H oxidation for late-stage functionalization. J. Zhao, E. de Lucca, Jr., T. Nanjo, M. White

3:20 ORGN 71. Enabling and accelerating C-H functionalization through continuous-flow chemistry. T. Noel


4:00 ORGN 73. Evidence for a distinct C–H activation mechanism for mild dehydrogenative coupling: Electrophilic Concerted Metalation-Deprotonation (eCMD). B.P. Carrow

4:20 ORGN 74. Advances in platinum-catalyzed Csp3–H oxidation reactions. N. Laloo, M.S. Sanford

Section D

Orange County Convention Center
West Hall F3

Opportunities & Challenges in Carbohydrates

Cosponsored by CARB‡
H. M. Nguyen, Organizer, Presiding

1:00 Introductory Remarks.

1:05 ORGN 75. Studies toward catalytic site-selective alterations of glycopeptide antibiotics and other carbohydrates. S.J. Miller

1:35 ORGN 76. Using reversible covalent bonding to enhance site selective catalysis. K.L. Tan

2:05 ORGN 77. Catalytic stereoselective 1,2-cis glycosylations. H.M. Nguyen

2:35 Intermission.

2:50 ORGN 78. Streamlined methods for the synthesis of heparan sulfate oligosaccharide libraries. L.C. Hsieh-Wilson

3:20 ORGN 79. Stereoselective reactions of oxocarbenium ions: Conformational analysis, stereoelectronic effects, and reactivity. K.A. Woerpel

3:50 ORGN 80. Influence of side-chain configuration and conformation on reactivity and selectivity in glycosylation. D. Crich

Section E
ACS Award for Encouraging Disadvantaged Students into Careers in the Chemical Sciences

K. N. Maloney, Organizer
D. E. Figueroa, Presiding

1:00 Introductory Remarks.


1:40 ORGN 82. Towards *Mycobacterium tuberculosis* detection at the point-of-care: solvatochromic probes permits the detection of mycobacteria within minutes. M. Kamariza, C.R. Bertozzi

2:15 ORGN 83. Regulation of mTOR dependent entry and exit from diapause-like state. A. Hussein, H. Ruohola-Baker

2:50 Intermission.

3:05 ORGN 84. Development of small molecule inhibitors of IKK2. S.J. Hotchkiss, G. Ghosh

3:40 ORGN 85. National Institute of General Medical Sciences undergraduate and predoctoral grant programs. S. Singh

4:15 Introduction of Awardee.

4:20 ORGN 86. Award Address (ACS Award for Encouraging Disadvantaged Students into Careers in the Chemical Sciences sponsored by The Camille and Henry Dreyfus Foundation, Inc.). My success in encouraging disadvantaged students into careers in the chemical sciences using mentoring and research in organic chemistry. E.C. Alexander

Hudson Award

Sponsored by CARB, Cosponsored by CELL, MEDI, ORGN and PROF

Isabell Award

Sponsored by CARB, Cosponsored by CELL, MEDI, ORGN and PROF

Gin New Investigator Award

Sponsored by CARB, Cosponsored by CELL, MEDI, ORGN and PROF
SUNDAY EVENING

Section A

Orange County Convention Center
West Hall C

Metal-Mediated Reactions & Syntheses

Cosponsored by MEDI‡
E. C. McLaughlin, Organizer

5:30 - 7:30

ORGN 87. Borylation of aryl iodides using a Pd/Cu dual catalysis. J. Floreancig, A. Spencer, S. Laulhe

ORGN 88. Stereoselective oxyamidation of glycals: Exploration of N-acyloxy carbamates and azidoformates as metallanitrene and metalloradical precursors. I. Rocroi, K. Song, A. Banerjee, E. Latif, C.M. Rojas

ORGN 89. Applications of conjunctive cross-coupling towards the synthesis of β-hydroxy ketones. C.M. Law, Y. Meng, S. Koo, J.P. Morken


ORGN 91. Method development of air-free techniques with samarium diiodide. G. Rojas


ORGN 93. Enantioselective hydroalkoxylation of 1,3 dienes via metal hydride catalysis. R. Le Tourneau, X. Yang, V.M. Dong

ORGN 94. Base-metal-catalyzed hydrofunctionalization. A. Jiu

ORGN 95. Transition-metal mediated cycloisomerizations of allenes to afford highly substituted cyclopentenes. R.D. Reeves, J.M. Schomaker

ORGN 96. Deprotonative zinclation for the generation and functionalization of organozinc pivalate reagents. K. Bitting


ORGN 98. Quinoline-oxazoline ligand synthesis for bimetallic catalysis. A. Noonikara Poyil

ORGN 100. Supramolecular ensemble of PBI derivative and metal NPs: Potential application in various organic transformations. G. Singh, V. Bhalla


ORGN 102. Synthesis of cyclobutanones and 1,4-diketones via low-valent titanium intermediates. A. Rodriguez, N.N. Le, J.R. Alleyn, M.R. Gesinski

ORGN 103. Bulky bipyridine/pyridine-oxazoline ligands: Synthesis and catalytic reactivity study. Z. Zheng, P.J. Walsh


ORGN 105. Ni-catalyzed C-O bond cleavage of 3-phenoxy acrylic acid derivatives and subsequent intramolecular C-C bond formation to give benzofurans. O. Shohei, K. Murai, H. Fujioka, M. Arisawa


ORGN 107. Examination of the reaction mechanism of the rhodium-catalyzed decarbonylation of pyridyl ketones. E.J. Schoonover, C.J. Wagner, G.J. Campbell, J.B. Johnson

ORGN 108. Synthesis of aryl boronic esters from aryl bromides Using Pd/Cu dual catalysis. A. Spencer, J. Floreancig, S. Laulhe

ORGN 109. Transition-metal catalyst development for alkyne coupling reactions. S. Acharya, P. Zhao

ORGN 110. Safer solvents for alkylthium reagents. T. Malinski, D.E. Bergbreiter

ORGN 111. Palladium-catalyzed hydrodefluorination: A robust and operationally convenient procedure. J. Gair, R. Grey, S. Giroux

ORGN 112. Highly diastereoselective synthesis of (Z)-trisubstituted alkenes containing phenyl and (1,3-dioxan-2ylethul) moieties via organoboranes. N.G. Bhat

ORGN 113. Highly diastereoselective synthesis of (E)-trisubstituted alkenes containing phenyl and biphenyl moieties via organoboranes. N.G. Bhat

Section A

Orange County Convention Center
West Hall C

New Reactions & Methodology

E. C. McLaughlin, Organizer

5:30 - 7:30
ORGN 114. Mild intramolecular ring opening of oxetanes. L. DeRatt, S.D. Kuduk


ORGN 116. Mild and efficient synthesis of amides from acid chlorides and amines using Cs2CO3 & TBAI. J. Champ, E. Carey, D. Orlando, R.N. Salvatore

ORGN 117. Acid-promoted synthesis of cyclic imides from carboxylic acids and isocyanates. S. Kennedy, M.N. Schaeff, D.A. Klumpp

ORGN 118. Synthesis of medchem-relevant Dimethylphosphine Oxide (DMPO) containing building blocks. Y. Dmytriv, S. Ryabukhin, D. Volochnyuk, A.A. Tolmachev

ORGN 119. One-step synthesis of functionalized pyridines by reaction of propargylamine and ketones catalyzed by Cu(II) compounds. S.A. Sotnik, A.I. Subota, S. Ryabukhin, S.V. Kolotilov, D. Volochnyuk


ORGN 122. New frontiers in Castagnoli–Cushman reaction. S. Ryabukhin, D. Volochnyuk, M. Adamovskiy, O. Grygorenko

ORGN 123. Stereospecific connective synthesis of allenes by eliminative cross-coupling of stereodefined sp3- and sp2-hybridized carbenoids. Y. Cao, P.R. Blakemore


ORGN 128. Fluorination of alkynes using keteniminium ion intermediates. G.J. Rainone, S.P. Mulcahy

ORGN 129. Regioselective synthesis of isoxazoles by hypervalent iodine(III) reagent mediated oxidative cyclization. M. Jarvi, G. Rohde, V. Nemykin, V.V. Zhdankin, A. Yoshimura

ORGN 130. Metal-free imidation of sulfides and phosphines using iminoiodane reagents. C.L. Makitalo, S. Larson, G. Rohde, V. Nemykin, A. Saito, V.V. Zhdankin, A. Yoshimura

ORGN 132. Synthetic access to sterically enhanced N-aryl amines and progress toward a novel, tunable carbene scaffold. J.P. Moerdyk, D. Martin, M. Kline, B. Mayro, Z. Herman

ORGN 133. Base-catalyzed isomerization of dienyl alcohols and ethers. N. Molleti, S. Martinez Erro, A. Sanz-Marco, B. Martin-Matute

ORGN 134. Metal-free amino-oxidation of alkenes mediated by N-oxoammonium salts. A. Millimaci, J.D. Chisholm

ORGN 135. Fluorine as an oxygen transfer agent. S. Rozen


ORGN 137. Synthesis of indolizidines from L-pyroglutamic acid using the Ireland–Claisen rearrangement and ring-closing metathesis. D. Essayan, J. Cannon


ORGN 139. Development of a reductive enyne Cope rearrangement for synthesis of allenyl malonates. K. White, S. Scott, A.J. Grenning


ORGN 141. Simple, tunable synthetic routes to cannabinoid natural product analogues. P.V. Navaratne, A.J. Grenning


ORGN 143. Decarboxylative heptannulations via divinylcyclopropane Cope rearrangements: Access to terpenoid-like polycycloalkane scaffolds. R. Schroeder, A.J. Grenning

ORGN 144. Towards scalable terpenoid synthesis: Multifunctionalization of Knoevenagel adducts. P. Vertesaljai, A.J. Grenning

ORGN 145. Stereodivergent total synthesis of hapalindoles, fischerindoles, hapalonamide H, and ambiguine H alkaloids by developing a biomimetic, redox-neutral, cascade Prins-type cyclization. S. Sahu, B. das, M.S. Maji

ORGN 146. Toward the synthesis of radicinin, an inhibitor of Pierce’s disease and citrus greening disease. C.A. Brandenburg, J.W. Lockner, K.N. Maloney, C. Castro, A. Blacutt, C. Roper, P. Rolshausen


ORGN 149. Copper-catalyzed silyl-additions to imines using a disilane as the silicon source. T.S. Carpenter, R. Van Hoveln

ORGN 150. Accessible synthesis of organofluorosilicates. S.R. Harruff, R. Van Hoveln
ORGN 151. Progress toward synthesis of an acylsilane via copper catalysis. B.M. Thomas, R. Van Hoveln

ORGN 152. New methodology for the preparation of 3,4-dihydroxybenzenesulfonamide chelators for iron complexation. A.S. Gopalan, T.T. Pham


ORGN 155. Terpenoid synthesis via the reductive Cope rearrangement. R. Serrano, P. Vertesaljai, A. Grenning

ORGN 156. Catalytic C–C bond silylation with hydrosilyl acetals. T. Avullala, P. Asgari, A. Bokka, J. Jeon


ORGN 158. Direct acyl amide synthesis from carboxylic acids using N-haloimide reagents. C.D. Irving, S. Walker, M. Gasonoo, S. Laulhe


ORGN 160. Facile synthesis of aromatic 1,2-azaborine derivatives through oxidation of 1,2-BN-3-cyclohexene. Q. Xing, X. Shi

ORGN 161. Chiral benzamidine formation by reaction of nucleophilic alkylquinazolinones with chiral electrophiles and subsequent regiospecific rearrangement. S. Rozema, J.N. Fitz-Henley, J.E. Golden

ORGN 162. Reductive Nef reaction mediated by CS₂ and amidine/guanidine bases. w. guan, M. Ju, J.M. Schomaker, K. Harper

ORGN 163. Visible-light-assisted and catalyst-free intramolecular hydroamidation of allenyl amides. L. Liu, R. Ward, J.M. Schomaker

ORGN 164. Synthesis of anti- and syn-hydroxymethyl 1,3-diol motifs based on the regioselective cleavage of 2,3-epoxy alcohols using Grignard and organoaluminum reagents: application to the polypropionate synthesis. R.R. Rodriguez Berrios, J.A. Prieto

ORGN 165. Investigation of methods for introducing structural complexity into cyclic carbonate monomers. E. Whitman, M.L. Turlington

ORGN 166. Organocatalyzed domino reactions of cannabinoid and anthracene derivatives. A. Kelley, E. Wolf, L. Davis

ORGN 167. Investigation of coupling reagents for esterification reactions of carboxylic acid-containing cyclic carbonate monomers. B. Marx, C. Howard, E. Whitman, C. Hanger, M.L. Turlington

ORGN 168. Making the precursors to β-heteroatom-stabilized carbenes. L.J. Bitsko, J. Unger

ORG 170. Distal C-H functionalization via an interrupted HLF mechanism. L.M. Stateman, Z. Zhang, D. Nagib

ORG 171. Bioorthogonal cross-metathesis reaction of allenes. C. Hanger

ORG 172. Desilylative Ullmann reaction. G. Petruncio, M. Girgis, M. Paige

ORG 173. Synthesis of ethyl and propyl fatty acid esters in nano-reactors. D. Welborn, N.N. Shaw


ORG 175. Microwave-assisted sustainable entry to 6H-chromeno[4,3-b]quinolin-6-ones. D. Bandyopadhyay, C. Pena, V.M. Cano

ORG 176. Reaction of organotrifluoroborates with benzyne in tandem with coupling chemistry. T. Choi, W. Yang, P. Persichini


ORG 178. Light-induced coupling reactions through electron transfer of electron donor-acceptor complexes. B. Liu, C. Lim, G. Miyake


ORG 180. One-step synthesis of biflavones mediated by peroxynitrite oxidative coupling of flavone monomers. X. Yang, D. Huang

ORG 181. Direct primary electrophilic amination of alkylmetals with NH-oxaziridine. N. Behnke, R. Kielawa, L. Kurti

ORG 182. Divergent reductive ketyl radical couplings. S.M. Rafferty, J. Rutherford, D. Nagib

ORG 183. Vinyl cation reaction with aromatic system. J. Fang, M. Brewer

ORG 184. Cleavage of C–C bonds through transfer hydroformylation. A. Lu, F.A. Cruz, X. Wu, V.M. Dong

ORG 185. Titanium catalyzed coupling reactions of triazoles and alkynes: An unexpected synthesis of halovinyl sulfides. A. Nguyen, A.N. Desnoyer, I. Tonks

Section A

Orange County Convention Center
West Hall C
Photoredox Chemistry

E. C. McLaughlin, Organizer

5:30 - 7:30


MONDAY MORNING

Section A

Orange County Convention Center
Room W230A

New Reactions & Methodology

S. M. Silverman, Organizer
C. Yeung, Presiding


8:40 ORGN 191. Impact of increased CO₂ pressure on substrate scope and boracarboxylation reaction efficiency. S.W. Knowiden, B.V. Popp

9:00 ORGN 192. Decarboxylative amination of redox-active esters using diazirines. P.P. Chandrachud, J.M. Lopchuk


9:40 ORGN 194. Boron cluster-based approach to nucleophilic borylation. A.M. Spokoyny

10:00 ORGN 195. Room-temperature palladium-catalyzed C-S cross-couplings: Synthetic chemistry innovations from the Merck Co-op Program and the importance of academia-industry partnerships. C. Yeung

10:40 ORGN 197. Palladium-catalyzed imine formation from acetylenes and anilines. M. Mihelac, J. Kosmrlj, M. Gazvoda


Section B

Orange County Convention Center
Room W230B

Physical Organic Chemistry: Calculations, Mechanisms, Photochemistry & High-Energy Species

S. M. Silverman, Organizer
A. S. Petit, Presiding

8:20 ORGN 201. Gas-phase reactivity and mechanism study of charged quinoline-based σ-type tri- and tetraradicals. D. Ding, R.R. Kotha, H.I. Kenttamaa

8:45 ORGN 202. Control of reaction mechanism and reactivity and by photoswitchable N-heterocyclic carbene ligands in Rh-catalyzed hydroboration of styrene: A computational investigation. H. Shao, C. Bielawski, P. Liu


9:35 ORGN 204. Chemical characterization of boron-centered radical anion. J. Liu, X. Ma, E. Johnson, J. Warneke, R. Kumar, J. Laskin, H.I. Kenttamaa, M. Rohdenburg

10:00 ORGN 205. Effects of linkers between coumarin units on determination of sodium and potassium. D. Tan, A. Akdag


10:50 ORGN 207. Probing the mechanism of the Prins and related reactions via a combined experimental and computational study. L.C. Evans, A. Dobbs, J. Pang

11:15 ORGN 208. Computational investigation of the formation and intramolecular cyclization of 2'-arylbenzaldehyde oxime ether radical cations. S. Kong, L. Ulloa, A. Vigil, A.S. Petit

Section C
Biologically Related Molecules & Processes

S. M. Silverman, Organizer
S. Choi, Presiding


9:40 ORGN 213. Kinetic dearomatization strategy for an expedient biomimetic route to the Bielschowskysin skeleton. P.D. Scesa, S. Roche, L.M. West


10:40 ORGN 216. Improved, efficient synthesis of the calmodulin antagonist TAPP. J.W. Johnson, K. Cain, T. Dunlap, G.R. Naumiec

11:00 ORGN 217. Small-molecule ion channel restores host defenses in cystic fibrosis airway epithelia. R. Chorghade, M.D. Burke


Section D

Innovative Green Chemistry: Striving toward Zero Waste API Manufacturing

Financially supported by Green Chemistry Institute
G. R. Humphrey, K. M. Maloney, Organizers, Presiding
8:00 Introductory Remarks.

8:05 ORGN 219. Translational chemistry. P.S. Baran

9:00 ORGN 220. Innovative green chemistry: Striving towards zero-waste API manufacturing. M. Faul

9:55 ORGN 221. Towards a fully biocatalytic manufacturing route for MK-8591. C.C. Nawrat

10:50 ORGN 222. Innovation by evolution: Bringing new chemistry to life. F.H. Arnold

Section E

Orange County Convention Center
West Hall F4

Ernest Guenther Award in the Chemistry of Natural Products

S. M. Sieburth, Organizer, Presiding

8:00 Introductory Remarks.

8:05 ORGN 223. Art, craft, logic, and the unforeseen in natural product synthesis. S. Hanessian

8:55 ORGN 224. From natural product to unnatural product: Seeking for better biological activity. M. Sodeoka

9:45 ORGN 225. Therapeutic function through synthesis-informed design: Approaches to HIV/AIDS eradication, Alzheimer's disease, and enhanced cancer immuno-therapy. P.A. Wender


10:45 ORGN 226. Award Address (Ernest Guenther Award in the Chemistry of Natural Products sponsored by Givaudan). Exploration of the exceptional potential of taxane-class diterpenes at the interface of chemistry, biology and medicine. I. Ojima

LGBTQ+ Graduate Student & Postdoctoral Scholar Research Symposium

Sponsored by PROF, Cosponsored by AGFD, ANYL, BIOL, BIOT, CARB, CELL, CHED, CMA, COLL, COMP, ENVR, GEOC, I&EC, MEDI, MPPG, NUCL, ORGN, PHYS, PMSE, POLY, PRES, WCC and YCC

MONDAY AFTERNOON

Section A

Orange County Convention Center
Room W230A
New Reactions & Methodology

S. M. Silverman, Organizer
J. McCabe Dunn, Presiding

1:00 ORGN 227. C-H arylation via Cu-catalyzed radical relay. L.M. Stateman, Z. Zhang, D. Nagib


1:40 ORGN 229. Controlled α-halogenation of alkyl sulfones using reagent-solvent halogen bonding. C. Poteat, V. Lindsay

2:00 ORGN 230. Water mediated benzylene reactions using arylbenziodoxaboroles. A. Yoshimura, J. Fuchs, G. Rohde, V. Nemykin, A. Saito, M. Yusubov, V.V. Zhdankin

2:20 ORGN 231. Palladium-catalyzed dearomative syn-1,4-oxyamination and carboamination. C. Tang, M. Okumura, Y. Zhu, D. Sarlah


3:00 ORGN 233. HFIP and the development of an interrupted Schmidt reaction. J. Aube, M. Charaschanya, K. Li, H. Motiwala


4:00 ORGN 236. Gold-catalyzed oxidative coupling of alkynes toward the synthesis of cyclic conjugated diynes and its application on polymer post-functionalization. J. Wei, X. Ye, X. Shi

4:20 ORGN 237. Synergistic, Au-Fe-catalyzed, directed aldol reaction. t. yuan, X. Shi

4:40 ORGN 238. Catalytic enantioselective approaches to allenes. S. Ma

Section B

Orange County Convention Center
Room W230B

Physical Organic Chemistry: Calculations, Mechanisms, Photochemistry & High-Energy Species

S. M. Silverman, Organizer
M. Jaramillo, Presiding

1:00 ORGN 239. Fundamental studies of the singlet oxygenation of melanin model compounds: Reaction products and pathways. M. Jaramillo, K.E. O'Shea

1:50 ORGN 241. Substituent effects on ultrafast photochemistry: ethylene, butadiene and larger polyenes. R.J. MacDonell, M. Schuurman

2:15 ORGN 242. Understanding the connection between cation-pi interactions and reaction selectivity. S.L. Wiskur

2:40 ORGN 243. Computational mechanistic study of a P₄-catalyzed anti-Markovnikov alcohol addition to styrene derivatives. J. Alegre Requena, R.S. Paton

3:05 ORGN 244. Computational modeling of substituent effect on the frontier orbitals of conjugated molecules. Y. Shao, Y. Mao, V. Satalkar


3:55 ORGN 246. Copper-catalyzed difunctionalization of alkenes with boron and CO₂: Evidence for a cooperative carboxylation transition-state. B.V. Popp, N.N. Baughman

Section C

Orange County Convention Center
Room W230C

Successful Products & Models of Undergraduate-Based Research: Good Science, Better Scientists

J. J. Reczek, K. A. Wheeler, Organizers, Presiding

1:00 Introductory Remarks.

1:05 ORGN 247. Fluorogenic polymer synthesis for biological detection. C.B. Cooley

1:30 ORGN 248. Design of undergraduate organic synthesis research projects with a high probability of success. E. Bosch

1:55 ORGN 249. Internship experiences at Biogen: Chemical process development. W. Liang

2:20 ORGN 250. One click away from products: Click chemistry as a powerful tool for the synthesis of ionic liquids for undergraduate chemistry students. A. Mirjafari

2:45 Intermission.

2:55 ORGN 251. Undergraduate research at the University of Texas: What’s unique with us? E.V. Anslyn

3:20 ORGN 252. SPR biosensors based on guided-wave plasmon-polariton modes. J. Leger

3:45 ORGN 253. Research opportunities for undergraduate students and educators at Eli Lilly. M.S. Zia Ebrahimi
4:10 ORGN 254. Polymer chemistry with undergraduate women: Reactive, azlactone-functionalized polymers for the fabrication of multifunctional biomaterials. **M.E. Buck, A. Mineo, E. Fitzgerald, R. Yan**


Section D

Orange County Convention Center
West Hall F3

**Innovative Green Chemistry: Striving toward Zero Waste API Manufacturing**

Financially supported by Green Chemistry Institute
G. R. Humphrey, K. M. Maloney, *Organizers, Presiding*

1:00 Introductory Remarks.

1:05 ORGN 256. Transitioning organic synthesis to a water world: Faster, better, cheaper, & environmentally responsible chemistry. **B.H. Lipshutz**

1:50 ORGN 257. Use of continuous flow technology towards more sustainable API manufacturing. **C. Kappe**

2:35 ORGN 258. New catalysts for carbonyl-olefin metathesis. **C. Schindler**


4:05 ORGN 260. Chemistry in water for highly selective reaction pathways. **S. Handa**

Section E

Orange County Convention Center
West Hall F4

**ACS Award for Creative Work in Synthetic Organic Chemistry**

K. B. Hansen, *Organizer*
S. Paradine, *Presiding*

1:00 Introductory Remarks.

1:05 ORGN 261. Metalloenzyme discovery in the microbial world. **E.P. Balskus**

1:45 ORGN 262. Single electron processes enabling organic synthesis. **G.A. Molander**

2:25 ORGN 263. Nucleophilic substitution reactions: A radical alternative to $S_N1$ and $S_N2$ reactions. **G.C. Fu**
3:05 ORGN 264. Chiral H-bond donor/Lewis acid cooperativity. E.N. Jacobsen


LGBTQ+ Graduate Student & Postdoctoral Scholar Research Symposium
Sponsored by PROF, Cosponsored by AGFD, ANYL, BIOL, BIOT, CARB, CELL, CHED, CMA, COLL, COMP, ENVR, GEOC, I&EC, MEDI, MPPG, NUCL, ORGN, PHYS, PMSE, POLY, PRES, WCC and YCC

MONDAY EVENING

Section A
Orange County Convention Center
West Hall C

Sci-Mix
E. C. McLaughlin, Organizer

8:00 - 10:00


TUESDAY MORNING

Section A
Orange County Convention Center
Room W230A

Molecular Recognition & Self-Assembly

S. M. Silverman, Organizer
J. Jung, Presiding


9:00 ORGN 268. Can self-assembly into wormlike micelles occur in polar solvents at sub-zero temperatures? N. Agrawal, S.R. Raghavan


9:40 ORGN 270. Supramolecular boronic acids: Gelator and receptor design. K. Dannaher

10:00 ORGN 271. Hierarchical and anion-templated organization of macrocycles. J. Dobscha, A.H. Flood


10:40 ORGN 273. Anion recognition with π-acids and Lewis acids. S. Saha

11:00 ORGN 274. Enhancing the stability of photogenerated benzophenone triplet radical pairs through supramolecular assembly. B. DeHaven, D. Goodlett, L.S. Shimizu


11:40 ORGN 276. Residual copper detection by molecular probe: Applications by coupling with HPLC system. J. Jung, J. Jo, A. Purohit

Section B

Orange County Convention Center
Room W230B

Peptides, Proteins & Amino Acids

S. M. Silverman, Organizer
J. Iegre, Presiding

8:00 ORGN 277. Development of novel CK2 inhibitors: From small molecules to conformationally constrained peptides targeting allosteric binding sites. J. Iegre, P. Brear, D.R. Spring

8:20 ORGN 278. Synthesis of malfromin C and analogs for targeted anti-cancer drug delivery. F. Hossain, S. Nishat, P.R. Andreana

8:40 ORGN 279. Reaction design for highly efficient chemical protein synthesis. G. Hayashi, A. Okamoto

9:00 ORGN 280. Reinvention of peptide synthesis through utilization of nano-reactors. C. Chapman, N.N. Shaw


10:00 ORGN 283. Thioenamide synthesis inspired by peptide macrocycles. J.A. Lutz, C.M. Taylor

10:20 ORGN 284. Aerobic oxidation of N-phenylglycinyl peptides for catalyst-free oxime ligations. Q. Guthrie, C. Proulx


11:00 ORGN 286. Structural revision and total synthesis of the bacterial siderophore madurastatin C1. M.J. Hall


Section C
Orange County Convention Center
Room W230C

Heterocycles & Aromatics

S. M. Silverman, Organizer
H. Ren, Presiding

8:00 ORGN 288. Operationally simple approach to indole derivatives from 2-alkenylanilines utilizing an oxidation-transannulation-elimination sequence. C.J. Monceaux, R.M. Chapman, J.R. King


8:40 ORGN 290. Use of microwaves for synthesis of propargylic ethers as precursors of 1,2,3-triazoles in click reactions. L.C. García, M.A. García-Eleno, E. Cuevas-Yañez, A.F. Becerra

9:00 ORGN 291. Development of a green and sustainable commercial manufacturing process. H. Ren


9:40 ORGN 293. Direct and regioselective difluoromethylation of azines and pharmaceuticals via phosphorus ligand-coupling. K. Nottingham, C. Patel, A. McNally

10:00 ORGN 294. Revisiting the gamma-gauche effect: A 1H NMR method for stereochemical assignment of 1,3-disubstituted-1,2,3,4-tetrahydro-β-carbolines. K. Cagasova, M. Ghavami, Z. Yao, P.R. Carlier

10:40 ORGN 296. Incorporation of fused heterocycles to the macrocyclic ring of calix[4]arene by reactions at the methylene bridge. J.L. Fantini

11:00 ORGN 297. Donor-acceptor thiazolothiazole dyes exhibiting solvatofluorochromism, high quantum yields, and large electronic dipole changes. N. Sayresmith, J. Sailer, K. Sandor, S.M. Patberg, M.G. Walter

11:20 ORGN 298. Developing the chemistry of boroles to access larger boracycles. C. Martin

11:40 ORGN 299. Iminoquinones as a source of electrophilic nitrogen for heterocycle synthesis. L.M. Mori Quiroz, M.D. Cliff, C. Comadoll, J. Super

Section D
Orange County Convention Center
West Hall F3

Process Chemistry: New Developments in Pharmaceutical Process Development

Cosponsored by I&EC
R. Vaidyanathan, Organizer
J. A. Pesti, Organizer, Presiding

8:00 Introductory Remarks.


10:00 ORGN 303. Journey from early- to late-stage development at Merck. J. McCabe Dunn

10:40 ORGN 304. Impact of remnants from reactions on subsequent transformations. R. Vaidyanathan


11:55 Concluding Remarks.

Section E
Orange County Convention Center
West Hall F4

Elias J. Corey Award for Outstanding Original Contribution in Organic Synthesis by a Young Investigator
J. G. Pierce, Organizer, Presiding

8:00 Introductory Remarks.

8:05 ORGN 306. Organic and organometallic reactions mediated by water-soluble host-guest supramolecular systems. R.G. Bergman

8:45 ORGN 307. Unleashing the supramolecular potential of strained carbon nanohoops. M. von Delius

9:25 ORGN 308. Innovation at Merck Process R&D via discovery and development of new catalytic reactions. R. Ruck

10:05 Intermission.


10:55 ORGN 310. Award Address (Elias J. Corey Award for Outstanding Original Contribution in Organic Synthesis by a Young Investigator sponsored by the Pfizer Endowment Fund). Make it or break it with metal-hydrides. V.M. Dong

Opportunities and Challenges in Carbohydrate Synthesis B

Sponsored by CARB, Cosponsored by CELL and ORGN

GSSPC: Artificial Molecular Machines & the Next Generation of Molecular Control

Sponsored by CHED, Cosponsored by COLL, I&EC, ORGN², PHYS, POLY and PRES

TUESDAY AFTERNOON

Section A

Orange County Convention Center
Room W230A

Molecular Recognition & Self-Assembly

S. M. Silverman, Organizer
M. von Delius, Presiding


2:40 ORGN 315. Bioinspired artificial nanoparticle esterases for effective stabilization of the tetrahedral anionic transition state. M. Arifuzzaman, Y. Zhao

3:00 ORGN 316. Dynamic covalent self-assembly based on oxime condensation. H. Li

3:20 ORGN 317. Molecularly Imprinted Nanoparticles (MINP) as fluorescent sensors for Nonsteroidal Anti-Inflammatory Drugs (NSAIDs). L. Duan

3:40 ORGN 318. Construction of linked G-octamer via monomer conformational control stabilized in MeOH and DMSO. m. liu, X. Shi

4:00 ORGN 319. New approach to gold recovery: Supramolecular co-precipitation of square-planar gold complexes. C. Shaffer, W. Liu, B.D. Smith


4:40 ORGN 321. Self-assembly of adaptive orthoester architectures. M. von Delius

Section B

Orange County Convention Center
Room W230B

Metal-Mediated Reactions & Syntheses

S. M. Silverman, Organizer
G. Howell, Presiding

1:20 ORGN 322. Straightforward α-amino nitrile synthesis through Mo(CO)6-catalyzed reductive functionalization of carboxamides. P. Trillo

1:40 ORGN 323. Catalytic hydroamination of unactivated internal alkenes. Y. Xi, J.F. Hartwig

2:00 ORGN 324. Allyl- and allenylboronic acids: Preparation and application in organic synthesis. K.J. Szabo


3:00 ORGN 327. Aqueous Atom Transfer Radical Polymerization (ATRP) of commonly used vinyl monomers with N-heterocyclic carbene (NHC) containing homogeneous Ru catalyst. S. Kim, H. Chung

3:20 ORGN 328. Metal–hydride catalysis in organic synthesis. R. Davison


Section C

Orange County Convention Center
Room W230C

Chemistry for New Frontiers

S. M. Silverman, Organizer
M. Straub, Presiding

1:00 ORGN 330. Synthesis and circularly polarized luminescence of chiral boron-chelated dipyrrromethene fluorophores. M.J. Hall

1:20 ORGN 331. Sustainable route to bio-based terephthalic acid from crude sulfate turpentine. J. Tibbetts, P. Plucinski, S. Bull


2:00 ORGN 333. Bioorthogonal catalysis: Overview, applications, and state-of-the-art. A. Unciti-Broceta

2:20 ORGN 334. From fuzzy to functionally smart molecules: Orchestrated asymmetric synthesis of indolo[2,3-a]quinolizine scaffolds as novel motifs for cancer immunotherapy. T.H. Altel

2:40 ORGN 335. Ring distortion of vincamine produces complex and diverse molecules for drug discovery. C.M. Norwood, R. Huigens

3:00 ORGN 336. Organocatalytic enantioselective synthesis of α-fluoro-β-amino acid derivatives. M. Straub, V. Birman


3:40 ORGN 338. Synthesis and anti-microbial activity of 1,2,3-triazoles-coumarin hybrids from chalcones. T. Moodley, N. Koornkanally

4:00 ORGN 339. New frontiers of difluorocyclopropanation of alkenes using Ruppert–Prakash reagent. S. Ryabukhin, P. Nosik, D. Volochnyuk, O. Grygorenko

4:20 ORGN 340. Expanding the boundaries of water tolerant frustrated Lewis hydrogenation via size-exclusion catalyst design. T. Soos
Section E

Orange County Convention Center
West Hall F4

**Herbert C. Brown Award for Creative Research in Synthetic Methods**

A. K. Franz, Organizer, Presiding

1:00 Introductory Remarks.

1:05 ORGN 341. Functionalizations of C–H bonds in a flask and a cell. J.F. Hartwig

1:45 ORGN 342. Radical reactions for control freaks: New synthetic methods involving aryl radicals and strong C–F bonds. N. Jui

2:25 ORGN 343. Break-it-to-make-it strategies for complex molecule synthesis. R. Sarpong

3:05 ORGN 344. Enantioselective and remote C–H activation reactions. J. Yu


3:50 ORGN 345. Award Address (Herbert C. Brown Award for Creative Research in Synthetic Methods sponsored by the Purdue Borane Research Fund and the Herbert C. Brown Award Endowment). Catalyst-controlled site-selective and enantioselective C-H functionalization. H.M. Davies

**LGBTQ+ Graduate Student & Postdoctoral Scholar Research Symposium**

Sponsored by PROF, Cosponsored by ENVR, GEOC, I&EC, MEDI, MPPG, NUCL, ORGN, PHYS, PMSE, POLY, WCC and YCC

**ACS Award in Industrial Chemistry: Symposium in Honor of Guy R. Humphrey**

Sponsored by I&EC, Cosponsored by ORGN

**Opportunities and Challenges in Carbohydrate Synthesis B**

Sponsored by CARB, Cosponsored by CELL and ORGN

**GSSPC: Artificial Molecular Machines & the Next Generation of Molecular Control**
Sponsored by CHED, Cosponsored by COLL, I&EC, ORGN, PHYS, POLY and PRES

TUESDAY EVENING

Section A

Orange County Convention Center
West Hall C

Biologically Related Molecules & Processes

E. C. McLaughlin, Organizer

5:30 - 7:30


ORGN 350. New small, rigid nitroxide for site-directed spin labeling of proteins. N. Richards, Z. Yang, A. Rajca, S. Rajca

ORGN 351. Green synthesis of potential anticancer drugs NUK-1. H. Cheng, H. Yu, Y. Huang


ORGN 354. Iterative deconjugative alkylation/Cope rearrangement and ring-rearrangement metathesis for the synthesis of 5-6-5-n scaffolds. E. Semenova


ORGN 357. Extraction of some triterpenoid saponins from Tetraena qatarense (Zygophyllum qatarense) and their biological activities. S. Yousuf, H. Nimir, H. Hassan, H. Al Easa

ORGN 358. Flavins as enophiles in ene reactions and catalysts for retro-ene reactions. A.W. Jensen

ORGN 359. Investigation of new benzoate-1,2-dioxygenase substrates using quantitative 1H-NMR spectroscopy. Z. Clark, S.Q. Erickson, D.K. Pawar, J.A. Collins

ORGN 360. Effect of selenium nutrition, temperature, and photoperiod on gibberellic acid accumulation in spinach plants. A. Malkawi, C. True, A. Bailey


ORGN 364. Inhibition of ribonucleolytic activity of RNase A by triazolylated thymidines. P. Mondal, S. Dasgupta, T. Pathak

ORGN 365. Fluorescent probe for carbapenemase detection. C. Ma, D. Yang

ORGN 366. Synthetic studies on K204, a potent new SHIP1 agonist. O.M. Dungan, L. Chen, S. Fernandes, W.G. Kerr, J.D. Chisholm

ORGN 367. Utilizing triazole-based compounds as potential inhibitors active against gram-negative bacteria. R. Roldan, C. Embry, L. Peterson, M.L. Cafiero


ORGN 369. Development and synthesis of conjugated cyclic diyne as a novel alpha-helix structure constraining strategy. X. Li


ORGN 373. Synthesis of the enantiomers of the environmental contaminant diethylhexylphthalate (DEHP) and its metabolites. D. Oldham, L. Harris, C. Amurrio, K. Bempong

ORGN 375. Design, modeling, and synthesis of potential LpxC inhibitors. C.P. Embry, R. Roldan, A.O. Pajarillo, J.D. Greenberg, M.L. Cafiero, L. Peterson

ORGN 376. Synthesis of small molecule derivatives of CK-666 as potential inhibitors of the Arp2/3 complex. A. Sripeng, N. Wade, Z. Cournia, B. Nolen, A. Baggett


ORGN 378. Synthesis of 4-thiazolidinone small molecules as potential inhibitors of the Arp2/3 complex. H. Smith, A. Baggett, B. Nolen, Z. Cournia

ORGN 379. In vitro determination of potency of small molecule inhibitors of Arp2/3 complex. K. Andersen, B. Nolen, Z. Cournia, A. Baggett

ORGN 380. Synthesis, characterization, and chromic properties of thio-ether derivatives of 1,4-naphthoquinones. C.A. Arias, A.L. Perez, G. Lamoureux, A. Bella Cruz, V. Cechinel Filho

Section A
Orange County Convention Center
West Hall C

Carbon Allotropes & Nanomaterials

E. C. McLaughlin, Organizer

5:30 - 7:30

ORGN 381. Selective oxidation of olefins to ketones over palladium supported on weak acidic graphene oxide. X. Gao

ORGN 382. Analytical method to measure surface area of graphene materials in solution. I.V. Kalinina, G. Tamas, D. Meyers

Section A
Orange County Convention Center
West Hall C

Chemistry for New Frontiers

E. C. McLaughlin, Organizer

5:30 - 7:30

ORGN 384. $^{13}$C NMR spectroscopic studies of intra- and intermolecular interactions of amino acid derivatives in solutions. Y. Hiraga, Y. Uyama, S. Niwayama

ORGN 385. Microwave synthesis and characterization of acridine-triazole derivatives. C. Kannigadu, N. Koobanally

ORGN 386. Oxygen-18 enrichment of alcohols by a modified Mitsunobu esterification reaction. R. Beddoe, H. Sneddon, R. Denton

ORGN 387. Catalytic epoxidation of olefins over transition metal ferrite nanoparticles. A.I. Mohamadi, M.S. Eldous, K. Salih


ORGN 389. Synthesis of photoresponsive derivatives derived from maleonitrile. H. Ayoub

ORGN 390. Green, sustainable, nanocatalysed, synthetic route for an exploration of Knoevenagel condensation. D. Madan


ORGN 392. Phytoceutical investigation of Magnolia grandiflora green seed cones. D. Bandyopadhyay, B. Garza, A. Echeverria, F. Gonzalez

Section A

Orange County Convention Center
West Hall C

Flow Chemistry & Continuous Processes

E. C. McLaughlin, Organizer

5:30 - 7:30

ORGN 393. Impact of flow turbulence in narrow capillaries on the nucleation rate of small organic molecules. R. Debuysschère, B. Rimez, B. Scheid

ORGN 394. Applications of flow chemistry in undergraduate research. A. Schroeder, J.A. Shea, C. Ford, Z. Matesich


Section A
Materials, Devices & Switches

E. C. McLaughlin, Organizer

5:30 - 7:30


ORGN 398. Synthesis and electronic properties of alkylated spirobifluorene derivatives. R. Kundu


ORGN 400. NIR-responsive metastable-state photoacid. O.Z. Alghazwat, T. Khalil, A. Elgattar, Y. Liao

ORGN 401. Synthesis and characterization of liquid-crystalline and light-emitting properties of several 1,3,4-oxadiazole diamines-based azomethine compounds. H.D. Mandal, R. Cortez, J. Gutierrez, P. Quach, P.K. Bhowmik, S.L. Chen, H. Han


ORGN 404. Systematic investigation of photinduced electron transfer in coumarins: Applications in triazine detection. J. Dorsheimer, W.R. Luksic, R.R. Walvoord

ORGN 405. New organic hole transporting materials with various acceptors for efficient inverted (p-i-n) perovskite solar cells. S. Akula, C. Su, Y. Zheng, W. Li

ORGN 406. New phosphonate lipid tubules and their use as a delivery device. X. Xie, P. Persichini

ORGN 407. Carbon nanodots doped with fluorescent naphthalene and perylene derivatives. L. Huang, G. Aryal, K.W. Hunter


ORGN 409. Photothermal electrode from conjugated polymers for emission color control. J. Hwang, Y. Kim, E. Kim
Molecular Recognition & Self-Assembly

E. C. McLaughlin, Organizer

5:30 - 7:30

**ORGN 410.** Halogen bonds strength in complexes of diiodine with heteroaromatic N-oxides. B. Watson, W. Borley, Y. Nizhnik, M. Zeller, S.V. Rosokha

**ORGN 411.** Photochemical assisted synthesis of interlocked organic molecules. V. Ramalingam, M. Pattabiraman

**ORGN 412.** Supramolecular catalysis. S. Teng, X. Shi


**ORGN 414.** Quantification of halogen-bonding ability for neutral and charged electrophilic iodine reagents. N. Hirbawi, J.R. Jagannathan, A.K. Franz

**ORGN 415.** Heteroditopic and multitopic supramolecular hosts. d. Liu, F.X. Han, Y. Zhao

**ORGN 416.** Design, synthesis, and self-assembling properties of hybrid glyoclusters and glycolipids. J.M. Bietsch, A. Chen, G. Wang

**ORGN 417.** Design and synthesis of molecular gelators derived from 4,6-O-(p-chlorobenzylidene)-acetal protected D-glucosamine. M. Olson, J.M. Bietsch, G. Wang

**ORGN 418.** Spectra, structures, and thermodynamics of anion-π complexes of p-benzoquinones with halide anions. S. Kepler, M. Zeller, S.V. Rosokha

**ORGN 419.** Synthesis and exploration of 7,7'-azaindigo and its derivatives. J.A. Shriver, J. De Young

**ORGN 420.** Coordination chemistry of molecular topologies. L. Zhang, D.A. Leigh

**ORGN 421.** Optical chirality sensing with a stereodynamic, aluminum biphenolate probe. Z. De los Santos, L.A. Joyce, E.C. Sherer, C.J. Welch, C. Wolf

**ORGN 422.** Self-organization of highly emissive porphyrin lantern nanoarrays using a single component short G-rich sequence. P. Pathak, R. Vik, J. Jayawickramarajah

**ORGN 423.** Investigating the specificity of thiourea host molecules for inorganic phosphate. T.A. Davis, A. Cullen, B. Bagnall, T.S. Goebel, R. Lascano

**ORGN 424.** Self-assembly of supramolecular prisms using tetraterpyridine-porphyrin ligand. A.A. Filosa, H. Wang, J. Piccolo, X. Li
ORGN 425. Self-assembly of tetraphenylethylene-based dimer with tunable fluorescence. Y. Yan, G. Yin, X. Li

ORGN 426. Self-assembly of ring-in-ring metallacycle with alkynylplatinum(ii) bzimpy and the study of its aggregation behavior. Y. Li, G. Huo, W. Sun, H. Yang, X. Li

ORGN 427. Spontaneous resolution of an octahedral supramolecular cage. R. Ni, C. Xu, X. Li

ORGN 428. Effects of small molecules that selectively bind to phosphatidylglycerol(PG). B. Seelam, D. Burns

ORGN 429. Synthesis of small bis-phenolic ether scaffold cationic molecule that binds to phosphatidylglycerol at the membrane interface. K. Donavalli, D. Burns

ORGN 430. Developing a basket-shaped host molecule based on calix[4]arene featuring urea groups for volatile guest molecules. V. Lokugama Widanelage

ORGN 431. Synthesis and characterization of N-acetyl-glucosamine-based macrocycles by S\textsubscript{N}2 reactions. S. Adhikari, A. Chen, G. Wang

ORGN 432. Tightly-knit dual hydrogen bonding for fluorescence turn-on detection of cyanide: Evolving design principles and synthetic implementations. H. Park, D. Lee


ORGN 434. Self-assembly of supramolecular pentagonal prisms. B. Song, H. Wang, M. Wang, X. Li

ORGN 435. Self-assembly salen complexes utilizing π-related interactions for efficient cooperative catalysis. T. Imahori, K. Tsunogaya, K. Suzuki

ORGN 436. Effect of electron demand on sensing behavior of carbazolopyridinophanes. G. Abban, A.B. Brown


ORGN 441. Functional thin films on plastic surfaces for applications in bacterial biosensor. E. Hjelvik, A. Anderson, H. Mukundan

ORGN 442. Design and synthesis of an enlarged M\textsubscript{8}L\textsubscript{6}–metallocubes for encapsulation of nanocrystals. E. Tiernan, J.D. Thoburn

ORGN 443. Construction of nano-tube via terephthalic acid linked G-octamer. M. Liu, X. Shi
ORGN 444. Synthesis of diazaperopyrenium dication as a guest in a switchable molecular cage. Z.M. Preyer, H. Jacquot de Rouville, R. Djemili, S. Durot, V. Heitz

Section A
Orange County Convention Center
West Hall C

Physical Organic Chemistry: Calculations, Mechanisms, Photochemistry & High-Energy Species

E. C. McLaughlin, Organizer

5:30 - 7:30


ORGN 446. Computational study of substituent effects on the intramolecular cyclization of benzaldehyde oxime ethers containing a thiophene or furan group. A.M. Abiad, A.S. Petit, J. Gillette, D. Torres

ORGN 447. How does varying levels of DMSO change the -OH peak in ethanol containing chemicals? P. Tamilselvan, R.E. Rosenberg


ORGN 450. Structural effects on the temperature dependence of primary kinetic isotope effects in hydride transfer reactions in solution. S. Wilhelm, L. Ma, Y. Lu


ORGN 452. Mechanistic study of photocatalytic [2+2] cycloaddition of α,β-unsaturated ketones. K. Kuan, D.A. Singleton

ORGN 453. Advances in the development of organic active materials for grid-scale energy storage. M.E. Cook, M.S. Sanford

ORGN 454. Oxidation kinetics of porphyrin-manganese(IV)-oxo intermediates generated by chemical and photochemical methods. S.E. Klaine, M. Winchester, R. Zhang

ORGN 455. Efficient chemoselective oxidations of sulfides catalyzed by manganese corrole with iodobenzene diacetate. D. Ranburger, B. Willis, B. Kash, C. Alcantar, R. Zhang

ORGN 456. Synthesis and spectroscopy of 2,5-diphenyl-3,4-diarylcyclopentadienones. A.J. Orozco, H. Ruiz, R.A. Isovitsch
ORGN 457. Computational investigation of the cyclization of benzaldehyde oxime ether radical cation intermediates containing a thiophene or furan group. J.K. Gillette, C. Taylor, A.M. Abiad, D. Torres, P. De Lijser, A.S. Petit

ORGN 458. Iptycenyl effect: Primary vs. secondary stereoelectronic bias of bridged bicyclic molecular skeleton. H. Kim, T. Kang, D. Lee


ORGN 460. Aqueous kinetics of α-hydroxyhippuric acid derivatives as a function of pH, buffer and metal-ion concentration. M.I. Rafie, K.A. Feken, R.W. Nagorski

ORGN 461. Para-sulfonamide analogue of green fluorescent protein chromophore: Excited-state proton transfer. Y. Chen, R. Sung, K. Sung

ORGN 462. Stabilizing effects in the photochlorination and photobromination of haloalkanes. N. Mielke, M. LaPorte


ORGN 465. Generation of solid-state, efficient emitters based on 6-membered ring Excited State Intramolecular Proton Transfer (ESPIT) systems. E. Hermosillo Guzman, T. Pariat, A. De Nicola, G. Ulrich

WEDNESDAY MORNING

Section A

Orange County Convention Center
Room W230A

New Reactions & Methodology

S. M. Silverman, Organizer
Z. Liu, Presiding

8:20 ORGN 466. Heterocyclic phosphonium salts as new reagents for medicinal chemistry. D. Ryan

8:40 ORGN 467. Diversification of allenyl esters: α-Selective reactions leading to products containing all-carbon quaternary centers. S. Maki, S. Jana, S.D. Lepore

9:00 ORGN 468. Synthesis of biodiesel fuel from waste cooking oil using nano-reactors. A. Azieva, N.N. Shaw

9:20 ORGN 469. Esterification of carboxylic acids for analysis via gas chromatography. E.B. Vaughan, N.N. Shaw

10:00 ORGN 471. Hypervalency aided route to 3,3,3-trifluoropropenylated heterocycles, 1,2-diamines and N-aryl-2-(trifluoromethyl)aziridines. **Á. Mészáros**, A. Székely, F. Béke, Á. Tóth, J. Csenki, A. Stirling, Z. Novák


10:40 ORGN 473. Cesium base promoted alkylations: Mild & efficient synthesis of carbon-heteroatom bonds and synthetic applications. **R.N. Salvatore**

11:00 ORGN 474. Stereoselective synthesis of O-vinyl oximes using dialkyl acetylenic ester as efficient Michael acceptor through microwave irradiation. **V. Srivastava**, A. Mishra


Section B

Orange County Convention Center
Room W230B

**Total Synthesis of Complex Molecules**

S. M. Silverman, Organizer
N. Choy, Presiding


9:00 ORGN 479. Early process route to fungicide DAS-087. **N. Choy**, F. Li, G.T. Whiteker


10:00 ORGN 482. Efficient strategies for the synthesis of complex antibody-drug conjugate payloads. **J. Parker**

10:20 ORGN 483. Towards the total synthesis of rishirilide. **A. RagbirSingh**

11:00 ORGN 485. Total synthesis of the baulamycins. **J. Thielman**, R.M. Williams

Section C

Orange County Convention Center
Room W230C

**Heterocycles & Aromatics**

S. M. Silverman, **Organizer**
J. Cole, **Presiding**

8:00 ORGN 486. Synthesis of novel, pharmaceutically relevant fluorinated amines. **P. Mykhailiuk**, O.O. Stepaniuk


8:40 ORGN 488. Anion-pool-driven selective functionalization of indazole. **M.M. Dissanayake**, A.K. Vannucci

9:00 ORGN 489. Developing green synthesis of quinazoline, quinazolin-4-one, and benzoazole derivatives by microwave and electrochemical reactions. **Y. Huang**


10:40 ORGN 494. Angled isomers of linear aromatic diimides. **D.D. Cao**

11:00 ORGN 495. Synthesis and SAR investigation of insecticidal N-(2-(pyridinyl-3-yl) thiazole-5-yl) amides. **N.V. Garizi**, A. Buysse, T.K. Trullinger, J.D. Eckelbarger, M.C. Yap


Section D
Biologically Related Molecules & Processes

S. M. Silverman, Organizer
R. Rafferty, Presiding

8:20 ORGN 498. Origin of high cyclopropanation stereoselectivity by myoglobin-based carbene transfer biocatalyst. Y. Wei, Y. Zhang


9:00 ORGN 500. Studies toward total synthesis of enantiopure hydnocarpin D. P.S. Rajaram, A.S. Rivera, Q. Chen


10:00 ORGN 503. Novel metal-chelating and stimuli-responsive peptoid oligomers. Y. Minko, J.G. Schmidt, C.E. Strauss, R.F. Williams

10:20 ORGN 504. Exploiting synthesis inherent in total synthesis campaigns: New avenues for bioactive agent discovery. R. Rafferty

10:40 ORGN 505. Exploring the spatial effects of charge upon porin-mediated gram-negative bacteria transport. R. Rafferty

Section E

Earle B. Barnes Award for Leadership in Chemical Research Management

J. Aube, Organizer, Presiding

8:00 ORGN 506. Increasing global access to health care through process intensification. F. Gupton

8:45 ORGN 507. Novel approaches in the design of CNS drug candidates and PET ligands. A. Villalobos, X.J. Hou, P.R. Verhoeest, T. Wagner, L. Zhang

9:30 ORGN 508. Flow chemistry for greener and more efficient API synthesis. J. Hawkins

10:15 ORGN 509. Peering into the microbial world with chemistry. L.L. Kiessling
11:00 ORGN 510. Award Address (Earle B. Barnes Award for Leadership in Chemical Research Management sponsored by The Dow Chemical Company Foundation). Reflections on 31 years of collaboration and innovation in the pharmaceutical industry. S.E. Kelly

WEDNESDAY AFTERNOON

Section A

Orange County Convention Center
Room W230A

New Reactions & Methodology

S. M. Silverman, Organizer
D. Weingarten, Presiding


1:20 ORGN 512. Room temperature cross-coupling of unactivated arenes and nitriles via photoactivation of π-conjugated triazenes. A. Bugarin


2:00 ORGN 514. Development of strategies for the application of eliminative cross-coupling to polyfunctional alkene targets. S. Tanpure, P.R. Blakemore


3:00 ORGN 517. Base-catalyzed stereospecific isomerization of electron-deficient allylic halides. S. Martinez Erro, V. García-Vázquez, A. Sanz-Marcos, B. Martín-Matute

3:20 ORGN 518. Aryne-based multi-component coupling reactions enabled by silver-catalyzed addition of isonitriles. S. Ghorai, D. Lee

3:40 ORGN 519. Exploration of amide bond coupling in nano-reactors. K. Machen, N.N. Shaw

4:00 ORGN 520. Future of computer-aided synthesis design technology for organic synthetic chemistry. J. Taylor, O. Ravitz

4:20 ORGN 521. Titrimetric study of used cooking oil and biodiesel fuel. C. McCall, N.N. Shaw

Section B
Asymmetric Reactions & Syntheses

S. M. Silverman, Organizer
Z. Chen, Presiding

1:00 ORGN 522. Interlocked catalysts for asymmetric organocatalysis. J. Niemeyer
1:20 ORGN 523. Organocatalytic enantioselective synthesis of functionalized decalins via desymmetrization of substituted dihydropyran and 1,3-diketones. R. Aher, P. Chouthaiwale, F. Tanaka
1:40 ORGN 524. Chiral building blocks via Lewis base-silicon complexes. C. Reep, n. takenaka
2:00 ORGN 525. Asymmetric alkylation reaction of glycine derivatives catalyzed by core-corona polymer microsphere-supported cinchonidium salt. M. Ullah, N.T. Thao, T. Sugimoto, N. Haraguchi, S. Itsuno
2:40 ORGN 527. Iodo-arene peptides for asymmetric hypervalent iodine chemistry. D.C. Whitehead
3:00 ORGN 528. Enantiopurity determination of alkyl P-chiral compounds with Eu(hfc)₃: The terminal methyl group signal is most enantiotopically affected. P. Ly, T. Tran, C. Pace, K. Nakayama
3:20 ORGN 529. Medium-sized heterocycles: Stereoselective synthesis and functionalizations. Y. Zhao
3:40 ORGN 530. Design principles in catalysis: Cobalt-catalyzed cycloisomerizations and in-silico catalyst design. J. Riedel
4:00 ORGN 531. Catalytic enantio- and regioselective alkylation of pyridines. K. Olsen, M. Pappopula, A. Aponick
4:20 ORGN 532. Manufacturing process development for GPR40 MK-8666: Small molecules, big challenges. Z. Liu
4:40 ORGN 533. Stereoselective hydrofunctionalizations and cycloisomerizations via Rh-catalysis. Z. Chen, V.M. Dong

Section C

Orange County Convention Center
Room W230C

Photoredox Chemistry

S. M. Silverman, Organizer
M. Ashley, Presiding
1:00 ORGN 534. Multicomponent synthesis of tertiary alkylamines by photocatalytic olefin-hydroaminoalkylation. D. Reich, A. Trowbridge, M. Gaunt

1:20 ORGN 535. Visible-light-induced radical silylation to dibenzosiloles via dehydrogenative cyclization. C. Jiang, C. Yang

1:40 ORGN 536. Pyrenedione as a metal-free visible-light photocatalyst for aerobic alkylation and epoxidation. Y. Zhang, J. Wu, D. Huang

2:00 ORGN 537. Mild ketyl radical generation via atom transfer catalysis. J. Rutherford, S. Rafferty, D. Nagib

2:20 ORGN 538. Translating organic photoredox catalyst design from polymer synthesis to new reactivity. J. Cole

2:40 ORGN 539. Decarboxylative elimination of carboxylic acids via photoredox/ cobalt dual catalysis. K. Cartwright, J.A. Tunge

3:00 ORGN 540. Speciation and photoexcitation of Ni-amine complexes in light-driven C-N cross coupling reactions. M. Kudisch, C. Lim, B. Liu, G. Miyake

3:20 ORGN 541. N-aryl phenoxazines as strongly reducing organic photoredox catalysts. B. McCarthy


4:00 ORGN 543. C-N cross-coupling via photoexcitation of nickel-amine complexes. C. Lim, M. Kudisch, B. Liu, G. Miyake


4:40 ORGN 545. Solar-driven photoredox catalysis: The development of the LSC photomicroreactor. T. Noel

Section D

Orange County Convention Center
West Hall F3

Flow Chemistry & Continuous Processes

S. M. Silverman, Organizer
K. K. Laali, Presiding


1:20 ORGN 547. Development of increased spontaneous nucleation rates for continuous crystallization processes of organic molecules in solution. B. Rimez, R. Debuyschère, B. Scheid

2:00 ORGN 549. Boosting electrochemical transformations by using continuous flow. T. Noel


2:40 ORGN 551. On-demand rapid synthesis of lomustine under continuous flow conditions. Z. Jaman

3:00 ORGN 552. Application of continuous and semi-continuous flow methods in synthesis of active pharmaceutical intermediates in fluconazole and hydroxychloroquine. N.S. Telang, F. Gupton, S. Amir, H. Mangunuru, P. Tosso, B. Desai

3:20 ORGN 553. Organocatalyzed atom transfer radical polymerization in continuous photo-flow reactors. B. Buss, G. Miyake


WEDNESDAY EVENING

Section A

Orange County Convention Center
West Hall C

Asymmetric Reactions & Syntheses

Cosponsored by MEDIT
E. C. McLaughlin, Organizer

7:00 - 9:00

ORGN 555. Developing atroposelective syntheses to access diverse pharmaceutically relevant scaffolds. M.M. Cardenas, A.N. Sanchez, C.J. Robinson, M.A. Saputra, J.L. Gustafson


ORGN 557. Asymmetric organocatalyzed double Michael reaction of γ, δ-unsaturated β-ketoesters with nitroalkenes generates functionalized 4-nitrocyclohexanone derivatives. N. Fuentes, L. Truong, B. Ni


ORGN 559. Multifunctional, MAP-based catalytic systems for cascade reactions and hybrid catalysis. S.S. Eliseenko, F. Liu

ORGN 560. Catalytic bis(imino)pyridine iron complexes for carbene reactions of diazo compounds. B. Wang, I. Howard, Y. Deng
ORGN 561. Co-catalyzed hydroacylation of cyclic aldehydes to afford bicyclic ring systems. J. PARK, J. Riedel, V.M. Dong

ORGN 562. Planar chiral palladacycle precatalysts for asymmetric catalysis. C.J. Richards, R.A. Arthurs


ORGN 565. Catalytic, asymmetric synthesis of chiral aryl esters from ketenes and allyl aryl ethers. N. Kerrigan, A. Ibrahim

ORGN 566. Studies toward a general and enantioselective synthesis of 2-substituted and 2,3-disubstituted azetidines using organocatalysis. K.J. Ruud, M.C. O’Reilly


ORGN 568. Total synthesis of (+)-DMDP and (+)-hyacinthacine A2. Y. Jung, S. Park, J. Jung, Y. Kim


ORGN 570. Stereoselective multicomponent couplings of conjugated aldehydes. H. Bauer, S. Luesse


Section A

Orange County Convention Center
West Hall C

CH Activation

Cosponsored by MEDI‡
E. C. McLaughlin, Organizer

7:00 - 9:00

ORGN 573. Understanding the site-selectivity and enantioselectivity of dirhodium-catalyzed C-H functionalization. Z. Ren, W. Liu, J. Fu, J. Musaev, H.M. Davies

ORGN 575. *In situ* kinetic studies to develop rhodium-catalyzed cyclopropanation with extremely high catalyst turnover number. B. Wei, P. Lin, S. Wilkerson-Hill, D. Hill, D. Blackmond, H.M. Davies


ORGN 578. Electrochemically enabled copper-catalyzed C-H amination using electricity as an oxidant. K. Suppan

ORGN 579. New ligand design for C (SP3) H activation and boron-templated, acid-catalyzed cyclization of allylic alcohols to form 1, 3 diols. K. Forson


ORGN 581. One-step approach to generate annulated indoles through a palladium-catalyzed norbornene-mediated cascade reaction. Y. Gao, J. Li, X. Qi, C. Jiang

ORGN 582. Aromatization reaction from nitrones with MBH adducts via two different pathways. S. Han

ORGN 583. Chelation-assisted decarboxylative C-N bond formation. K. Das, P. Kilaru, S. Acharya, P. Zhao

ORGN 584. Catalytic 3,3'-bis-functionalization of BINOLs and biphenols. H.H. Nguyen, Y. Hua, P. Asgari, J. Jeon

ORGN 585. Functionalization of allylamines via carbon dioxide directed C-H activation. J. Maxwell, M. Kapoor, M.C. Young

ORGN 586. Oxidative Mannich reactions using Cu(II) 2-quinoxalinol salen catalyst and tert-butyl hydroperoxide. C. Black, A.E. Gorden

ORGN 587. Cp*CoII-catalyzed C-C and C-N bond forming reactions through directed hydroarylation and amidation protocol: A route towards direct access of important heterocycles. S.S. BERA


ORGN 589. General solution to amine and heterocycle poisoning during C–H alkenylation, arylation, and carbonylation using thioether-palladium catalysis. L. Wang, B.P. Carrow

ORGN 590. Role of solvent, ligand, and oxidant in reactivity and selectivity in platinum-catalyzed C–H functionalization. N. Laloo, M.S. Sanford

Section A

Orange County Convention Center
West Hall C

Heterocycles & Aromatics
7:00 - 9:00

**ORGN 591.** Facile approach to polycyclic 3-unsubstituted tetrahydroisoquinolonic acid. **M. Alturki**, R. Clark, J. Deruiter, F. Smith

**ORGN 592.** Novel arrangement of a 3-(oxiran-2-yl)prop-2-enamide to a 2-amino furan rifamycin derivative. **K.D. Combrink**


**ORGN 595.** Cycloaddition reactions of vinyl-dihydroisoquinolines for the synthesis of complex alkaloids. **A.N. Specht**, G. Moura-Letts

**ORGN 596.** Synthesis of photoswitchable azobenzene-based derivative with potential biological activity. **N.A. Al-Sulaiti**

**ORGN 597.** Intramolecular hydroalkylation of in situ-generated bis-homoallylic chiral piperazinonates. **A. Moreno**, T.K. Beng, B. Mankser, C. Gordner

**ORGN 598.** Solvatochromic behavior of a sterically hindered 4-aminonaphthalimide dye. **A.A. Pollock**, H.A. Huther, D.E. Lewis


**ORGN 600.** Synthesis of dibromoindigo isomers via a biosynthetic pathway. **S. Nahhas**, A.M. Wilson, G.D. Smith, V.J. Chen

**ORGN 601.** Enantioselective synthesis of gem-disubstituted N-Boc diazaheterocycles via decarboxylative asymmetric allylic alkylation. **A. Sun**, B.M. Stoltz

**ORGN 602.** Preparation of isomeric 3-bromopropanol capped oligoviologens. **M.E. Molina**, E.B. Smith, M. Chapman, B. Tase, S. Dane, O. Morgan, R.J. Morgan

**ORGN 603.** Development of an asymmetric zinc phthalocyanine as a NIR fluorescent probe for EGFR. **G. Ducharme**, E.E. Nesterov


**ORGN 605.** Microwave-promoted synthesis of 2,4-diamido-5-aminooxazoles. **J.S. Benner**, A. Purohit, A. Cottingham, S.A. Habay


ORG 616. Dicationic cyclic ionic liquids for energy applications. **C. Do-Thanh**, B. Prasad Thapaliya, I. Popovs, S. Dai


ORG 621. Efficient aza-Michael additions to tricarbonyl(tropone)iron enabling the synthesis of an unprecedented bridged azapolycycle. **D. Griffith**, Z. Huang, Z. Phelan


ORG 623. Oxone as an effective reagent for 2-(alkylthio)pyrimidine oxidation. **A.S. Bunev**

ORG 624. Progress towards the synthesis and chemistry of 2-sulfobenzoyldiaziridines. **C. Mitzel**, S.M. Bonser
Mild and efficient synthesis of phosphanecarbodithioates via a three-component coupling reaction of a phosphine, carbon disulfide, and an alkyl halide. **M.O. Ikhane**, H.J. Danboyi, L.E. Victorio, M.E. Steury, R.N. Salvatore

Rapid and efficient method for the reduction of quinoxalines using LiBH₄ and CH₃I: Synthesis of 1, 2, 3, 4-tetrahydroquinoxalines. **R.W. Roberts**, T.E. Gavin, R.N. Salvatore

Efforts toward the synthesis of 3,4-dihydroxyphenylacetaldehyde (DOPAL): A potential endogenous neurotoxin that may play a role in the development of Parkinson's disease. **D. Huber**, T. Scheffler, N. Schofield, J. Deslauriers, J.R. Hobby, T.E. Gavin, **R.N. Salvatore**

Purification of flavone derivatives: 3-hydroxy-2-phenylchrom-4-one via Algar-Flynn-Oyamada reaction. **C. Kelley**, Z. Poulos, E. Chong Ng

Straightforward general-purpose synthesis of regioisomerically pure type I porphyrin isomers. **M. Kielmann**, M. Roucan, S. Connon, M.O. Senge

First stable α-lactam with a secondary alkyl substituent in position three. **M. Fitzsimmons**, M. Benitez, Y. Wang, I. Lengyel, V.O. Cesare

DAST-mediated preparation of N-substituted 3-alkoxyisoindolinones. **F.A. Luzzio**, J.M. Ronnebaum

Novel design and preparation of a triazole-based axial chiral P,N-ligand. **J. Wang**, X. Shi


Synthesis of functionalized y-thiolactones via xanthate-mediation for potential polymerization and gold nanoparticles stabilization. **X. Xhani**

Section A

Peptides, Proteins & Amino Acids

Cosponsored by MEDI‡
E. C. McLaughlin, Organizer

7:00 - 9:00

Synthesis of computationally derived ERK2 substrates to probe kinase activity during oxidative stress. **W.A. LeFever**, A.J. Wommack, O.P. Tornow


Site-selective chemical protein modification via Umpolung catalysis. **L.M. Gooch**, M. Fascione
ORGN 638. New evidence for the mechanism of Strecker synthesis with ketones as substrates. W. Li, X. Song, I.J. Posey, A. Mondie


ORGN 642. Synthetic enzyme design by computational studies. J. Parkman, M. Kinghorn, G. Valdivia, J. Tretbar, M. Campbell, D.J. Michaelis

ORGN 643. Disulfide rich peptides: Automating optimized syntheses and regioselective formation of disulfide bonds. E. Denton, J.R. Bickler


ORGN 645. Progress towards a peptoid siderophore analogue. D.O. Baumann, R.F. Williams, J.C. Gordon

ORGN 646. Exploring the impact of backbone N-heteroatom substitution. M.P. Sarnowski

ORGN 647. N-amino peptide macrocycles as constrained α-helices. B.M. Rathman, C. Solanilla, J.R. Del Valle


Section A

Orange County Convention Center
West Hall C

Total Synthesis of Complex Molecules

Cosponsored by MEDI‡
E. C. McLaughlin, Organizer

7:00 - 9:00

ORGN 650. Total synthesis of cladosin B. J. Kim, K.P. Reber

ORGN 651. Total synthesis of a cyclopropenone-containing sesquiterpenoid. I.W. Gilbert, K.P. Reber

ORGN 652. Total synthesis of (R)-dihydroresorcylide via Pd enolate ring closure. K. Haney

ORGN 654. Synthesis of novel ceramide analogs to target skin cancer. A. Weather

ORGN 655. Synthetic studies of luteoside B. C.A. Starnbach, J.L. Koviach-Cote

ORGN 656. General synthetic approach for the lauroxocane family of natural products. Y. Zhang, N. Yaw, S.A. Snyder


ORGN 658. Chemoenzymatic approaches to the total synthesis of epoxyquinol A. M.S. Duncan, W.B. Kline, J.A. Collins


ORGN 661. Synthetic studies toward the 4-alkylideneproline natural products eleganine A and 17-nor-excelsinidine. C.F. Cain, J.A. Goodwin, E.H. Howard, J.R. Del Valle

ORGN 662. Asymmetric synthesis of (−)-naltrexone. S. Dongbang


ORGN 664. Total synthesis of tuberatolide B. K. Maurent, A. Corbu, S. Arseniyadas

ORGN 665. Progress towards the stereoselective total synthesis of scytophyycin B. H. Waldschmidt, W.R. Roush


ORGN 667. Efforts toward the total synthesis of a cis-decalin inhibitor of Rad52: Inducing synthetic lethality in BRCA deficient cancers. E. Hewlett, M. Nieborowska-Skorska, M. Abou-Gharbia, t. skorski, W. Childers

ORGN 668. Total synthesis of mansouramycins A and B. A. Zepeda, B. Gamez, S. Mito

ORGN 669. Strategy for sampling cis-pseudoguaianolide chemical space. F. Emmetiere, E. Bevan-Smith, A.J. Grenning

ORGN 670. Progress toward cryptomaldamide congeners. N. Falcone, R.B. Kinnel

ORGN 671. Toward a macrocyclic precursor of bielschowskysin. N. Falcone, A. Novak, D. Trauner

General Posters
THURSDAY MORNING

Section A

Orange County Convention Center
Room W230A

New Reactions & Methodology

S. M. Silverman, Organizer
M. C. Young, Presiding

8:20 ORGN 672. Photoredox-catalyzed oxidative ortho-addition of pyridine N-oxides with alkynes. J. Markham, Y. Deng

8:40 ORGN 673. Efficient and complete synthesis of 3,4-dihydropyrimidin-2(1H)-ones/thiones for pharmaceutical applications using nano-reactors. E. Finlay, N.N. Shaw

9:00 ORGN 674. Development of the enyne Cope rearrangement for applications in complex molecule synthesis. S. Scott, K. White, A.J. Grenning

9:20 ORGN 675. Reagent-controlled, stereoselective aldol reaction of methyl phenylacetate. P.B. Chanda, P. Ramachandran


10:00 ORGN 677. Cycloaddition of vinylcyclopropanes through energy transfer photocatalysis. D. Chen, G. Miyake

10:20 ORGN 678. Hydrofunctionalization of diene. X. Yang


11:20 ORGN 681. Synthesis of functionalized dicyclopenta[a,d]cyclooctene (5-8-5) ring systems via a photoinduced cycloisomerization reaction. A.E. Salvati, J. Frederich

11:40 ORGN 682. One-pot, multi-component assembly for synthesis of 1, 4-dihydropyridine scaffold and their bioavailability. H.M. Patel, M.G. Sharma

Section B
Total Synthesis of Complex Molecules

S. M. Silverman, Organizer
G. Cortez, Presiding

8:20 ORGN 683. Synthetic approach to the total synthesis of chimonanthine: Using a stereospecific photodecarbonylation reaction in the crystalline solid state. J.J. Dotson, M.A. Garcia-Garibay, N.K. Garg

8:40 ORGN 684. Total synthesis of akuammiline alkaloids. R.B. Susick, N.K. Garg

9:00 ORGN 685. Studies on total syntheses of tronocarpine and dippinine B. S. Taylor, S.M. Weinreb


10:00 ORGN 688. New strategy toward icetexane natural products. A. Amiri Naeini, G.P. Yap, W.J. Chain

10:20 ORGN 689. Lagunamide C: Total synthesis efforts, final structural determination, and biological evaluation. R. Rafferty


Section C

Materials, Devices & Switches

S. M. Silverman, Organizer
E. R. Draper, Presiding

8:00 ORGN 691. Reversible modulation of semiconducting performance of conjugated polymer entailing azobenzene groups in the side chains by light irradiations. D. Zhang


9:00 ORGN 694. Enhancing pyromellitic diimide electron acceptor ability through cationic core functionalization. D.D. Cao


10:00 ORGN 697. Synthesis and polymerization of diynes containing thiocyanate and thiophene end-groups en route towards polydiacetylenes. R. DeCicco


10:40 ORGN 699. Expanding the scope of metastable photoacids into material applications. M. Sanchez Zayas, N. Dolinski, J.L. Self, A. Abdilla, C.J. Hawker, C.M. Bates, J. Read De Alaniz

11:00 ORGN 700. Dimerization modes of graphene flakes. M. Kertesz, Z. Mou

11:20 ORGN 701. Tuning the electronic properties of (porphinato)zinc(II)-derived supramolecular polymers by design. C. Liu, K. Liu, A. Ashcraft, J.T. Klutke, S. Steefel, O. Jean-Hubert

11:40 ORGN 702. Gas transport through intrinsic defects of graphene sheets. J. Roh, H. Park

PHYS
Division of Physical Chemistry
A. McCoy, Program Chair

SUNDAY MORNING

Section A

Orange County Convention Center
Valencia Ballroom B-D - Theater 1

Advances in Data Collection & Analysis of Biomolecular Structures

Cosponsored by COMP
S. Lindert, S. Yang, Organizers
K. Sanbonmatsu, F. Tama, Presiding

8:00 PHYS 1. CryoFIT: User-friendly fitting of high-resolution cryo-EM reconstructions in PHENIX. D. Kim, K. Sanbonmatsu