

# Technical Program

---

\*Program Subject to Change\*

## FLUO

Division of Fluorine Chemistry

*Thomas Mathew and John T. Welch  
Program Chairs*

---

**JANUARY 05, 2025**

**SUNDAY EVENING**

### Fluorine Chemistry Welcome Reception

**5:00 PM – 7:00 PM**

Hyatt Regency Clearwater, Belleair Room

### Fluorine Chemistry Poster Session I

Hyatt Regency Clearwater, Belleair Room

**Co-sponsored by FLUO**

**Financially Supported by Honeywell**

*T. Mathew, J. T. Welch, Organizers*

*J. T. Welch, Presiding*

**7:00 PM – 9:00 PM**

**WFC 1.** Copper-catalyzed tetrafluoroethylation of vinyl- and alkynyl boronic acids with in-situ derived  $\text{HCF}_2\text{CF}_2$ -radicals. **M. N. Alam**, S. Majumder, W. R. Dolbier

**WFC 2.** Synthesis of various derivatives of 3-(5,7-Difluoro-4-oxo-4H-chromen-6-yl)-1,1-dimethyl-urea, study of their biological activities. **M. B. Alshammari**

**WFC 3.** End of life assessment of fluoropolymers: Recent developments and challenges. **B. M. Ameduri**

**WFC 4.** Face selection in hydride reductions and photochemical reactions of 5-fluoro-2-adamantanone and *F*-adamantanone. **L. H. Assaad**, I. Nelsen, R. N. Salvatore

**WFC 5.** Development and optimization of photochemical flow and batch processes for

perfluoroalkylation and -arylation. **S. Balsler**, O. Scheinberger, S. H. Strauss, O. V. Boltalina

**WFC 6.** Synthesis of difluoro-olefins of exocyclic-glycosyl enol ethers for advancing the difluoro-C-glycoside chemistry. **A. Begum**, D. A. Colby

**WFC 7.** Activation of a fluorine based weakly coordinating anion through cooperation of light s block metals. **C. Berthold**, M. R. Buchner

**WFC 8.** Iron-catalyzed aminoradiofluorination of alkenes to unprotected  $\beta$ -radiofluoroamines. **M. R. Bortolus**, Y. Li, N. Vasdev, C. Zheng

**WFC 9.** How mechanism drives innovation in strain-release pentafluorosulfanylation. **J. A. Buldt**

**WFC 10.** Enantioselective reduction of prochiral  $\alpha$ - $\text{CF}_3$  and  $\alpha$ - $\text{SF}_5$  ketones. **K. Burchell-Reyes**, C. Depoumpe, J.-F. Paquin

**WFC 11.** Expedited synthesis of  $\alpha$ - $\text{SF}_5$  ketones from enol acetates. **K. Burchell-Reyes**, C. Depoumpe, J.-F. Paquin

**WFC 12.** Enantioconvergent copper-catalysed difluoromethylation of alkyl halides. **D. Ding**, W. Liu

**WFC 13.** Predicted properties of C1 to C4 HFC's. **C. R. Durkee**, D. A. Dixon

**WFC 14.** Biocatalytic aza-Michael addition of aromatic amines to enone using  $\alpha$ -amylase in water. **S. Dutt**

**WFC 15.** Synthesis and characterization of  $\text{ClF}_4^+\text{Sb}_4\text{F}_{21}^-$ . **P. A. Fuzon**, F. Kraus

**WFC 16.** Influence of perfluoroalkyl chains on solid state structure, optical, and electrochemical properties of phenazine derivatives. **S. Gairhe**, M. Ferrie, Y. Feng, H. Sun

# Technical Program

---

**WFC 17.** Exploring strain-release pentafluorosulfanylation of [1.1.0]bicyclobutanes. **Z. C. Haidar**, A.H. Patel, J. A. Buldt, Y. Kraemer, C. R. Pitts

**WFC 18.** Amorphous Lewis-acidic zirconium chlorofluoride as HF shuttle. **C. Heinekamp**, A. Guilherme Buzanich, M. Ahrens, T. Braun, F. L. Emmerling

**WFC 19.** Synthesis and in vivo incorporation of difluoromethyl phenylalanine. **D. Honeycutt**, J. M. Goldberg, F. Wang

**WFC 20.** Tetrafluoro(aryl)sulfanylated bicyclopentane crystals that self-destruct upon cooling. **Y. Kraemer**

**WFC 21.** Comparative study of cationic effects on thermophysical and thermal properties of pure ionic liquids. **I. Kul**, K. Bhat, A. Ruggiero, F. Mallouhi

**WFC 22.** Dehydrofluorination of hydrofluorocarbons via iridium pincer complexes. **L. A. Mauro**, S. Hall, D.A. Vivic

**WFC 23.** Bridgehead-fluorinated and -fluoroalkylated bicyclo[1.1.1]pentanes. **S. K. Nelson**, C. Bore, A. E. Thwaites, J. Hamel

**WFC 24.** Design and synthesis of candidate fluorine-18 labeled tracers for PET imaging of ion channel based chemogenetics. **S. Nerella**, S. Telu, J. L. Gomez, M. Michaelides, R. B. Innis, P. Victor

**WFC 25.** Liquid-liquid extraction of lactic acid from aqueous medium using thymol-lauric acid deep eutectic solvent. **M. I. Obisike**, A. A. Opuada, T. K. Bello (Withdrawn)

**WFC 26.** The CF<sub>2</sub>H group-mediated strong hydrogen bonds. **M. Paoletta**, D. Honeycutt, J. M. Goldberg, F. Wang

**WFC 27.** Synthesis of SF<sub>5</sub>-pyrazoles: Expanding the scope of pentafluorosulfanyl heterocycles. **P. Paquin**, G. Bélanger-Chabot, J.-F. Paquin

**WFC 28.** Bidirectional synthesis of unilaterally substituted fluorotetracenes. **R. Pessi Kenmogne**, U. Koert

**WFC 29.** Aryl fluorides as versatile reagents for rapid expansion of chemical complexity. **I. Popovs**

**WFC 30.** Gold-catalyzed hydrofluorination of terminal alkynes using potassium bifluoride (KHF<sub>2</sub>). **R. Pronovost**, M. Rion, N.V. Tzouras, S.P. Nolan, J.-F. Paquin

**WFC 31.** Mechanochemical substitutions of pentafluoropyridine: A facile approach to macromonomer synthesis. **J. Pulfer**, T. Storr, C. M. Friesen

**WFC 32.** Synthesis, structure, and reactivity of compounds bearing the SF<sub>5</sub> group and its congeners. **A. N. Ragan**, Y. Kraemer, C. R. Pitts

**WFC 33.** Nickel perfluoroalkyl complexes supported by simple acetate coligands. **C. T. Ravidas**

**WFC 34.** Utilization of bis(trifluoromethyl)amine for the incorporation of -N(CF<sub>3</sub>)<sub>2</sub> groups into organic compounds. **M. Reeves**, E. Csapo, E. Fortuna, M. Finze, V.A. Petrov, J.S. Thrasher

**WFC 35.** Selective S-F bond activation of SOF<sub>2</sub> via ligand cooperation of a rhodium(I) P\*NNOP pincer complex: Formation and further reactivity studies. **L. Richter**, T. Braun

**WFC 36.** Global <sup>19</sup>F NMR database. **J. B. Rojo**, L. Emswiler, L.A. Mauro, C.T. Ravidas, D.A. Vivic

**WFC 37.** Polyfluoroarylimidazolium salts for crystal engineering. **G. C. Saunders**, U. A. Apeksha

**WFC 38.** Organypentafluorophosphate Ions. **J.-H. Schroeder**, B. Hoge (Withdrawn)

# Technical Program

---

**WFC 39.** 3-Fluoroallylation of  $\alpha$ -amino acids through photoredox decarboxylative C–C coupling. **T. Semeniuk**, J. Challenger, T. Dudas, D. Toporkov

**WFC 40.** Preparation of arylpyridinium fluoride salts. **A. Sharma**, S. Gairhe, M. Nartey, H. Sun

**WFC 41.** Investigation of halogen bonding interactions through the synthesis of perfluorinated disulfonyl halides. **D. L. Helm**, W. D. Magen, C. D. McMillen, J. A. Barroso Moreno, J.S. Thrasher

**WFC 42.** Strain-release trifluoromethoxylation and pentafluorosulfanoylation of [1.1.0]bicyclobutanes: Expanded access to fluorinated cyclobutane hybrid bioisosteres. **A. M. Stephens**

**WFC 43.** Efforts towards the development of a novel pentafluorosulfanylation reagent. **L. Verret**, K. Burchell-Reyes, J. Morin, J.-F. Paquin

**WFC 44.** Expanding the chemical space of pentafluorosulfanyl-containing compounds. **L. Xu**, D. Rombach (Withdrawn)

**WFC 45.** Synthesis of two different perfluoroalkylated aromatics using 1,4-diodoperfluorobutane based on photo-induced reaction. **A. Yamaguchi**, T. Yajima

**WFC 46.** Synthesis and reactivity of acetonitrile-solvated trifluoromethyl palladium complexes. **L. Yorks**, D. A. Vicic

## JANUARY 06, 2025 MONDAY MORNING

### Fluorine Chemistry Session I

Hyatt Regency Clearwater, Aqualea Grand Ballroom

**Co-sponsored by FLUO**

**Financially supported by Arkema**

*T. Mathew, J. T. Welch, Organizers*

*G. J. Schrobilgen, Presiding*

**7:45 AM – 9:55 AM**

**7:45** Welcoming Remarks.

**7:50 WFC 47. (PL)** Convenient fluoroalkylation, azidodifluoromethylation, fluoroalkoxylation, fluoroalkylation and halofluoromethylation protocols. **G. K. Surya Prakash**

**8:20 WFC 48. (IL)** Recent advances in the synthesis of SF<sub>5</sub>-containing molecules. **J.-F. Paquin**

**8:40 WFC 49. (IL)** Reactivity of silylium and other cations in the context of catalytic hydrodefluorination. **O. Ozerov**, D. Leong, N. Bhuvanesh, O. Gunther, J. Daum

**9:00 WFC 50. (IL)** A deoxyfluoroalkylation-aromatization strategy for accessing highly substituted fluoroalkyl arenes. **R. A. Altman**

**9:20 WFC 51. (CL)** Straightforward pentafluorosulfanylation for molecular design. **T. Gatzemeier**

**9:40 WFC 52 (IL)** Photochemical perfluoroalkylation of polycyclic aromatic hydrocarbons. **S. Balsler**, O. Scheinberger, S. H. Strauss, O. V. Boltalina

**9:55** Intermission

### Fluorine Chemistry Session II

Hyatt Regency Clearwater, Aqualea Grand Ballroom

**Co-sponsored by FLUO**

**Financially supported by Fluorinova**

*T. Mathew, J. T. Welch, Organizers*

*M. Gerken, Presiding*

**10:10 AM – 12:15 PM**

**10:10 WFC 53. (IL)** Rethinking fluorine chemistry with global challenges in mind. **V. Gouverneur**

# Technical Program

---

**10:35 WFC 54. (IL)** Shelf-stable reagent for radical pentafluorosulfanylation. **A. Tlili**

**10:55 WFC 55. (IL)** Lewis acid-catalyzed sulfur fluoride exchange. **N. D. Ball**

**11:15 WFC 56. (CL)** Utilizing *trans*-cyclohexenes to rapidly access complex fluorochlorocarbons. **J. D. Weaver**

**11:35 WFC 57 (IL)** From a novel fluorinated functional group to fluorinated 'Smart Reagent' dienophiles for Diels-Alder cycloadditions. **T. Dudding**

**11:55 WFC 58. (IL)** SF<sub>6</sub> and triisopropylsilyl acetylene sulfur pentafluoride - Towards safer reagents in pentafluorosulfanylation chemistry. **D. Rombach**, B. Birenheide, H.-A. Wagenknecht, J. O. Wenzel, H. Kucher, F. Jester, A. Togni

**12.15** Lunch.

## MONDAY AFTERNOON

### Fluorine Chemistry Session III

Hyatt Regency Clearwater, Aqualea Grand Ballroom

**Co-sponsored by FLUO**

**Financially supported by Oakwood Chemical**

*T. Mathew, J. T. Welch, Organizers*

*V. A. Petrov, Presiding*

**1:30 PM – 3:20 PM**

**1:30 WFC 59. (PL)** Advances in high-performance semi-fluorinated aromatic ether polymers: Segmented perfluorocyclobutyl (PFCB) copolymers and 6F materials via interfacial electrophilic aromatic polymerization. G. Munoz, M. Solovyev, K. Shelar, K. Mukebah, K. Chamberlain, C. Pittman, Jr., **D. W. Smith, Jr.**

**2:00 WFC 60. (IL)** Selective C(sp<sup>3</sup>)-F bond functionalization of trifluoromethylarenes utilizing EDA Complex. **T. Akiyama**, T. Uchikura, F. Akutsu

**2:20 WFC 61. (IL)** Fluoroalkanesulfenamides as versatile reagents in fluorine organic chemistry. **T. Billard**

**2:40 WFC 62. (IL)** Fragment deactivation in natural product site selectivity. **T. Lectka**

**3:00 WFC 63. (CL)** Hybrid palladium-catalyzed approaches for efficient partial fluoroalkylation. **Z. Zhang**

**3:20** Intermission.

### Fluorine Chemistry Session IV

Hyatt Regency Clearwater, Aqualea Grand Ballroom

**Co-sponsored by FLUO**

**Financially supported by Oakwood Chemical**

*T. Mathew, J. T. Welch, Organizers*

*J. Hyvl, Presiding*

**3:35 PM – 5:55 PM**

**3:35 WFC 64. (IL)** Enantioselective synthesis of  $\alpha$ -monofluoro- $\alpha$ -amino acid derivatives and synthetic applications. **S. Arimitsu**

**3:55 WFC 65. (IL)** Mechanistic insights into copper-mediated trifluoromethylation. **Q. Shen**

**4:15 WFC 66. (IL)** Per- and polyfluoroalkyl substances (PFASs): When Dr. Jekyll meets Mr. Hyde. **M.-P. Krafft**

**4:35 WFC 67. (IL)** Recent advances in difluoroalkylations with hemiaminals. **S. Munoz**

**4:55 WFC 68. (IL)** Searching for alternative nucleophilic fluorinating reagents. **H. Sun**

**5:15 WFC 69. (IL)** Photoredox  $\gamma$ -functionalization of allylic and propargylic polyfluorides. T. Semeniuk, T. Dudas, J. Challenger, D. Toporkov, **J.-D. Hamel**

**5:35 WFC 70. (CL)** Expanding tracer space for positron emission tomography:<sup>18</sup>F-Labeled  $\alpha,\alpha$ -Difluoromethylalkanes. **Q. Zhao**, S. Telu, S. Lu

# Technical Program

---

**JANUARY 07, 2025**  
**TUESDAY MORNING**

## **Fluorine Chemistry Session V**

Hyatt Regency Clearwater, Aqualea Grand Ballroom

**Co-sponsored by FLUO**

**Financially supported by Honeywell**

*T. Mathew, J. T. Welch, Organizers*

*T. Billard, Presiding*

**7:45 AM – 9:55 AM**

**7:45 WFC 71. (PL)** Transition metal-catalyzed addition of pronucleophiles to alkynes and allenes – an atom-efficient alternative to the Tsuji-Trost Reaction. **B. Breit**

**8:15 WFC 72. (IL)** Exploring new opportunities in organofluorine chemistry. **T. Besset**

**8:35 WFC 73. (IL)** Asymmetric fluorocyclization of fluoroalkenes under phase-transfer catalysis. **H. Egami**, T. Mayumi, C. Igarashi, Y. Hamashima

**8:55 WFC 74. (IL)** Development of S-trifluoromethyl trifluoromethanesulfonothioate (TTST) as a highly versatile and atom-efficient trifluoromethylthiolating agent: Its background, preparation, and applications. **T. Umemoto**

**9:15 WFC 75. (IL)** Initial investigation of the incorporation of the 1,1,2-trifluoroethyl substituent into organic compounds via photoredox chemistry. **W. R. Dolbier**, S. Majumder

**9:35 WFC 76. (IL)** Investigations using multidentate ligands for efficient bismuth-catalyzed olefin difluorocarbeneation. **J. Hyvl**, M. Vynoslavská, B. Fong, C. Ehm

**9:55** Intermission.

## **Fluorine Chemistry Session VI**

Hyatt Regency Clearwater, Aqualea Grand Ballroom

**Co-sponsored by FLUO**

**Financially supported by CJIdeas**

*T. Mathew, J. T. Welch, Organizers*

*R. G. Syvret, Presiding*

**10:10 AM – 12:10 PM**

**10:10 WFC 77. (IL)** Construction and degradation of fluorinated biopolymers. **B. Kokschi**

**10:30 WFC 78. (IL)** Highly branched fluorinated dendrimers in gene delivery applications. **P. Metrangolo**

**10:50 WFC 79. (CL)** Controlling structure and function of peptide through selective SNAr cyclization using fluorobenzene derivatives. N. H. Fischer, S. Nikitin, M. Meldal, **F. Diness**

**11:10 WFC 80. (IL)** Developing more sustainable organofluorine materials: New fluororous liquids and synthetic oligomers for <sup>19</sup>F MRI. **W. C. Pomerantz**

**11:30 WFC 81. (IL)** Exploring the limits of site-specific fluorinated amino acids encoding into protein using genetic code expansion. **R. A. Mehl**

**11:50 WFC 82. (CL)** Perfluoro-*tert*-butanol: branched structure and diverse application. **Z.-X. Jiang**

**12:10** Lunch.

(12:10-12:25 – General Meeting, FLUO Members)

## **TUESDAY AFTERNOON**

### **Fluorine Chemistry Session VII – Award Session**

Hyatt Regency Clearwater, Aqualea Grand Ballroom

**Co-sponsored by FLUO**

**Financially supported by Exfluor**

*T. Mathew, J. T. Welch, Organizers*

*V. Gouverneur, Presiding*

# Technical Program

---

1:30 PM – 3:40 PM

**1:30 WFC 83. (PL)** Nucleophilic Dimerization of Perfluorinated Olefins. **V. A. Petrov**, A. A. Marchione, M. Miller

**2:00 WFC 84. (IL)** Hydrofluorination of Alkynes at Pt complexes: Model reactions and Catalysis. **T. Braun**, O. He, S. Sander

**2:20 WFC 85. (IL)** Exploring the coordination chemistry of tungsten(VI) fluoride: Synthesis and characterization of *N*-heterocyclic carbene and cyclic (alkyl)(amino)carbene complexes. M. Riethmann, M. Gerken, M. Finze, **U. Radius**

**2:40 WFC 86. (IL)** Nickel-Catalyzed Trifluoromethylselenolation of Aryl and Alkenyl-Triflates. **A. Amgoune**

**3:00 WFC 87. (IL)** Research Highlight: From alternate routes to fluorspar (CaF<sub>2</sub>) or anhydrous HF (aHF) to conversion of fluorspar into a nucleophilic fluorinating agent. V. A. Petrov, **J. S. Thrasher**

**3:20 WFC 88. (IL)** The preparation and reactions of new tetrafluoro(trifluoromethyl)-λ<sup>6</sup>-sulfanyl (CF<sub>3</sub>SF<sub>4</sub>)-containing building blocks. L. Ma, S. Shah, W. Desoucey, **J. T. Wech**

**3:40.** Intermission.

**Fluorine Chemistry Session VIII – Award Session**  
Hyatt Regency Clearwater, Aqualea Grand Ballroom

**Co-sponsored by FLUO**

**Financially supported by Oakwood Chemical**

*T. Mathew, J. T. Welch, Organizers*

*D. A. Dixon, Presiding*

3:55 PM – 6:15 PM

**3:55 WFC 89. (IL)** Targeting Creative Destruction: Bond Breaking and Bond Making to Approach the Fluorine Problem. **S. Cook**

**4:15 WFC 90. (IL)** From perhalogenated trityl cations, radicals and peroxides: New synthons in fluorine chemistry. **S. Riedel**

**4:35 WFC 91. (IL)** Solid-state donor-acceptor interactions in the PAH/C<sub>2n</sub>F<sub>x</sub> systems and implications for effective molecular doping. **O. V. Boltalina**, N. J. Deweerdt, S. H. Strauss, Y. Chen

**4:55 WFC 92. (IL)** Regioselective ring opening of *gem*-difluorocyclopropanes: Applications in the synthesis of organofluorine compounds. **J. Ichikawa**

**5:15 WFC 93. (IL)** Metal-catalyzed fluoroalkylation reactions. **W. Liu**

**5:35 WFC 94. (IL)** Copper difluorocarbene involved catalytic coupling. **X. Zhang**

**5:55 WFC 95. (IL)** Polyfluorinated Peptides – Establishing A Novel Class of Biopolymers. **T. Hohmann**, B. Kokscht

**JANUARY 08, 2025**

**WEDNESDAY MORNING**

**Fluorine Chemistry Poster II, Exposition, and Breakfast**

Hyatt Regency Clearwater, Belleair Room

**Co-sponsored by FLUO**

*T. Mathew, J. T. Welch, Organizers*

*J. T. Welch, Presiding*

8:00 AM – 10:00 AM

**WFC 1.** Copper-catalyzed tetrafluoroethylation of vinyl- and alkynyl boronic acids with in-situ derived HCF<sub>2</sub>CF<sub>2</sub>-radicals. **M. N. Alam**, S. Majumder, W. R. Dolbier

**WFC 2.** Synthesis of various derivatives of 3-(5,7-Difluoro-4-oxo-4*H*-chromen-6-yl)-1,1-dimethyl-urea, study of their biological activities. **M. B. Alshammari**

# Technical Program

---

**WFC 3.** End of life assessment of fluoropolymers: Recent developments and challenges. **B. M. Ameduri**

**WFC 4.** Face selection in hydride reductions and photochemical reactions of 5-fluoro-2-adamantanone and *F*-adamantanone. **L. H. Assaad**, I. Nelsen, R. N. Salvatore

**WFC 5.** Development and optimization of photochemical flow and batch processes for perfluoroalkylation and -arylation. **S. Balsler**, O. Scheinberger, S. H. Strauss, O. V. Boltalina

**WFC 6.** Synthesis of difluoro-olefins of exocyclic-glycosyl enol ethers for advancing the difluoro-C-glycoside chemistry. **A. Begum**, D. A. Colby

**WFC 7.** Activation of a fluorine based weakly coordinating anion through cooperation of light s block metals. **C. Berthold**, M. R. Buchner

**WFC 8.** Iron-catalyzed aminoradiofluorination of alkenes to unprotected  $\beta$ -radiofluoroamines. **M. R. Bortolus**, Y. Li, N. Vasdev, C. Zheng

**WFC 9.** How mechanism drives innovation in strain-release pentafluorosulfanylation. **J. A. Buldt**

**WFC 10.** Enantioselective reduction of prochiral  $\alpha$ -CF<sub>3</sub> and  $\alpha$ -SF<sub>5</sub> ketones. **K. Burchell-Reyes**, C. Depoumpe, J.-F. Paquin

**WFC 11.** Expedited synthesis of  $\alpha$ -SF<sub>5</sub> ketones from enol acetates. **K. Burchell-Reyes**, C. Depoumpe, J.-F. Paquin

**WFC 12.** Enantioconvergent copper-catalysed difluoromethylation of alkyl halides. **D. Ding**, W. Liu

**WFC 13.** Predicted properties of C1 to C4 HFC's. **C. R. Durkee**, D. A. Dixon

**WFC 14.** Biocatalytic aza-Michael addition of aromatic amines to enone using  $\alpha$ -amylase in water. **S. Dutt**

**WFC 15.** Synthesis and characterization of ClF<sub>4</sub><sup>+</sup>Sb<sub>4</sub>F<sub>21</sub><sup>-</sup>. **P. A. Fuzon**, F. Kraus

**WFC 16.** Influence of perfluoroalkyl chains on solid state structure, optical, and electrochemical properties of phenazine derivatives. **S. Gairhe**, M. Ferrie, Y. Feng, H. Sun

**WFC 17.** Exploring strain-release pentafluorosulfanylation of [1.1.0]bicyclobutanes. **Z. C. Haidar**, A.H. Patel, J. A. Buldt, Y. Kraemer, C. R. Pitts

**WFC 18.** Amorphous Lewis-acidic zirconium chlorofluoride as HF shuttle. **C. Heinekamp**, A. G. Buzanich, M. Ahrens, T. Braun, F. L. Emmerling

**WFC 19.** Synthesis and in vivo incorporation of difluoromethyl phenylalanine. **D. Honeycutt**, J. M. Goldberg, F. Wang

**WFC 20.** Tetrafluoro(aryl)sulfanylated bicyclopentane crystals that self-destruct upon cooling. **Y. Kraemer**

**WFC 21.** Comparative study of cationic effects on thermophysical and thermal properties of pure ionic liquids. **I. Kul**, K. Bhat, A. Ruggiero, F. Mallouhi

**WFC 22.** Dehydrofluorination of hydrofluorocarbons via iridium pincer complexes. **L. A. Mauro**, S. Hall, D.A. Vivic

**WFC 23.** Bridgehead-fluorinated and -fluoroalkylated bicyclo[1.1.1]pentanes. **S. K. Nelson**, C. Bore, A. E. Thwaites, J. Hamel

**WFC 24.** Design and synthesis of candidate fluorine-18 labeled tracers for PET imaging of ion channel based chemogenetics. **S. Nerella**, S. Telu, J. L. Gomez, M. Michaelides, R. B. Innis, P. Victor

# Technical Program

---

**WFC 25.** Liquid-liquid extraction of lactic acid from aqueous medium using thymol-lauric acid deep eutectic solvent. **M. I. Obisike**, A. A. Opuada, T. K. Bello (Withdrawn)

**WFC 26.** The CF<sub>2</sub>H group-mediated strong hydrogen bonds. **M. Paoletta**, D. Honeycutt, J. M. Goldberg, F. Wang

**WFC 27.** Synthesis of SF<sub>5</sub>-pyrazoles: Expanding the scope of pentafluorosulfanyl heterocycles. **P. Paquin**, G. Bélanger-Chabot, J.-F. Paquin

**WFC 28.** Bidirectional synthesis of unilaterally substituted fluorotetracenes. **R. Pessi Kenmogne**, U. Koert

**WFC 29.** Aryl fluorides as versatile reagents for rapid expansion of chemical complexity. **I. Popovs**

**WFC 30.** Gold-catalyzed hydrofluorination of terminal alkynes using potassium bifluoride (KHF<sub>2</sub>). **R. Pronovost**, M. Rion, N.V. Tzouras, S.P. Nolan, J. Paquin

**WFC 31.** Mechanochemical substitutions of pentafluoropyridine: A facile approach to macromonomer synthesis. **J. Pulfer**, T. Storr, C. M. Friesen

**WFC 32.** Synthesis, structure, and reactivity of compounds bearing the SF<sub>5</sub> group and its congeners. **A. N. Ragan**, Y. Kraemer, C. R. Pitts

**WFC 33.** Nickel perfluoroalkyl complexes supported by simple acetate coligands. **C. T. Ravidas**

**WFC 34.** Utilization of bis(trifluoromethyl)amine for the incorporation of -N(CF<sub>3</sub>)<sub>2</sub> groups into organic compounds. **M. Reeves**, E. Csapo, E. Fortuna, M. Finze, V. A. Petrov, J. S. Thrasher

**WFC 35.** Selective S-F bond activation of SOF<sub>2</sub> via ligand cooperation of a rhodium(I) P\*NNOP pincer complex: Formation and further reactivity studies. **L. Richter**, T. Braun

**WFC 36.** Global <sup>19</sup>F NMR database. **J. B. Rojo**, L. Emswiler, L. A. Mauro, C. T. Ravidas, D. A. Vici

**WFC 37.** Polyfluoroarylimidazolium salts for crystal engineering. **G. C. Saunders**, U. A. Apeksha

**WFC 38.** Organypentafluorophosphate ions. **J.-H. Schroeder**, B. Hoge (Withdrawn)

**WFC 39.** 3-Fluoroallylation of α-amino acids through photoredox decarboxylative C-C coupling. **T. Semeniuk**, J. Challenger, T. Dudas, D. Toporkov

**WFC 40.** Preparation of arylpyridinium fluoride salts. **A. Sharma**, S. Gairhe, M. Nartey, H. Sun

**WFC 41.** Investigation of halogen bonding interactions through the synthesis of perfluorinated disulfonyl halides. **D. L. Helm**, W. D. Magen, C. D. McMillen, J. A. Barroso Moreno, J.S. Thrasher

**WFC 42.** Strain-release trifluoromethoxylation and pentafluorosulfanoylation of [1.1.0]bicyclobutanes: Expanded access to fluorinated cyclobutane hybrid bioisosteres. **A. M. Stephens**

**WFC 43.** Efforts towards the development of a novel pentafluorosulfanylating reagent. **L. Verret**, K. Burchell-Reyes, J. Morin, J. Paquin

**WFC 44.** Expanding the chemical space of pentafluorosulfanyl-containing compounds. **L. Xu**, D. Rombach (Withdrawn)

**WFC 45.** Synthesis of two different perfluoroalkylated aromatics using 1,4-diiodoperfluorobutane based on photo-induced reaction. **A. Yamaguchi**, T. Yajima

**WFC 46.** Synthesis and reactivity of acetonitrile-solvated trifluoromethyl palladium complexes. **L. Yorks**, D. A. Vici



# Technical Program

---

**JANUARY 09, 2025**

## **THURSDAY MORNING**

### **Fluorine Chemistry Session IX**

Hyatt Regency Clearwater, Aqualea Grand Ballroom

**Co-sponsored by FLUO**

**Financially supported by Honeywell**

*T. Mathew, D. A. Vicic, Organizers*

*O. V. Boltalina, Presiding*

**7:45 AM – 9:55 AM**

**7:45 WFC 96. (PL)** Oxidation of halogen pentafluorides and N<sub>2</sub> mediated by RuF<sub>5</sub> and [BrF<sub>6</sub>]<sup>+</sup>. B. Koch, A. J. Karttunen, **F. Kraus**

**8:15 WFC 97. (IL)** Molybdenum(VI) and tungsten(VI) fluoride and oxide fluoride chemistry. **M. Gerken**, M. D. van Hoeve, C. Sommer, T. Adamitz, M. Doyle, S. D. Wetmore

**8:35 WFC 98. (CL)** Rare earth containing fluorides: Synthetic strategies. **H.-C. zur Loye**, L. W. Masachchi, N. Keerthisinghe

**8:55 WFC 99. (IL)** Syntheses and structures of mixed krypton-xenon species, MOF<sub>4</sub> (M = Mo, W) coordination complexes of KrF<sub>2</sub> and XeF<sub>4</sub>, and Group 6 oxyfluoro-anion salts of [XeF<sub>5</sub>]<sup>+</sup> and [Xe<sub>2</sub>F<sub>11</sub>]<sup>+</sup>. **M. R. Bortolus**, H. Mercier, G. J. Schrobilgen

**9:15 WFC 100. (IL)** New perspectives on arylxenonium(II) salts: From Lewis acids to oxidizers in organometallic chemistry. **A. Pérez-Bitrián**, P. Cortes Solans

**9:35 WFC 101. (CL)** Pentafluoroethylphosphoranides – Structure, reactivity and ligand properties. **M. Keßler**, L. Hartmann, G.-V. Roesenthaler, B. Hoge

**9:55** Intermission.

### **Fluorine Chemistry Session X**

Hyatt Regency Clearwater, Aqualea Grand Ballroom

**Co-sponsored by FLUO**

**Financially supported by Honeywell**

*T. Mathew, J. T. Welch, Organizers*

*T. Braun, Presiding*

**10:10 AM – 12:10 PM**

**10:10 WFC 102. (IL)** Syntheses of a stable complex of endothermic OClF, F<sub>5</sub>Ir---OClF; and the mixed-valence iridium (+5,+6) salt, [ClO<sub>2</sub>]<sub>2</sub>[cyclo-{{(μ-O)IrF<sub>4</sub>}}<sub>3</sub>]. M. R. Bortolus, J. T. Goettel, H. Mercier, D. A. Dixon, **G. J. Schrobilgen**

**10:30 WFC 103. (IL)** Diborane(6) dianions, and boryl dianions, and anionic N-heterocyclic carbenes. **M. Finze**

**10:50 WFC 104. (IL)** Imidazolium and pyrrolium-derived fluorides and polyhydrogen fluorides. **G. Tavcar**, E. Gruden, G. G. Prinčič, J. Hočevar, J. Iskra, J. Kvicala

**11:10 WFC 105. (CL)** Chlorodefluorination induced by gallium-based Lewis acids. K. Tölke, **B. Hoge**

**11:30 WFC 106. (IL)** NSF Engineering Research Center EARTH (Environmentally Applied Refrigerant Technology Hub). **M. Shiflett**

**11:50 WFC 107. (CL)** Tailoring the gating effect of fluorinated organic cage via a fluorinated porous liquid approach. **Z. Yang**

**12:10** Lunch

## **THURSDAY AFTERNOON**

### **Fluorine Chemistry Session XI**

Hyatt Regency Clearwater, Aqualea Grand Ballroom

**Co-sponsored by FLUO**

**Financially Supported by Exfluo**

*T. Mathew, J. T. Wech, Organizers*

*J. S. Thrasher, Presiding*

**1:30 PM – 3:20 PM**

# Technical Program

---

**1:30 WFC 108. (PL)** Interactions and behavior of per- and polyfluoroalkyl substances (PFAS) through a computational lens. **A. K. Wilson**

**2:00 WFC 109. (IL)** Computational actinide fluorine chemistry and redox halogen chemistry. **D.A. Dixon**

**2:20 WFC 110. (IL)** Organofluorine molecules for chemical biology studies. **F. Wang**

**2:40 WFC 111. (IL)** Exploiting electrostatic effects in decatungstate-catalyzed C-H <sup>18</sup>F- and <sup>19</sup>F-fluorination. **R. A. Britton**

**3:00 WFC 112. (CL)** A quantum chemical topology perspective on teflate – Fluoride analogy. **J. Munarriz**, D. Barrena-Espés, S. Riedel, A. Pérez-Bitrián

**3:20** Intermission

## Fluorine Chemistry Session XII

Hyatt Regency Clearwater, Aqualea Grand Ballroom

**Co-sponsored by FLUO**

**Financially supported by Arkema**

*T. Mathew, J. T. Welch, Organizers*

*S. Cook, Presiding*

**3:35 PM – 6:00 PM**

**3:35 WFC 113. (IL)** 60 years of chasing fluorine. **D. T. Meshri**

**4:00 WFC 114. (IL)** Advancements in using perfluoropyridine: Versatile applications in sustainable polymer development. **C. M. Friesen**, M. Aldom, J. Pulfer

**4:20 WFC 115. (IL)** Synthesis and stability studies of β-amino- and β-hydroxy difluoromethyl ketones. **D. A. Colby**

**4:40 WFC 116. (IL)** Late stage fluorination approaches for enabling drug discovery. **S. Tyagarajan**

**5:00 WFC 117. (IL)** Construction of tertiary fluorides using enantioselective catalysis. **T. N. Snaddon**

**5:20 WFC 118. (CL)** Libraries of fluorinated fragments for <sup>19</sup>F NMR screening of protein and RNA targets. **M. Clausen**

**5:40 WFC 119. (CL)** Carbon-fluorine cleavage by *N*-heterocycle carbene complexes. **G. C. Saunders**, S. K. Bandaru, H. Thomas, A. C. Marr, P. J. Morgan, P. Licence

## THURSDAY EVENING

Hyatt Regency Clearwater, Aqualea Grand Ballroom

**Banquet Reception**

**7:00 PM – 7:30 PM**

**Banquet Dinner and Presentation of Awards**

**7:30 PM – 9:00 PM**

**9:00 WFC AL. ACS National Award for Creative Work in Fluorine Chemistry 2025**

**Award Address:** Fluorine and First-Row Metals. **D. A. Vici**

## JANUARY 10, 2025

### FRIDAY MORNING

**Fluorine Chemistry Session XIII**

Hyatt Regency Clearwater, Aqualea Grand Ballroom

**Co-sponsored by FLUO**

**Financially Supported by Exfluor**

*T. Mathew, J. T. Welch, Organizers*

*T. Dudding, Presiding*

**7:45 AM – 9:45 AM**

**7:45 WFC 120. (IL)** Strain-Release Pentafluorosulfanylation: Strange Molecules Doing Stranger Things. **C. R. Pitts**

**8:05 WFC 121. (IL)** Group 14 Derivatives-Catalyzed Photomediated Synthesis of PVDF and its Block Copolymers. **A. Asandei**

# Technical Program

---

**8:25 WFC 122. (CL)** Strategies for incorporating fluorinated moieties into polymers: synthesis and thermal characterization of semi-fluorinated 6F and 12F polymers. **G. Munoz**, M. E. Solovyev, K. M. Chamberlain, C. U. Pittman, D. W. Smith

**8:45 WFC 123. (CL)** Poly- and Perfluoroalkyl Substances (PFAS): Any alternative(s)? **B. M. Ameduri**

**9:05 WFC 124. (CL)** Fluoropolymer Nafion Enhances Neurochemical Detection with Carbon Electrodes and Fast Scan Cyclic Voltammetry. **A. Zestos**, W. Cho

**9:25 WFC 125. (CL)** One-step HF-free synthesis of alkali metal fluorides from fluorspar. **T. Schlatzer**, C. Gault, M. A. Hayward, V. Gouverneur

**9:45** Intermission

## Fluorine Chemistry Session XIV

Hyatt Regency Clearwater, Aqualea Grand Ballroom

**Co-sponsored by FLUO**

**Financially supported by Honeywell**

*T. Mathew, J. T. Welch, Organizers*

*A. Tlili, Presiding*

**10:00 AM – 11:45 AM**

**10:00 WFC 126.** Chemistry of MoF<sub>5</sub> and MoOF<sub>3</sub>. **M. D. van Hoeve**, J. Challenger, J. Bykowski, S. D. Wetmore, M. Gerken

**10:20: WFC 127. (CL)** Heterocyclic silicon-fluoride acceptors (HetSiFA) for the development of <sup>18</sup>F/<sup>177</sup>Lu-labeled theranostic radiotwins targeting gastrin-releasing peptide receptor (GRPR). **T. A. Singleton**, P. Deore, C. Kiran, B. J. Atienza, M. El-Zaria, A. Genady, S. Edelmann, D. Burley, L. R. Silva, Y. Marfatia, A. Eltantawy, P. DeRoy, A. Larivée, S. Sadeghi, J.-P. Lumb, C. M. Waldmann, A. Kostikov

**10:40 WFC 128. (CL)** Formation of coordinatively saturated cations by oxidation with RuF<sub>6</sub>. **B. Koch**, F. Kraus

**11:00 WFC 129. (CL)** Versatile reactivity of Perfluoro(methyl vinyl ether) at a Rh(I) hydrido complex. **S. Mollasalehi**

**11:15 WFC 130. (CL).** Pentafluoroethyl stabilized  $\alpha$ -Silyl-Carbanions. **J. Landwehrmann**, B. Hoge

**11:30 WFC 131. (CL)** Synthesis of SCF<sub>2</sub>-glycosides from exocyclic glycosyl difluoroenol ethers using radical couplings in innovative drug discovery. **A. Begum**, D. A. Colby

**11:45** Closing Remarks.