WFC 2017

Robert Syvret, Program Chair and Markus Etzkorn, Program Co-chair

Plenary Lecture designated (PL) and Invited Lecture designated (IN)

SUNDAY EVENING

Clearwater Hilton
Foyer DEFG

Welcoming reception 5:00 to 7:00 p.m.

Foyer DEFG

Poster Session I 7:00 - 9:00

R. G. Syvret, Organizer, Presiding


4. Improving access to aromatic sulfur pentafluorides by direct fluorination of disulfides. J. Ajenjo, P. Beier


6. Reactivity of SF₅ organyls towards transition metals. C. Berg, T. Braun, R. Laubenstein, B. Braun


8. Recent developments in the preparation of monofluoroalkenes from 3-fluoro-3-halopropenes. J. Hamel, M. Cloutier, M. Drouin, J. Paquin

10. Sugar-based isoxazoles with perfluoroalkylmethyl moiety as antibacterial candidates. A. Mohammed


13. Recent findings and trends in the chemistry of tetrafluoridobromates(III). S.I. Ivlev, A.J. Karttunen, R.V. Ostvald, D. Kraus

14. Chiral fluoride anion generators in asymmetric catalytic reactions. S. Park, S. Paladhi, C. Song

15. Investigation on Cl-F exchange mechanism occurring at C(sp^2) and C(sp^3) orbitals of halogenated cyclopentene. H. Quan, C. Zhang, M. Tamura


17. Through-space arene activation by anchimeric assistance from fluorine: A different method of directing electrophilic substitution. M. Holl, T. Lectka

18. Investigation of nucleophilic difluoromethylation using the Ruppert-Prakash reagent. S. Krishnamoorthy, S.G. Prakash

19. Surface activities of bivalent and trivalent salts of perfluorooctanoic acid and perfluorobutanoic acid in water and in organic liquids. Z. Xiao, H. Xing, Z. Dou, J. Xiao

20. Surface activity and interfacial activity of amine oxide type fluorinated surfactant and its mixture with anionic hydrocarbon surfactant in strong acidic solution. Z. Xiao, H. Xing, Z. Dou, J. Xiao


24. Biological evaluation of both enantiomers of fluoro-thalidomide: Comparative case study using human myeloma cell line H929. E. Tokunaga, N. Shibata


31. Low cost deoxyfluorination reaction with methanesulfonyl fluoride / DBU system. K. KURIHARA, A. Harada, Y. NAKAMURA

32. Synthesis, characterisation, and computational study of fluorido(imido)tungsten(VI) complexes. D. Turnbull, S.D. Wetmore, M. Gerken

33. Difluoro(imidazolium)sulfuranes. S. Lim, E. Lee


35. Nafion-H@SPIONs as a robust perfluoro-tagged nanocatalyst for the synthesis of AT-130 analogous in a microreactor. A. Khosropour


38. Exploiting the fluorine gauche effect for applications in medicinal and supramolecular chemistry. A. Ariawan, L. Hunter

40. Nanoscale Lewis acidic aluminium chlorofluoride (ACF) in the activation of small molecules. B. calvo


42. Radical fluorination of sp$^3$ C-H and C-C bonds employing transition metals, radical initiators, and photochemistry: Methods, mechanisms, and advances in selectivity. C.R. Pitts, T. Lectka

43. HF addition reactions across C≡N and C=O bonds. A. Baxter, J. Hegge, R.M. Haiges, K.O. Christe


46. Olefin insertion into a Pd-F bond: Catalyst reactivation following β-F elimination in ethylene/vinyl-fluoride copolymerization. S. Wada, R.F. Jordan

47. Atmospheric chemistry of (CF$_3$)$_2$CHOCH$_3$: Kinetics of the gas-phase reactions with OH radicals, atmospheric lifetime, and global warming potentials. S. Qin, D. Liu, W. Li, Q. Zhang

48. Efficient process for the synthesis of perfluoroalkylated tetrahydro-4H-chromenes. X. Yan, J. Han, J. Chen, H. Zhang, W. Cao

49. Efficient process for the synthesis of perfluoroalkylated pyrazolopyridines. D. He, J. Han, J. Chen, H. Zhang, W. Cao

50. Efficient one-pot three-component process for the synthesis of perfluoroalkylated indolizines. D. He, J. Han, J. Chen, H. Zhang, W. Cao

Clearwater Hilton
Starfish
Hospitality Room 9:00 – 11:00 p.m.
Co-sponsored by SynQuest Laboratories and Apollo Scientific
MONDAY MORNING

Clearwater Hilton
Salons EF

Fluorine Chemistry Session I
Sponsored by Arkema Inc. Fluorochemicals
R. G. Syvret, Organizer, Presiding

7:50 Introductory Remarks. Plenary (PL), Invited (IN)

8:00 51. (PL) Xenon(II) oxide chemistry, and the coordination chemistry of XeF₆, XeO₃, and NgF₂ (Ng = Kr, Xe). J.T. Goettel, J. DeBackere, V. Haensch, M.R. Bortolus, M. Ivanova, J. Haner, K. Matsumoto, H. Mercier, G.J. Schrobligen

8:30 52. (IN) Fluoronium ions and hypervalent fluorine. K.O. Christe, R.M. Haiges, M. Rahm, D.A. Dixon

9:00 53. (IN) Generation of a symmetrical fluoronium ion in solution: From theoretical interest to potential practical applications. T. Lectka

9:30 54. (IN) Nanoscopic luminescent alkaline earth metal fluorides doped with rare earth metal fluorides. E. Kemnitz, T. Krahl, B. Ritter

10:00 Intermission. Co-sponsored by ACS Division of Fluorine Chemistry and Beijing Yuji Science and Technology Co. Ltd.

Clearwater Hilton
Salons EF

Fluorine Chemistry Session II
Co-sponsored by 3M Company and ExFluor Research Corporation
J. T. Welch, Presiding

10:20 55. (IN) Nano-CoF₃ as electrode material for Li-ion battery; synthesis, characterizations and electrochemical properties. A. Tressaud, H. Grout, S. Neveu, S. Leclerc, A. Porras-Gutierrez, C. Julien, E. Durand, C. Labrugere

10:50 56. Breaking C-F bonds for electricity: design, synthesis, and characterization of new fluorinated carbon materials for high capacity cathodic materials. H. Sun

11:10 57. (IN) Fluorocarbon-assisted dynamic self-assembly: Applications in materials sciences and medicine. M. Krafft

12:00 Lunch.

MONDAY AFTERNOON

Clearwater Hilton
Salons EF

Fluorine Chemistry Session III
Sponsored by Peach State Labs
G. Sandford, Presiding

1:30 59. (PL) Recent studies in the area of fluoroalkylations and fluorinations. S.G. Prakash

2:00 60. (IN) A new version of Umemoto reagents as practically useful electrophilic trifluoromethylating agents. T. Umemoto

2:30 61. (IN) Sustainable concepts for late-stage fluoroalkyl(thiol)ations. L.J. Goossen

3:00 62. (IN) New approaches in the direct introduction of CF₃S and CF₃S(O) motifs. D. Cahard

3:30 Intermission. Co-sponsored by ACS Division of Fluorine Chemistry and Beijing Yuji Science and Technology Co. Ltd.

Clearwater Hilton
Salons EF

Fluorine Chemistry Session IV
Sponsored by Beijing Yuji Science & Technology Co. Ltd
S. G. Prakash, Presiding

3:50 63. (IN) Recent advances in hydrogen bond-controlled nucleophilic halogenation. G.B. Hammond

4:20 64. (IN) Selectively fluorinated heterocyclic systems. G. Sandford


5:10 66. Difluorinated ketones as under-studied fluorinated building blocks. G. Pattison

5:30 67. From fluoroalkylation to fluorination: Deoxyfluorination of alcohols with 3,3-difluoro-1,2-diarylcyclopropenes (CpFluors). L. Li, C. Ni, F. Wang, J. Hu

Clearwater Hilton
Starfish
Hospitality Room 9:00 – 11:00 p.m.
TUESDAY MORNING

Clearwater Hilton
Salons EF

Fluorine Chemistry Session V
Sponsored by Galaxy Chemicals, LLC
G. J. Schrobilgen, Presiding

8:00 68. (PL) Computational approaches to the study of fluorine containing molecules. D.A. Dixon

8:30 69. (IN) Metallocenes and oxidative fluorine reagents. K. Seppelt, M. Malischewski

9:00 70. (IN) Fluorinated precursors as catalysts for exciting transformations. H.W. Roesky

9:30 71. (IN) Fluorine-rich fluorides: New insights into the chemistry of polyfluoride anions and beyond. S. Riedel

10:00 Intermission. Co-sponsored by ACS Division of Fluorine Chemistry and Beijing Yuji Science and Technology Co. Ltd.

Clearwater Hilton
Salons EF

Fluorine Chemistry Session VI
Co-sponsored by Merck KGaA and TCI Chemicals America
J. Hu, Presiding

10:20 72. (IN) Pentafluoroethyl derivatives of sulfur(IV) fluorides. N. Kostiuk, P. Hazendonk, S.D. Wetmore, M. Gerken

10:50 73. (IN) Chemistry of halogen and uranium fluorides. D. Kraus

11:20 74. (IN) Protonation and addition reactions of nitriles, azides and isocyanates with anhydrous HF. R.M. Haiges, T. Saal, A. Baxter, K.O. Christe

11:50 FLUO Division Business Meeting 11:50 to 12:00.

12:00 Lunch.

TUESDAY AFTERNOON
Fluorine Chemistry Session VII
Sponsored by Arkema Inc. Fluorochemicals
M. Gerken, Presiding

1:30  75. (IN) Activation of SF$_6$ at rhodium complexes. T. Braun, L. Zámostná, C. Berg

2:00  76. (IN) Reactions of fluorocarbons with late transition metal complexes. J. Love

2:30  77. (IN) Green hydrofluoroalkene synthesis via base-metal complex mediation or catalysis. R.T. Baker

3:00  78. (IN) Organocatalytic C-F bond activation with alanes and gallanes. A.D. Jaeger, R. Walter, D. Lentz

3:30  Intermission. Co-sponsored by ACS Division of Fluorine Chemistry and Beijing Yuji Science and Technology Co. Ltd.

Fluorine Chemistry Session VIII
Sponsored by Peach State Labs
T. Braun, Presiding

3:50  79. (IN) New reagents for difluoromethyl and difluoromethylene transfer. D.A. Vicic, L. Xu, P.T. Kaplan


4:50  81. Structures and hydration/dehydration dynamics of M$_2$(H$_2$O)$_n$B$_{12}$F$_{12}$: M$^+ = Li^+–Cs^+, Ag^+$; $n = 0–4$. S.H. Strauss, D.V. Peryshkov, E.V. Bukovsky, H. Wu, W. Zhou, W. tang, W. Jones, M. Lozinsek, T.C. Folsom, D. Heyliger, T. Udovic

5:20  82. Fluorinated and other halogenated CB$_{11}$ carborane anions and radicals. A. Wahab, F. Šembera, J. Ludvík, J. Klíma, R. Crespo, M. Piqueras, Z. Janoušek, J. Michl

5:50  83. Fluorination of fullerenes: From curiosity-driven research to real-world applications. O.V. Boltalina
Wednesday Morning

Clearwater Hilton
Foyer DEFG

Fluorine Chemistry Poster Session II, exposition and buffet breakfast
R. G. Syvret, Organizer, Presiding

8:00 - 10:00 a.m.

Clearwater Hilton
Starfish
Hospitality Room 9:00 – 11:00 p.m.
Co-sponsored by SynQuest Laboratories and Apollo Scientific

THURSDAY MORNING

Clearwater Hilton
Salons EF

Fluorine Chemistry Session IX
Sponsored by Galaxy Chemicals, LLC.
H. Koroniak, Presiding

8:00 84. (PL) An enzymatic method for C-18F bond formation for PET. D. O'Hagan

8:30 85. (IN) Fluorine-18 radiochemistry in drug development and clinical research. N. Vasdev

9:00 86. Hypervalent Iodine based radiofluorination for the preparation of PET radiopharmaceuticals. S.H. Liang, N. Vasdev


10:00 Intermission. Co-sponsored by ACS Division of Fluorine Chemistry and Beijing Yuji Science and Technology Co. Ltd.

Clearwater Hilton
Salons EF

Fluorine Chemistry Session X
Sponsored by Arkema Inc. Fluorochemicals.
K. Matsumoto, Presiding
10:20 88. (IN) Strategic incorporation of fluorine into bioactive compounds for chemical biology and drug discovery. I. Ojima


11:20 90. Fluorobenzene derivatives as multifunctional tools for medicinal chemistry and modification of biomolecules. F. Diness, M. Meldal, C.B. Jacobsen, A. Embaby

11:40 91. Enantioselective Friedel-Crafts alkylation reaction of indoles with beta-aryl-beta-trifluoromethyl nitroalkene. T. Akiyama, I. Ibáñez Sánchez

12:00 Lunch.

THURSDAY AFTERNOON

Clearwater Hilton
Salons EF

Fluorine Chemistry Session XI
Sponsored by Peach State Labs
D. O’Hagan, Presiding


2:00 93. (IN) Methods for the synthesis of CF₃- and SF₅-containing molecules using a building-block approach. J. Paquin


3:00 95. (IN) Recent progress in the chemistry of SF₅CX₂- and SF₅N-containing compounds. A.V. Matsnev, S.P. Belina, S. Qing, C.A. Parrish, J.S. Thrasher, P. Dudzinski, G. Haufe

3:30 Intermission. Co-sponsored by ACS Division of Fluorine Chemistry and Beijing Yuji Science and Technology Co. Ltd.

Clearwater Hilton
Salons EF

Fluorine Chemistry Session XII
Co-sponsored by Halocarbon Products Corporation and Chemours
J. Paquin, Presiding
Further exploitation of photoredox catalysis in the generation and use of difluoromethyl radicals to prepare molecules of synthetic interest. W.R. Dolbier, Z. Zhang, H. Martinez


Cycloaddition reactions of perfluoroacyl isothiocyanates. V. Petrov

Challenges in the successful synthesis of oligo(hexafluoropropylene oxide) perfluoroisopropenyl ether (PIPE). T.J. Burgess, A. Pasiuk, B.J. Jelier, C. Friesen

New 3-fluorocyclobutyl amines and amino acids: synthesis and physical chemical properties. I. Kondratov, I.A. Feskov, A.V. Chernykh, D. Radchenko, N.A. Tolmachova, G. Haufe

Clearwater Hilton
Salons EF

Banquet reception 7:00 – 7:30 p.m.
Banquet dinner 7:30 – 9:00

Starfish
Hospitality Room 9:00 – 11:00 p.m.
Co-sponsored by SynQuest Laboratories and Apollo Scientific

FRIDAY MORNING

Clearwater Hilton
Salons EF

Fluorine Chemistry Session XIII
Co-sponsored by ACS Division of Polymer Chemistry and Solvay Chemicals, Inc.
R. M. Haiges, Presiding

Preparation of meta- and para-SF₅-substituted pyridines. N. Shibata

Synthesis of organofluorine compounds using difluorocarbene. A.D. Dilman, V. Levin

Selected synthetic aspects of fluoro-isoindenone chemistry: How much fluorine is too much?. M. Etzkorn, J. Franklin, V. Wait, J. Spinaris

9:50 105. Gold(I) activating C-F bond: Catalysis and mechanism. **J. Zhang**, J. Hu

10:10 Intermission. *Co-sponsored by ACS Division of Fluorine Chemistry and Beijing Yuji Science and Technology Co. Ltd.*

Clearwater Hilton
Salons EF

**Fluorine Chemistry Session XIV**
**Sponsored by Beijing Yuji Science & Technology Co. Ltd.**
**M. Etzkorn, Presiding**

10:30 106. NHC nickel-catalyzed derivatization of polyfluoroarenes. **U. Radius**

10:50 107. Transverse relaxation (T2) time and peak width at half-height measurements for support of di-radical intermediates during the reaction of chlorosulfonyl isocyanate with electron-rich monofluoroalkenes. **D.F. Shellhamer**, Z.J. Beavis, S.L. Elwin, L. Gomez, S. Van Horne

11:10 108. Structural elucidation of fluorosurfactants by NMR. **H. Liu**

11:30 109. Which nonmetal, which halogen, is the strongest oxidant? A study with systematics and surprises. M. Ponikvar-Svet, D.N. Zeiger, **J.F. Liebman**