

Nagoya Fluorine Days 2026

17–22 May, 2026



Nagoya Institute of Technology



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Contents

Time Table.....2

Program4

Poster Presentation11

Foundation list.....17

Advertisement.....18

Time Table

Presentation time

Plenary Lecture (PL) : 50 min

Invited Lecture (IL) : 25 min

Contributed Oral (O) : 15 min

	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
	May 17	May 18	May 19	May 20	May 21	May 22
8:00–9:00		Registration	Registration	Registration	Registration	Registration
9:00–9:25		IL-01 (online) Q. Shen	PL-04 F.-L. Qing	PL-06 T. Ritter	IL-25 K. Ishihara	O-15–19 A. Yamaguchi A. Matsunami A. Tarui M. Akiyama K. Fuchibe
9:25–9:50		IL-02 (online) J. Zhou			IL-26 T. Billard	
9:50–10:15		IL-03 (online) I. Ojima	IL-10 Y. Maekawa	IL-20 P. Beier	IL-27 E. Magnier	
10:15–10:45	10:00–Registration	Break	Break	Break	Break	Break
10:45–11:10		IL-04 T. Akiyama	IL-11 (online) X. Zhang	IL-21 V. Petrov	IL-28 (online) T. Lectka	O-20–23 H. Hori M. Nambo S. Kawamura T. Kawamoto
11:10–11:35		IL-05 J. Hu.	IL-12 W. Liu	IL-22 M. Donnard	IL-29 G. B. Hammond	
11:35–12:00		IL-06 Y. Kobayashi	IL-13 A. Takahara	IL-23 M. Finze	IL-30 G. C. Tsui	
12:00–12:25		IL-07 T. Braun	IL-14 D. A. Vicić	IL-24 T. Umemoto	12:00–12:30 O-01–02 D. Rombach T. Niwa	12:00–12:10 Closing
12:30–14:00		Photo, Lunch	Lunch	Lunch	Lunch	
14:00–14:25		IL-08 B. Ameduri.	IL-15 V. Bizet		14:00–15:15 O-03–07 P. Zaikin H. Sun D. Giguère D. Kawaguchi Y. Wang (online)	
14:25–14:50		PL-02 V. Gouverneur	IL-16 J.-F. Paquin			
14:50–15:15	15:00–16:00 Opening		IL-17 J. T. Welch			
15:15–15:45	Concert	Break	Break		Break	
15:45–16:10			IL-18 J.-M. Vincent			
16:10–16:35	16:00–16:50 PL-01 F. D. Toste	IL-09 (online) G.-V. Röschenthaler	IL-19 M. P. Krafft		15:45–17:30 O-08–14 E. Anselmi N. D. Chernovskii O. T. Dyan T. Osawa B. Pégot M. Jasiński F. Diness	
16:35–17:25		PL-03 (online) R. Gilmour	PL-05 (online) P. Mykhailiuk			
18:00	18:00–20:00 Welcome reception	17:30–19:00 Poster Session	17:30–19:00 Poster Session	17:30–20:30 Conference Dinner With Concert		

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- Tomoko YAJIMA (Ochanomizu University)
- Susumu YONEZAWA (University of Fukui)

Program

Sunday, 17 May 2026

- 10:00 Registration
15:00 Opening Ceremony and Concert
Chair: Dominique Cahard
16:00 PL-01 *Daikin Industries Lecture*
Catalytic Methods for Carbon-Fluorine Bond Construction
F. Dean Toste
University of California, Berkeley, USA
18:00 Welcome reception at Koyoen (Craft beer brand)

Monday, 18 May 2026

- Chair: Thomas Braun*
09:00 IL-01 Oxidative Addition of Aryl Iodide to Cu(I)
Qilong Shen (online)
State Key Laboratory of Fluorine and Nitrogen Chemistry and Advanced Materials,
Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences, China
09:25 IL-02 Asymmetric Propargylic Amination to α -CF₂H α -Tertiary Ethynylamines
Jian Zhou, Jing-Sheng Yu (online)
Shanghai Engineering Research Center of Molecular Therapeutics and New Drug
Development, School of Chemistry and Molecular Engineering, East China Normal
University, China
09:50 IL-03 Strategic Incorporation of Fluorine into Bioactive Compounds: A Progress Report
Iwao Ojima (online)
Institute of Chemical Biology and Drug Discovery, Stony Brook University–State
University of New York, USA
10:15 Break
Chair: Morgan Donnard
10:45 IL-04 Carbon-Fluorine Bond Functionalization
Takahiko Akiyama
Department of Chemistry, Gakushuin University, Japan
11:10 IL-05 Metal-to-Ligand Charge Transfer (MLCT): A Serendipitous Discovery in Fluorine
Chemistry
Jinbo Hu, Zhiqiang Wei, Xiang Li, Lin Xiao, Yu He
State Key Laboratory of Fluorine and Nitrogen Chemistry and Advanced Materials,
Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences, China
11:35 IL-06 Photocatalytic Defluorination of Persistent Perfluoroalkyl Substances and
Fluoropolymers by Visible and UVA Light
Yoichi Kobayashi
Department of Applied Chemistry, Ritumeikan University, Japan
12:00 IL-07 Hydrofluorination of Alkynes at Pt Complexes: Model Reactions and Catalysis
Thomas Braun, Ouchan He, Stefan Sander
Humboldt-Universität zu Berlin, Institut für Chemie, Germany

12:25	Photo, Lunch	
	<i>Chair: Jinbo Hu</i>	CREST Session - 01
14:00	IL-08 Fluoropolymers as Unique and Irreplaceable Materials Bruno Ameduri Institute Charles Gerhardt, University of Montpellier, France	
14:25	PL-02 <i>AGC Lecture</i> Fluorochemicals: The Future We Want Véronique Gouverneur Department of Chemistry, University of Oxford, UK	
15:15	Break	
	<i>Chair: Bruno Ameduri.</i>	
16:10	IL-09 (β -Diazo- α,α -difluoroethyl) phosphonates: Promising Multifaceted Reactants Gerd-Volker Rösenthaller , Jianlin Han, Romana Pajkert, Haibo Mei, Ita Hajdin (online) School of Science, Constructor University Bremen gGmbH, Germany	
16:35	PL-03 <i>Chemours-Mitsui Fluoroproducts Lecture</i> Expanding Organofluorine Chemical Space by I(I)/I(III) Catalysis Ryan Gilmour (online) Institute for Organic Chemistry, University of Münster, Germany	
17:30	Poster Session-01 <i>Sponsored by STELLA CHEMIFA CORPORATION</i>	

Tuesday, 19 May 2026

	<i>Chair: Jean-François Paquin</i>	CREST Session – 02
09:00	PL-04 <i>BCSJ ChemLett Lecture</i> Synthesis and Reaction of Pentafluorosulfanyl-Containing Reagents Feng-Ling Qing Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences, China	
09:50	IL-10 Efficient Decomposition of PTFE via Combined Radiation and Catalytic Thermal Processes Yasunari Maekawa , Hirofumi Aritani, Akira Idesaki, Hao Yu Institute of Advanced Science, Saitama Institute of Technology, Japan	
10:15	Break	
	<i>Chair: John T. Welch</i>	CREST Session – 03
10:45	IL-11 Metal Difluorocarbene-Involved Catalytic Coupling Xingang Zhang (online) Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences, China	
11:10	IL-12 Metal-Catalyzed Fluoroalkylation Wei Liu Department of Chemistry, Virginia Tech, USA	
11:35	IL-13 Molecular Aggregation States and Functional Properties of Fluoropolymers Atsushi Takahara , Sinan Feng Research Center for Negative Emission Technologies, Kyushu University, Japan	
12:00	IL-14 Catalytic Functionalization of the High-GWP Refrigerant R-143a David A. Vicie , Luc A. Mauro, Anthony T. Paulo, Josie B. Rojo, Elizabeth R. Young Department of Chemistry, Lehigh University, USA	

12:25	<i>Lunch</i>	
	<i>Chair: David Vicic</i>	CREST Session - 04
14:00	IL-15	Strategies for the Synthesis of Pentafluorosulfanyl-Containing Compounds Vincent Bizet University of Upper-Alsace, University of Strasbourg, CNRS, France
14:25	IL-16	New Synthetic Opportunities with the Pentafluorosulfanyl Group Jean-François Paquin CCVC, PROTEO, Département de chimie, Université Laval, Canada
14:50	IL-17	New Reactions Of Tetrafluoro(trifluoromethyl)- λ^6 -sulfanyl (CF ₃ SF ₄)-Containing Molecules John T. Welch , Long Ma, Sakshi Sha, Eleanor van der Riet, Willow Desoucey Chemistry Department, University at Albany, USA
15:15	<i>Break</i>	
	<i>Chair: Vincent Bizet</i>	CREST Session - 05
15:45	IL-18	Light-Promoted Self-Assembly of Elusive Radicals in Perfluorocarbons Jean-Marc Vincent Institut des Sciences Moléculaires, CNRS UMR 5255, Université de Bordeaux, France
16:10	IL-19	Perfluorocarbons@Interfaces: Chemically Inert Components Can Provide Functional Colloids for Medicine and Energy Marie Pierre Krafft Institut Charles Sadron (CNRS). University of Strasbourg, France
16:35	PL-05	<i>Elsevier Lecture</i> Fluorinates Pyridines and Piperidines for Medicinal Chemistry Pavel Mykhailiuk (online) Enamine Ltd, Ukraine
17:30	Poster Session-02	<i>Sponsored by STELLA CHEMIFA CORPORATION</i>

Wednesday, 20 May 2026

Chair: Santos Fustero

- 09:00 PL-06 *Kanto Denka Kogyo Lecture*
Late-Stage Functionalizations
Tobias Ritter
Max-Planck-Institut für Kohlenforschung, Germany
- 09:50 IL-20 Fluoroalkylation with Copper(III) Complexes
Petr Beier, Petr Pospíšil, Vladimir Motornov, Ondřej Michal
Institute of Organic Chemistry and Biochemistry, Academy of Sciences, Czechia
- 10:15 Break
- Chair: Petr Beier*
- 10:45 IL-21 Synthesis and Chemistry of Polyfluorinated Imidazolyl Thiones
Viacheslav Petrov, Christopher Junk, Luc Mauro
Fluorinova LLC, USA
- 11:10 IL-22 Harnessing Sulfuryl Fluoride Reactivity for Selective, Traceless, and Versatile Molecular Activation
Morgan Donnard, Frédéric Leroux, Armen Panossian, David Bernier, Sergii Pazenok
LIMA (UMR7042), CNRS, Université de Strasbourg, France
- 11:35 IL-23 The Bis(trifluoromethyl)amino Group – Synthetic Access and Properties
Maik Finze
Institute of Inorganic Chemistry, Institute for Sustainable Chemistry & Catalysis with Boron (ICB), University of Würzburg, Germany
- 12:00 IL-24 S-(Difluoromethyl) Trifluoromethanesulfonylthioate (DTST) and Its Analog: Synthesis and Difluoromethylthiolating Capability
Teruo Umemoto, Md Nirshad Alam, Satyajit Majumder, William R. Dolbier, Jr.
Department of Chemistry, University of Florida, USA
- 12:25 *Lunch*
- 14:00 Sightseeing in Tokugawaen (Japanese garden)
- 17:30 Conference Dinner at Gardem Restaurant Tokugawaen With Concert

Thursday, 21 May 2026

Chair: Gerald B. Hammond

- 09:00 IL-25 Iodine(I/III) or Iron(II/III)-Catalyzed Asymmetric Fluorination and Perfluoroalkylation
Kazuaki Ishihara
Graduate School of Engineering, Nagoya University, Japan
- 09:25 IL-26 A Guide to Linking Fluorinated Groups with Various Heteroatoms
Thierry Billard
Institute of Chemistry and Biochemistry, CNRS-University of Lyon, France
- 09:50 IL-27 Fluorinated Sulfoximines: Preparation and Reactivities
Emmanuel Magnier, Elsa Anselmi, Bruce Pégot, Guillaume Dagousset
Université Paris-Saclay, BioCIS - UMR CNRS 8076, France
Université Paris-Saclay, ILV - UMR CNRS 8180, France
- 10:15 Break

Chair: Kazuaki Ishihara

- 10:45 IL-28 Metal-Ion Induced Fragment Deactivation: From Site-Selective Fluorination to Cascade Reactions

Thomas Lectka

Department of Chemistry, Johns Hopkins University, USA

- 11:10 IL-29 Multifaceted Fluorinating Kits

Gerald B. Hammond, Yuhao Yang

Department of Chemistry, University of Louisville, USA

- 11:35 IL-30 A Perfluoroalkylation-Defluorination Strategy for Accessing Emerging Fluorinated Motifs

Gavin Chit Tsui

Department of Chemistry, The Chinese University of Hong Kong, China

- 12:00 O-01 Silylated Chloroalkenyl Sulfur Pentafluorides Pave the Way to α -SF₅ Cross-coupling Chemistry and Further Transformations

David Rombach, Lujie Xu

Department of Chemistry, University of Zurich, Switzerland

- 12:15 O-02 Carbon–Fluorine Bond Cleavage of Fluoroarenes for Organic Synthesis

Takashi Niwa

Graduate School of Pharmaceutical Sciences, Kyushu University, Japan

12:30 *Lunch*

Chair: Jean-Marc Vincent

- 14:00 O-03 How “wet” Is a Solvent-free Organic Synthesis? A Case Study of Electrophilic Fluorination

Pavel Zaikin

N.N. Vorozhtsov Novosibirsk Institute of Organic Chemistry, Siberian Branch of Russian Academy of Sciences, Russia

- 14:15 O-04 Nucleophilic Fluorination with Fluoride Salts and Electron-deficient Fluoroaromatics: Tuning the Nucleophilicity and Basicity

Haoran Sun

Department of Chemistry & Center for Fluorinated Functional Materials, University of South Dakota, USA

- 14:30 O-05 Synthesis of Multivincinal Fluorinated and Inter-Halide Stereocenters

Denis Giguère

Département de chimie, Université Laval, Canada

- 14:45 O-06 Physical Properties of Thin Films for Cycloolefin Polymers Bearing Cyclic Fluoroalkyl Side Groups

Daisuke Kawaguchi, Makoto Uno, Masafumi Sugiyama, Satoru Hommura, Takashi Okazoe

Department of Chemistry and Biotechnology, The University of Tokyo, Japan

- 15:00 O-07 Bench-stable Azidodifluoromethyl Imidazolium Reagents for Carbonimidic Difluoride Chemistry

Zhen Wang, Yi Pan Weigang Zhang, Yi Pan, **Yi Wang (online)**

School of Chemistry, Nanjing University, China

15:15 *Break*

Chair: Gavin Chit Tsui

- 15:45 O-08 Fluorinated and Deuterated (Cyclic) Sulfoximine Scaffold: Preparation and Physico-chemical Properties

- Elsa Anselmi**, Gabriel Goujon, Bruce. Pégot, Emmanuel Magnier
 Université Paris-Saclay, BioCIS - UMR CNRS 8076, France
 Université de Tours, Faculté des Sciences et Techniques, France
- 16:00 O-09 Mechanistic Study of Photochemical Substrate-initiated Benzylic and Aldehyde C-H Fluorination
Nikita D. Chernovskii, Ok Ton Dyan, Pavel A. Zaikin
 Novosibirsk Institute of Organic Chemistry SB RAS, Russia
 2Department of Natural Sciences, Novosibirsk State University, Russia
- 16:15 O-10 C-nucleophile Addition to 1,1-Difluoronaphthalene-2(1*H*)-ones
Ok Ton Dyan, Nikita O. Postnov, Maxim Sukhov, Aleksandr V. Britvin, Pavel A. Zaikin
 Engineering Center, N.N. Vorozhtsov Novosibirsk Institute of Organic Chemistry SB RAS, Novosibirsk, Russia
- 16:30 O-11 Oxidative Fluorination of β -Ketoamides using Guanidinium Hypoiodite Catalysts
Toma Osawa, Hayate Ishizuka, Kazuo Nagasawa, Dominique Cahard
 CNRS-UMR 6064 CARMeN, Normandy University, France
 Graduate School of Engineering, Tokyo University of Agriculture and Technology, Japan
- 16:45 O-12 General Preparation of Fluorinated Se(IV) and Se(VI)
Bruce Pégot, Arnaud De Zordo-Banliat, Guillaume Dagousset, Emmanuel Magnier
 Institut Lavoisier Versailles, Université de Versailles-Saint-Quentin-en-Yvelines, UMR 8180, France
- 17:00 O-13 Assembly of Fluorinated Pyrazoles from Nitrilimines
Marcin Jasiński
 University of Lodz, Faculty of Chemistry, Department of Organic and Applied Chemistry, Poland
- 17:15 O-14 Nucleophilic Aromatic Substitution (S_NAr) Reactions of Fluorobenzenes - Click Chemistry For Molecular Architecture
Frederik Diness, Morten P. Meldal, Sergey Nikitin, Feng Wang
 Department of Chemistry, University of Copenhagen, Denmark
 Faculty of Natural Science and Environment, Roskilde University, Denmark

Friday, 22 May 2026

Chair: Daisuke Kawaguchi

- 09:00 O-15 Metal-Free Visible-Light-Induced Perfluoroalkylation of Amines for the Synthesis of Perfluoroalkylated Amides
Airi Yamaguchi, Tomoko Yajima
Department of Chemistry, Ochanomizu University, Japan
- 09:15 O-16 Silica-Assisted Dehydrofluorination: Upcycling High-GWP Refrigerants into Low-GWP Alternatives
Asuka Matsunami, Shoji Furuta, Takashi Okazoe
AGC Inc., Japan
- 09:30 O-17 γ , γ' , γ'' -Trifluoroneopentyl-Substituted Diphenylacetylenes and Related Alkynes via Sonogashira Coupling Reaction
Atsushi Tarui, Shota Miyake, Yukiko Karuo, Kazuyuki Sato, Kentaro Kawai, Shigeyuki Yamada, David O'Hagan, Masaaki Omote
Faculty of Pharmaceutical Sciences, Setsunan University, Japan
- 09:45 O-18 Recent Advances in Perfluorocubane Chemistry: Photoinduced Electron Transfer and Unusual Carbon–Halogen Bonds
Midori Akiyama
RIKEN CEMS, Japan
- 10:00 O-19 Syntheses of Pinpoint-Fluorinated Oxacyclic Compounds via Gold-Catalyzed α -Selective Cycloaddition of 1,1-Difluoroallenes
Kohei Fuchibe, Toru Matsui, Junji Ichikawa
Department of Applied Chemistry, Faculty of Science and Engineering, Toyo University, Japan
- 10:15 Break
Chair: Kohei Fuchibe
- 10:45 O-20 Subcritical Water–Enabled Efficient Mineralization of Neutral PFAS: Fluorinated Silane Coupling Agents
Hisao Hori, Hiroto Hanashima, Hisashi Saito
Faculty of Science, Kanagawa University, Japan
- 11:00 O-21 α -Fluorinated Bis(phenylsulfonyl)methane as a Versatile Platform for Sequential Radical Functionalizations via Photoredox Catalysis
Masakazu Nambo, Minoru Ikuji, Ryoga Uematsu, Yasuyo Tahara-Tezuka, Cathleen M. Crudden
Institute of Transformative Bio-Molecules (WPI-ITbM), Nagoya University, Japan
Department of Chemistry, Graduate School of Science, Nagoya University, Japan
- 11:15 O-22 Fluoroalkylation of Alkenes with Fluorinated Carboxylic Anhydride
Shintaro Kawamura, Mikiko Sodeoka
RIKEN Center for Sustainable Resource Science, Japan
- 11:30 O-23 Synthesis of Perfluoroazetidines via Energy Transfer
Takuji Kawamoto, Kenshin Muramatsu, Sakura Watanabe
Department of Applied Chemistry, Yamaguchi University, Japan
- 11:45 Closing Ceremony

Poster Presentation

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Monday, 18 May 2026

- P1-01 Upcycling of PTFE to Fluorochemicals through Reductive Potassium-mediated Mechanochemical Process
Zhengyu Zhao, Masashi Hattori, Tatsuki Kiyono, Norio Shibata
Department of Life Science and Applied Chemistry, Nagoya Institute of Technology, Japan
- P1-02 Photocatalytic Decomposition of Perfluorooctanesulfonic Acid by ZnSe Nanocrystals
Hikari Kitamura, Yuto Toyota, Yuki Nagai, Yoichi Kobayashi
Department of Applied Chemistry, Ritsumeikan University, Japan
- P1-03 Subcritical Water-Driven Efficient Mineralization of Poly(tetrafluoroethylene-*co*-hexafluoropropylene) Copolymer (FEP)
Hisashi Saito, Hisao Hori, Abdelatif Manseri, Bruno Ameduri
Faculty of Science, Kanagawa University, Japan
- P1-04 Upcycling of PVDF to Organofluorine Compounds through Mechanochemical Process
Masashi Hattori, Debarshi Saha, Muhamad Zulfaqar Bacho, Norio Shibata
Department of Nanopharmaceutical Sciences, Nagoya Institute of Technology, Japan
- P1-05 Photoredox-catalyzed Defluoro- α -aminoalkylation of Trifluoromethylarenes with Pentamethylpiperidine
Masayuki Abe, Yoshihiro Nishimoto, Makoto Yasuda
Department of Applied Chemistry, Graduate School of Engineering, The University of Osaka, Japan
- P1-06 Visible-Light Defluorination of Perfluoroalkyl Substances by CdS/ZnS Core/Shell Nanocrystals with Suppressed Cadmium Leaching while Retaining Photocatalytic Activity
Kohki Tanaka, Yuki Nagai, Yoichi Kobayashi
Department of Applied Chemistry, Ritsumeikan University, Japan
- P1-07 High-efficiency Decomposition of Polytetrafluoroethylene by Electron Beam
Akira Idesaki, Yasunari Maekawa
Takasaki Institute for Advanced Quantum Science, National Institutes for Quantum Science and Technology (QST), Japan
- P1-08 Development of D-A Type Fluorescent Molecules with Perfluoroaromatic Compounds as Acceptors
Natsumi Honjo, Risa Harada, Akito Tamura, Haruka Homma, Toshiki Tajima
Graduate School of Engineering and Science, Shibaura Institute of Technology, Japan
- P1-09 Development of Photo-promoted Oxytrifluoromethylation of α,β -Unsaturated Carbonyl Compounds Utilizing Properties of Iron Salts
Joji Takeuchi, Shogo Makino, Shuhei Ohmura, Kazuaki Ishihara
Graduate School of Engineering, Nagoya University, Japan
- P1-10 Application of Catalytic Aromatic Trifluoromethylation to the Synthesis of Bioactive Compounds
Yuka Mizutani, Tsuyuka Sugiishi, Hideki Amii
Graduate School of Science and Technology, Gunma University, Japan
- P1-11 Synthesis, Properties, and Reactivities of Polyfluorinated *N*-Heterocyclic Carbenes
Masato Ohashi, Zhuoqin Yang, Kenichi Michigami, Sensuke Ogoshi
Department of Chemistry, Graduate School of Science, Osaka Metropolitan University, Japan
Department of Applied Chemistry, Faculty of Engineering, The University of Osaka, Japan

- P1-12 Hydrazone-Directed *para*-Selective C–H Perfluoroalkylation of Arenes
Motohiro Yasui, Aika Ominami, Shigeyuki Yamada, Tsutomu Konno
 Faculty of Molecular Chemistry and Engineering, Kyoto Institute of Technology, Japan
- P1-13 Regiodivergent Synthesis of *gem*-Difluoroalkenes Enabled by EDA Complex-Mediated C–F Bond Photoreduction
Sakurako Katsumi, Fua Akutsu, Tatsuhiro Uchikura, Takahiko Akiyama
 Department of Chemistry, Gakushuin University, Japan
- P1-14 Trifluoromethylation of Poly(3-hexylthiophene) via Electrochemical Radical Reaction
Yuki Mihara, Kohei Taniguchi, Kosuke Sato, Shinsuke Inagi
 Department of Chemical Science and Engineering, School of Materials and Chemical Technology, Institute of Science Tokyo, Japan
- P1-15 Photodriver Sulfonylation of Trifluoromethyl Diazo Compounds via Electron Donor–Acceptor Complex Activation
Jorge Escorihuela, Haibo Mei, Jianlin Han
 Department of Organic Chemistry, Faculty of Pharmacy and Food Sciences, Universitat de València, Spain
- P1-16 Synthesis and Optical Properties of Trifluoromethyl Isobenzofurans with Aryl Substituents
Khue M. Tran, Tsuyuka Sugiishi, Hideki Amii
 Graduate School of Science and Technology, Gunma University, Japan
- P1-17 Mechanistic Investigation of Cyclobutanol Ring Cleavage with Selectfluor®
Guilherme Cariello, Muyuan Wang, Mihir Sharma, Prabodh Rao, Hyeok-Kyu Kwon, Ananya Majumdar, Rodrigo A. Cormanich, Travis Dudding, Thomas Lectka
 Department of Chemistry, Johns Hopkins University, USA
 Institute of Chemistry, State University of Campinas, Brazil
- P1-18 Asymmetric Synthesis of 3'-Fluorinated Thalidomide Derivatives via Organocatalytic Enantioselective Fluorination as a Key Reaction
Hisanori Arakaki, Satoru Arimitsu
 Department of Chemistry, Biology, and Marine Science, University of the Ryukyus, Japan
- P1-19 Practical Synthesis of Fluorosilanes via Palladium-Catalyzed Fluorination of Hydrosilanes by Acyl Fluorides
Junichiro Kuwae, Shunsuke Tamba, Yuki Naganawa, Yohei Ogiwara
 Department of Chemistry and Biomolecular Science, Faculty of Engineering, Gifu University, Japan
- P1-20 Synthesis and Applications of Bisphenol- and Novolac-based Thermosetting Resins from Fluoral-HF
Kensuke Hirotaki, Hirokatsu Nagura, Kenji Hosoi
 Fundamental Chemical Research Center, Central Glass Co., Ltd., Japan
- P1-21 Asymmetric Synthesis of Chiral Fluoroallenes via Organocatalytic Halogenation of Aldehydes
Ibuki Shimada, Kazutaka Shibatomi
 Department of Applied Chemistry and Life Science, Toyohashi University of Technology, Japan
- P1-22 Synthesis of *gem*-Boryl(fluoro)cyclopropanes via a Boronic Ester-Accelerated Simmons–Smith Reaction
Yuma Oyama, Runa Nakamura, Satoshi Kurumada, Takashi Niwa
 Graduate School of Pharmaceutical Sciences, Kyushu University, Japan
- P1-23 Development of Asymmetric Fluorocyclization of Fluoroalkenes Using Anionic Phase-transfer Catalyst
Tomoya Mayumi, Chino Igarashi, Hiromichi Egami, Yoshitaka Hamashima
 Department of Pharmaceutical Sciences, School of Pharmaceutical Sciences, University of Shizuoka, Japan

- P1-24 A Copper-catalyzed Alkene Difunctionalization Using Acyl Fluorides and Silylboranes
Seishu Ochiai, Zhengyu Zhao, Jun Zhou, Sota Ikawa, Norio Shibata
 Department of Nanopharmaceutical Sciences, Nagoya Institute of Technology, Japan
- P1-25 Asymmetric Fluorinative Dearomatization of Phenols with Flexible Chiral Dicarboxylic Acid-derived Anion Phase Transfer Catalyst
Mio Shimogaki, Yuki Matsubayashi, Haruto Sugita, Kyosuke Fujiwara, Rikuto Momoi, Yoshihiro Miyake
 Department of Material Science, Graduate School of Science, University of Hyogo, Japan
- P1-26 Quantitative Formation of HF and Amine-3HF Complexes Using Cation Exchange Reaction between KF and Amberlyst 15DRY
Haruka Homma, Masahide Yamada, Toshiki Tajima
 Graduate School of Engineering and Science, Shibaura Institute of Technology, Japan
- P1-27 Development of a *gem*-Iodoalkene as a Synthetic Building Block for Monofluoroalkenes
Runa Nakamura, Takashi Niwa
 Graduate School of Pharmaceutical Sciences, Kyushu University, Japan
- P1-28 Facile Access to Chromone Scaffolds via Pd-Catalyzed C(acyl)-O Bond Activation and Defluorinative Cyclization of Enol 2-Fluoroarenoates
Kenichi Michigami, Yosuke Kanda, Yoshiki Otawa, Masato Ohashi
 Department of Chemistry, Graduate School of Science, Osaka Metropolitan University, Japan
- P1-29 Synthesis and Applications of Fluorinated *N*-Heterocycles via Aza-Electrocyclization
Kosaku Nakamura, Kazuma Kawauchi, Masato Morita, Motohiro Yasui, Shigeyuki Yamada, Tsutomu Konno
 Faculty of Molecular Chemistry and Engineering, Kyoto Institute of Technology, Japan
- P1-30 O-, S-, and N-Arylations of Fluorobenzene Derivatives via S_NAr Reactions
Feng Wang, Bjørn D. Hansen, Frederik Diness
 Department of Science and Environment, Roskilde University, Denmark
- P1-31 *N*-Difluoroacetylation of Sulfoximines by TFEDMA
Hiroto Iwasaki, Norio Shibata
 Department of Nanopharmaceutical Sciences, Nagoya Institute of Technology, Japan

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- P2-01 SF₅ Promotes Benzene-Azepine Skeletal Rearrangement of Aryl Azides with Phenols
Takuya Muramatsu, Chavakula Nagababu, Muhamad Zulfaqr Bacho, Shiwei Wu, Seishu Ochiai, Norio Shibata
Department of Nanopharmaceutical Sciences, Nagoya Institute of Technology, Japan
- P2-02 Synthesis of SF₅-Azepines, Bicyclic and Benzimidazole Scaffolds via Skeletal Rearrangement of Nitroarenes
Muhamad Zulfaqr Bacho, Shiwei Wu, Takuya Muramatsu, Chavakula Nagababu, Daiki Harano, Seishu Ochiai, Norio Shibata
Department of Nanopharmaceutical Sciences, Nagoya Institute of Technology, Japan
- P2-03 Visible-Light-Driven Photocatalytic Utilization of Sulfur Hexafluoride (SF₆) as an Pentafluorosulfanyl (SF₅) Radical Source
Minami Tanaka, Tatsuhiro Uchikura, Takahiko Akiyama
Department of Chemistry, Gakushuin University, Japan
- P2-04 Organophotoredox-Catalyzed Alkylation of Vinylsulfur Pentafluoride: Expanding Access to SF₅-Containing Aliphatic Molecules
Laurianne Verret, Pascal Paquin, Martin Le Roy, Maxim Boucher, Éric Biron, Guillaume Bélanger-Chabot, Jean-François Morin, Jean-François Paquin
Département de chimie, Centre en chimie verte et catalyse (CCVC), PROTEO, Centre de recherches sur les matériaux avancés (CERMA), Université Laval, Canada
- P2-05 Expanding the Chemical Space of Pentafluorosulfanyl-containing Compounds
Lujie Xu, David Rombach
Department of Chemistry, University of Zurich, Switzerland
- P2-06 Diphenylmethanone *O*-(2-(Pentafluoro- λ^6 -sulfanyl)acetyl) Oxime as a Novel CH₂SF₅ Radical Transfer Agent
Marie-Rose Ouellet-Du Berger, Tania, Julien Cayouette, Jean-Philippe Bouillon, Philippe Jubault, Jean-François Paquin
CCVC, PROTEO, Département de chimie, Université Laval, Canada
Normandie University, INSA Rouen, UNIROUEN, CNRS, COBRA (UMR 6014), France
- P2-07 Photoredox Catalytic Hydropentafluorosulfanylation of Alkynes by Sulfur Hexafluoride
Max Flügge, Sven Klehenz, Silas Leidenheimer, David Rombach, Hans-Aachim Wagenknecht
Karlsruher Institut of Technology, Germany
- P2-08 CF₃SF₄CF₂-substituted Organic Compounds
Eleanor P. van der Riet, John T. Welch
Chemistry, University at Albany, USA
- P2-09 Cu-Catalyzed SF₄-alkynylation of Enones for the Synthesis of *trans*-SF₄ Alkynes
Shiwei Wu, Muhamad Zulfaqr Bacho, Yuji Sumii, Ankit Kumar, Norio Shibata
Department of Engineering, Nagoya Institute of Technology, Japan
- P2-10 The Influence of *N*-(2-(Tetrafluoro(trifluoromethyl)- λ^6 -sulfanyl)ethyl) (*N*-CF₃SF₄-ethyl) Groups on Amide Bond Conformation
Willow M. DeSoucey, Sakshi Sha, John T. Welch
Chemistry, University at Albany, USA
- P2-11 Practical Synthesis of 3-CF₃-indoles from HFO-1234ze via S_NV Reaction and Intramolecular Heck-type Coupling
Shota Mizuno, Aozora Saitoh, Yoichi Obitsu, Tatsuya Ueji, Runa Kasahara, Hongtao Min, Takeshi Fujita, Munenori Inoue, Junji Ichikawa
Department of Chemistry and Biomolecular Science, Faculty of Engineering, Gifu University, Japan

- P2-12 Highly Efficient and Robust Fluorescent Ionic Liquids in 10*H*-Pyrido[1,2-*a*]indolium and Bis(perfluoroalkylsulfonyl)imide
Shota Mizuno, Hikaru Tastumi, Yasuhiro Kubota, Toshiyasu Inuzuka, Shigeyuki Yamada, Kazuhiko Matsumoto, Kazumasa Funabiki
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- P2-13 withdrawal
- P2-14 Flow Perfluoroalkylation Using Hydrofluorocarbons
Yuji Sumii, Hiroto Iwasaki, Masashi Hattori, Norio Shibata
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 Department of Engineering, Nagoya Institute of Technology, Japan
- P2-15 Influence of N–H Functionality of Amide Hydrogen Bond Donors on Physicochemical Properties of Fluoride-Based Deep Eutectic Solvents
Hiroki Yamamoto, Mineyuki Hattori, Kenji Ito, Masahiro Shikano, Kazuki Yoshii
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- P2-16 Halogen-Bond-Assisted Construction of Highly Planar Benzothiazole Derivatives and Their Photophysical Characterization
Natsuki Tamano, Masato Morita, Hiroki Fukumoto, Shigeyuki Yamada
 School of Engineering, Ibaraki University, Japan
- P2-17 Synthesis of CF₂CF₂-Containing Benz[e]indene and Fluorescent Tetracyclic Isoquinoline Derivatives
Seinosuke Okumura, Motohiro Yasui, Mayuka Ukai, Masato Morita, Shigeyuki Yamada, Tsutomu Konno
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- P2-18 Highly Chemoselective Sulfonylation of Phenolic Hydroxyl Groups
Kogaku Kimura, Ren Tomita, Katsuhiro Akiyama, Tsubasa Hirata, Manabu Hatano
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- P2-19 Hydrogen-bond-controlled Solid-State Emission of Benzothiazole Derivatives for PFAS Sensing
Ibuki Oshima, Masato Morita, Hiroki Fukumoto, Shigeyuki Yamada
 School of Engineering, Ibaraki University, Japan
- P2-20 Ring-fluorinated Indolenine-based Pentamethine Cyanine Dyes: Synthesis, Reactivities, and Photochemical Properties
Haruna Komai, Shota Mizuno, Yasuhiro Kubota, Toshiyasu Inuzuka, Yohei Miwa, Kazumasa Funabiki
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- P2-21 Fluorinated Materials as a Platform for Drug Delivery: R&D Approaches toward Emerging Life Science Applications
Mihoko Noro, Yu Ota, Takashi Okazoe
 AGC Inc., Japan
- P2-22 Synthesis and Reactions of Aromatic Compounds with Deuterated Difluoromethyl Groups
Hana Fukawa, Tsuyuka Sugiishi, Hideki Amii
 Graduate School of Science and Technology, Gunma University, Japan
- P2-23 Bromodifluoroacetate as a Versatile Precursor for Difluoromethylene: Arylation of Difluoroacetate Derivatives Using Diaryliodonium Salts
Kotaro Kikushima, Toshifumi Dohi
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- P2-24 D- π -A-type Fluorinated Tolanes: Solid-State PL Color Tuning via Intramolecular Charge Transfer
Shigeyuki Yamada, Kazuki Kobayashi, Masato Morita, Motohiro Yasui, Tsutomu Konno
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- P2-25 One-Step Formal Dimerization of Hexafluoropropylene Oxide Using K_2CO_3 and H_2O as Oxygen Sources
Tatsuya Ueji, Yuhki Ohtsuka, Shogo Morisako, Munenori Inoue
 Sagami Chemical Research Institute, Japan
- P2-26 Cooling-Enhanced Thermal Isomerization of a Fluoroazobenzene Derivative through Temperature-Responsive Catalyst Switching
Mizuki Nagano, Yuki Nagai, Yoichi Kobayashi
 Department of Applied Chemistry, Ritumeikan University, Japan
- P2-27 Facile Synthesis of $R_4NF(HFIP)_3$ Complexes Using Ion Exchange Reaction between KF and R_4NBr
Misaki Aketo, Haruka Homma, Toshiki Tajima
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- P2-28 Unusual Electron-Transfer Properties of a D-A Linked System Incorporating Fluorinated Cubane
Keima Higashio, Midori Akiyama, H. Sotome, K. Kato, A. Yamakata, S. Yabu, H. Sato, M. Higashi, K. Komaguchi, W. Ryan Osterloh, Hiroshi Imahori
 Graduate School of Engineering, Kyoto University, Japan
- P2-29 Fabrication of Fluorinated Covalent Organic Framework Films by Indirect Electrolysis and Their Electrochromic Behaviors
Kento Imamura, Kosuke Sato, Shinsuke Inagi
 Department of Chemical Science and Engineering, School of Materials and Chemical Technology, Institute of Science Tokyo, Japan
- P2-30 Tuning Emission Bandwidth of Organic Fluorophores via Halogen-Bonded Cocrystals
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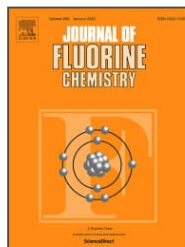
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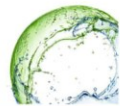
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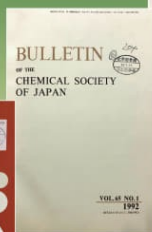
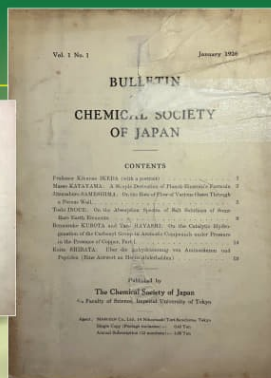
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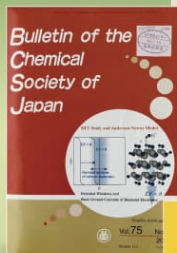
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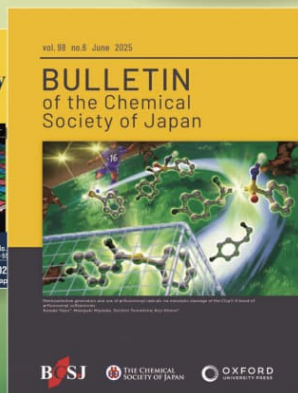
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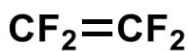
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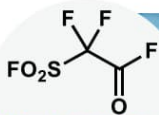
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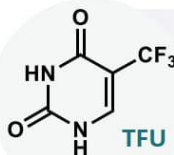
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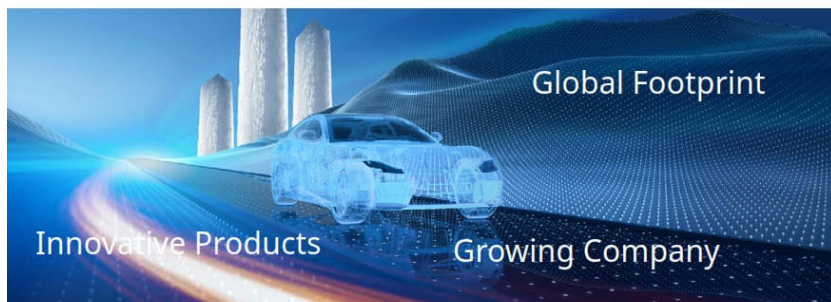
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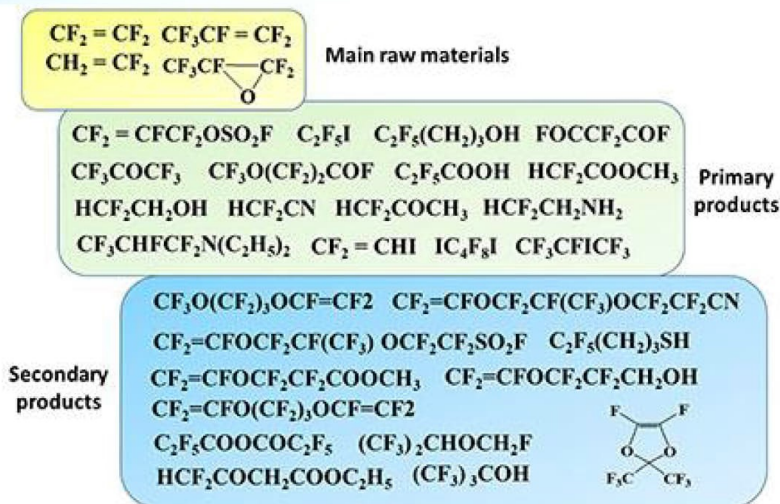
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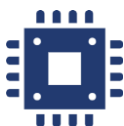
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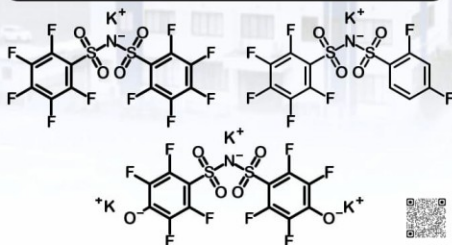
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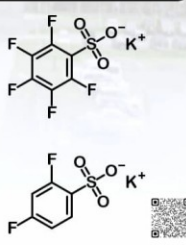
● PFAS-Free Structure

These compounds do not contain PFAS (per- and polyfluoroalkyl substances) structures such as $-\text{CF}_3$ or $-\text{CF}_2-$ units, yet exhibit PFAS-like properties.

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Sulfonate



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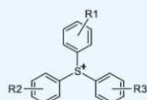
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Anion	UV curability	Acid diffusion Control	Solubility	Thermal yellowing resistance	Thermal weight loss resistance	Low corrosive to metals	Environmental compatibility	Remarks
Ga(C ₆ F ₅) ₄ ⁻	G	G	G	G	G	G	G	Proprietary Technology
PF ₆ ⁻	F	P	P	G	G	P	G	
SbF ₆ ⁻	G	P	P	G	G	P	Antimony	
PF ₃ (C ₂ F ₅) ₃ ⁻	G	F	E	P	P	F	PFAS*	Proprietary Technology
B(C ₆ F ₅) ₄ ⁻	G	G	G	P	P	G	G	

*E: Excellent, G: Good, F: Fair, P: Poor

*OECD definition

Applications of PAGs



3D printing (Cationic polymerization)



Coatings (Cationic polymerization)



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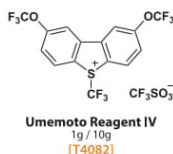
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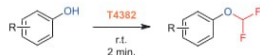


Reference: S. R. Mudhinge, G. B. Hammond, T. Umemoto, *J. Fluor. Chem.* **2022**, 261-262, 110015.
<https://doi.org/10.1016/j.jfluchem.2022.110015>

Difluoromethylating Reagent

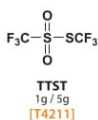


- Enables efficient introduction of difluoromethyl group into the hydroxy group of phenols
- Rapid reaction: completes within minutes at room temperature



References: 1) P. S. Fier, J. F. Hartwig, *Angew. Chem. Int. Ed.* **2013**, 52, 2092.
<https://doi.org/10.1002/anie.201209250>
2) G. Landwehr et al., *J. Fluor. Chem.* **2017**, 205, 155.
<https://doi.org/10.1016/j.jfluchem.2017.08.006>

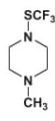
Trifluoromethylthiolating Reagents



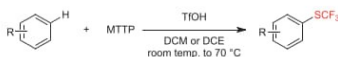
- TTST generates trifluoromethylthio cation species, anion species, and radical species depending on the reaction conditions.



Reference: T. Umemoto, G. B. Hammond, et al., *Angew. Chem. Int. Ed.* **2023**, 62, e202306095.
<https://doi.org/10.1002/anie.202306095>



- MTTP is high activity in the electrophilic trifluoromethylthiolation of electron-deficient aromatic rings.



Reference: S. Miraghaee, T. Umemoto, G. B. Hammond, *Org. Lett.* **2024**, 26, 6459.
<https://doi.org/10.1021/acs.orglett.4c02293>

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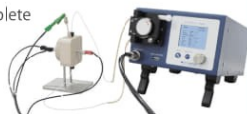
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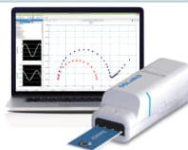
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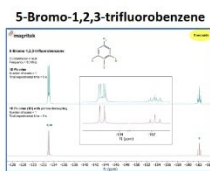
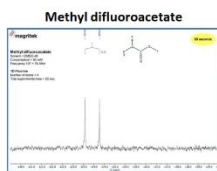
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