



ACS NEWS

The biannual newsletter for the American Chemical Society Division of Fluorine Chemistry

MESSAGE FROM THE CHAIR



OLGA
BOLTALINA

Warm greetings from sunny Colorado! As the 2022 FLUO Division Chair, I would like to start my message with words of gratitude and appreciation

to 2021 Chair Michael Gerken. In addition to his outstanding service to the fluorine chemistry community, Michael extended his generous help and valuable advice to me in the transition period. Thank you, Michael, from all of us!

Our Division started 2022 on a high note. Finally, after two years of cancelled conferences, we met in person in Clearwater, Florida in January. In spite of an unexpected new wave of COVID-19 at the end of 2021, the 25th Winter Fluorine Conference Organizing Committee decided to go ahead with a live conference. Slava Petrov and David Vicic faced an unimaginable number of logistical hurdles to jump over and hoops to jump through to make sure that the conference was organized in the safest possible way. And they marked the 50th year of biennial Winter Fluorine Conferences with an outstanding scientific program! Kudos to Executive Committee member Daniel Hercules and to Goethe University (Frankfurt) student Max Wacha, who flawlessly provided the virtual part of the conference, allowing speakers who could not attend in person to participate. In

addition, we thank the venerable, and always entertaining, Paul Reznick, who regaled us with a memorable presentation on the 50-year history of the WFC. To follow in Paul's footsteps, we appeal to all DFC members to help us write an online history of the Division by contributing any archival or anecdotal material you might have to Daniel Hercules (hercules.daniel@gmail.com).

We celebrated the outstanding achievements of several deserving colleagues at the 25th WFC: **Robert (Bob) Syvret**, Fluorine Chemistry and Technology, LLC, USA, for receiving the **2020 ACS Award for Creative Work in Fluorine Chemistry**, sponsored by the Division of Fluorine Chemistry; **Beate Koksch**, Freie Universität Berlin, Germany, for receiving the **2021 ACS Award for Creative Work in Fluorine Chemistry**, sponsored by Arkema; and Jinbo Hu, Shanghai Institute of Organic Chemistry, China, for receiving the 2022 ACS Award for Creative Work in Fluorine Chemistry, sponsored by Arkema. I want to take this opportunity to acknowledge Arkema for their generous sponsorship of this important ACS award. We also congratulated **Gary J. Schrobilgen**, McMaster University, Canada, for receiving the **2021 Division of Fluorine Chemistry Distinguished Service Award**. We are all indebted to Gary for his dedication and long-standing service to the DFC.

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VICE-CHAIR MEMBERSHIP REPORT

AS OF DECEMBER 31, 2021, THE DIVISION OF FLUORINE CHEMISTRY OF THE ACS HAD 455 MEMBERS. THE BREAKDOWN IS AS FOLLOWS:

| GROUP | COUNT | CHANGE TO % SEPT '21 |
|----------------------------|------------|-------------------------|
| Community Member | 1 | 0.22 (+1) |
| Regular Member | 316 | 69.45 (13) |
| Regular Student Member | 31 | 6.81 (-1) |
| Student Member – UnderGrad | 15 | 3.30 (0) |
| Emeritus Member | 51 | 11.21 (+1) |
| Retired Member | 19 | 4.18 (+1) |
| Division Affiliates | 12 | 2.64 (+1) |
| Society Affiliate | 10 | 2.20 (-1) |
| TOTAL | 455 | 100 |

Please join me in welcoming the newest members to our Division: Samuel E. Anderson, Colby Barrett, Adriana Greiner, Gupta Ankush, David L. Helm, Vinayak Krishnamurti, Connie Lu, Lizette J. Morales-Marques, Anjaneyulu Putta, Myoung G. Song, Lew Steinberg, Jimmie Weaver, Travis D. Wesley, Yuhao Yang, Cheng Zhang. In particular, I encourage our new student members to take advantage of the Division of Fluorine Chemistry many opportunities to grow professionally and to network, as you hopefully will remain part of our community throughout their future careers.

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Our Division will present a virtual-format symposium organized by **Thomas Lectka, Jinbo Hu,** and **Norio Shibata** on “Synthetic Methods in Fluorine Chemistry” at the Fall 2022 ACS National Meeting. Note that the joint 23rd Int'l. Symposium on Fluorine Chemistry/9th Int'l. Symposium on Fluorous Technologies in Quebec, Canada, and the 7th Fluorine Days in Poznan, Poland, have been rescheduled to take place in 2023.

The Division continued its important sponsorship of undergraduate research with the award of **Moissan Summer Undergraduate Research Fellowships (SURF)** of \$5000. In 2022, SURFs were awarded to **Morgan Lynn Haynes**, a 3rd year chemistry major at Fort Hays State University, Kansas, USA (advisor: Prof. Socrates B. Munoz, Kansas State University) and to **Audra Lutterotti**, a chemistry major at the University of Lethbridge, Canada (advisor: Prof. Jean-Denys Hamel, University of Lethbridge). Congratulations to Morgan and Audra! We wish them an enjoyable and productive summer of research in fluorine chemistry. Please keep in mind that the next SURF deadline is Jan. 30, 2023. Details will be announced in our Fall Newsletter.

It is my sad duty to report that Istvan Horváth, Adjunct Professor at Eötvös Loránd University, Hungary, and Honorary Professor at the Budapest University of Technology and Economics, Hungary, passed away on Feb. 26, 2022. Prof. Horvath made outstanding contributions to several fields of chemistry, including his organization of the 2011 Int'l. Symposium on Fluorous Technologies. In a 2018 Festschrift in honor of Prof. Horváth, John Gladysz wrote “Horváth has always had the generous nature and open type of personality that makes it very easy for him to serve as a mentor, form personal relationships, and take special interest in the welfare of those around him” (<https://pubs.acs.org/doi/10.1021/acssuschemeng.8b03138>).

The DFC Executive Committee had a productive in-person/virtual meeting on Jan. 16, 2022. We welcomed newly-elected and re-elected Executive Committee members **Andrej V. Matsnev** (Vice-Chair Programs), **Jean-Denys Hamel, Chadron M. Friesen,** and **R. Tom Baker** (Members at Large). We discussed the establishment of “**ACS Division of Fluorine Chemistry Undergraduate Award**” for undergraduate students for excellence in research in Fluorine Chemistry. The deadline for nomination is decided to be October 31, 2022. I thank Thomas Lectka for working on the draft documents and all Executive Committee members for their contributions in setting up this award. Also, please note that the nomination deadline for Doctoral Thesis Award is September 1, 2022.

On behalf of the Executive Committee, I want to send heartfelt and strong words of support to our professional friends and colleagues in Ukraine, who are enduring grave hardships at the present time.

In closing, let me say that I am humbled and honored to be entrusted with leading the ACS Division of Fluorine Chemistry in 2022. Please reach out to me (olga.boltalina@colostate.edu) with any ideas, comments, questions, or concerns. I do want to hear from you. And please stay actively involved in our Division in many ways, particularly in spreading the word to bring in new members, students and professional colleagues alike.

I wish you and your families good health and success in all your endeavors in 2022. ■

—Olga Boltalina, 2022 ACS Division of Fluorine Chemistry Chair

VICE-CHAIR MEMBERSHIP REPORT

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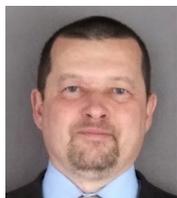


MARKUS ETZKORN

Division members are continuing to impact many areas of fluorine chemistry with outstanding contribu-

tions, and we remain the principal international organization of fluorine chemists around the world. The Division of Fluorine Chemistry, though drawing the largest number of members in the United States, continues to keep an international profile.

Our total membership has decreased since the September 2021 newsletter report! As pointed out previously, we all need to be very mindful of attracting new members, and I want to encourage our current members to talk to colleagues who work in fluorine chemistry, particularly those at your institution, to join our Division and become part of our welcoming, collegial, and close-knit fluorine chemistry community. In addition, I hope you can convince students or postdoctoral fellows in your groups to join the Division, as the new generation of fluorine chemists. The form and instructions to join our Division can be found at <https://www.acs.org/content/acs/en/membership-and-networks/join/>.html. Please note, as a regular member of the Division one has to be a member of the ACS. Non-members of the ACS can become affiliate members of the Division. If you have any questions or suggestions of activities that will expand our membership, please feel free to contact me. ■



ANDREJ V.
MATSNEV

Past Symposia and Conferences (Fall 2021 – Winter/Spring 2022)

A Symposium “Contemporary Fluorine Chemistry in the Southeast” was organized by Markus Etzkorn (Chair) and David A. Dixon (Co-Chair) at the *SERMACS 2021*, which was held on November 10-13, 2021, in Birmingham, AL.

Three Symposia were held at the *PACIFICHEM 2021* from December 16 to December 21, 2021.

1. The Chemistry of ^{18}F , ^{11}C and Radiometal-based Probes for Molecular Imaging & Precision Medicine (#178) *Organizers: Vasdev, Neil; VanBrocklin, Henry; Luyt, Leonard; Tamagnan, Gilles; Choe, Yearn Seong; Reiner, Thomas; Davis, Thomas.*

2. Diversity in Inorganic Fluorine Chemistry, from Fundamental Aspects to Applications for Global Challenges (#243). *Organizers: Gerken, Michael; Hagiwara, Rika; Matsumoto, Kazuhiko; Mercier, Helene; Schrobilgen, Gary J.; Syvret, Robert.*

3. Innovative Fluorination/Fluoroalkylation/Fluorofunctionalization (#368). *Organizers: Shibata, Norio; Amii, Hideki; Hu, Jinbo; Vivic, David.*

Many thanks to all involved in organizing these Symposia and the Meeting in general.

Our Division held the 25th Winter Fluorine Conference in Clearwater, FL on January 16–21, 2022. The conference Chair Viacheslav (Slava) Petrov and the Co-Chair David Vivic attracted an outstanding cohort of fluorine chemists from the U.S. and other countries. This was the first in-person meeting of the Fluorine Division in several years due to the COVID pandemic. The Organizers of the Conference successively overcame all obstacles and difficulties and ran a very successful Conference with an excellent scientific program.

Technical programming areas included: Organic and Bioorganic Fluorine Chemistry, Inorganic Fluorine Chemistry, General Fluorine Chemistry, Industrial Fluorine Chemistry and Physical Fluorine Chemistry.

Planned Fluorine Symposia in 2022/23

The Fluorine Division will hold a Symposium “*Synthetic methods in Fluorine Chemistry*” at the Fall 2022 ACS National meeting. This Symposium will be 100% virtual and will be held on August 22-24, 2022. Detailed schedule will be provided as soon as it is finalized. The Symposium is organized by Thomas Lectka, Norio Shibata and Jinbo Hu. It will feature both oral talks and poster presentations.

The 20th European Symposium on Fluorine Chemistry (20th ESFC) will take place on August 14–19, 2022 in Berlin, Germany. <https://esfc2022.de/>

The 26th Winter Fluorine Conference (WFC) will take place on January 8–13, 2023 in Clearwater, Florida at the Hyatt Regency Clearwater Beach Resort and Spa. <https://winterfluorineconference.com/> Please visit the WFC website for important updates often.

The 23rd International Symposium on Fluorine Chemistry (23rd ISFC) will be held in conjunction with the 9th International Symposium on Fluorous Technologies (ISoFT’23) conference will take place on July 23–28, 2023 in Québec City, Canada. www.isfc2023.org

Second Tutorial Week

More than 200 people attended the First Virtual Tutorial Week. Preparation for the Second Tutorial Week is currently undergoing. Tentatively, it is scheduled for the late Fall. Details and dates will be communicated via emails later in the year. ■

DIVISION COUNCILOR REPORT

AMERICAN CHEMICAL SOCIETY VIRTUAL COUNCIL MEETING ON MARCH 23, 2022



DAVID A.
DIXON

Candidates for President-Elect, 2023

By electronic ballot, the Council selected Mary Carroll and Rigoberto Hernandez as candidates for 2023 President-Elect.

These two candidates, along with any candidates selected via petitions, will stand for election in the Fall 2022 National Election.

Candidates for Districts II and IV By internet ballot, the Councilors from these districts selected Kimberly Agnew-

Heard and Marcy Towns as District II candidates; and Christopher J. Bannochie and Lisa Houston as District IV candidates. Ballots will be distributed to members residing in District II and District IV around October 1, 2022.

Candidates for Directors-at-Large The Committee on Nominations and Elections announced the selection of the following candidates for Directors-at-Large for 2023-2025 terms: Milagros (Milly) Delgado,

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Malika Jeffries-El, Will E. Lynch, and Ellene Tratras Contis. The election of two Directors-at-Large from among these four candidates and any selected via petition will be conducted in the fall. Ballots will be distributed to all Councilors around October 1, 2022.

Budget & Finance The Board of Directors resolved to authorize the creation of a quasi-endowment from proceeds in the ACS General Fund. This would have an initial principal amount of \$85 million, the annual payout from which would fund individual technical divisions and local sections per the allotment policies established by the Committees on Divisional Activities (DAC) and Local Section Activities (LSAC). Further, the amount of funding available made available for this purpose would be the standard payout from this quasi-endowment or \$3.2 million, whichever is greater.

The Council approved the *Petition to Amend the Use of Dues*.

- > The petition has two major components. The first changes the basis for developing the total pool of allotments available for local sections and technical divisions. The second eliminates the connection between dues revenue and Chemical & Engineering News (C&EN).

- > The total resource pool available for distribution to Local Sections and Divisions will be funded via a quasi-endowment established from the Society's unrestricted investment balances. This replaces the previous pool that was funded through the allocation of 20% of dues revenue to local sections and divisions.

In 2021, ACS generated a net from operations of nearly \$79 million, which was almost \$48 million higher than budgeted. Total revenues were \$660 million, which was 5.2% or \$32.6 million over budget.

Expenses for the year were \$581 million, or 2.5% below budget. This overall result was attributed to strong revenue performance from the Society's Information Services units (CAS and ACS Publications), reduced spending due to COVID-19 related impacts, and careful management of expenses across the ACS.

The Society's overall financial position strengthened considerably in 2021 as Unrestricted Net Assets, or reserves, increased by \$123 million to \$676 million on December 31. The increase was primarily the result of the \$79 million net from operations and growth of the Society's investments totaling \$71 million.

Divisional Activities Effective January 1, 2023, the Division of Carbohydrate Chemistry (CARB) will change its name to the Division of Carbohydrate Chemistry & Chemical Glycobiology (CARB).

International Activities The Council approved a Petition to Charter an International Chemical Sciences Chapter in Switzerland.

Membership Affairs The Council approved the extension of market testing of the international dues discount program based on World Bank country income levels.

- > The test provides reduced dues for international members residing in emerging nations, which host an ACS chapter, and as defined by World Bank income criteria.

- > The test results, to date, have suggested a positive impact on membership through new members and the expanded inclusivity that a wider global community provides.

The Council approved the 2023 Schedule of Membership.

- > The 2022 Schedule went "live" a few short months ago, and the 2023 Schedule was designed to add more value and an increased choice for membership by adding clarity and a more intuitive explanation of how our membership works.

- > The 2023 Schedule of Membership did not change any dues, benefits, eligibility, or privileges from the 2022 Schedule.

Board of Directors The Board received an extensive report from the CEO on issues relating to ACS core values of safety and DEIR, membership, financials, the ACS Institute, strategic initiatives, and upcoming events and activities. Notably, the strategic initiatives include funding of up to \$50 million over five years for sustainability, fostering a skilled technical workforce, accelerating digital research data projects, and accelerating life sciences growth. ■



BOB SYVRET

The Division's total assets have increased approximately **3.5%** over the course of the 12-month period ending March 31, 2022. This nominal increase is due, primarily, to appreciation of investment holdings and decreased spending in support of conferences during 2021.

ASSETS (actual as of March 31, 2022)

| | (\$) as of March 31, 2021 | (\$) as of March 31, 2022 |
|-------------------------------|---------------------------|---------------------------|
| Wells Fargo Bank Account | \$19,419 | \$11,069 |
| Long-term Investment Accounts | \$187,657 | 203,321 |
| TOTAL ASSETS | \$207,076 | \$214,390 |
| Percent Change | | +3.5% |

2021 FINANCIAL HIGHLIGHTS:

> In 2021 the Division provided **1** Moissan Summer Undergraduate Research Fellowships in the amount of **\$5,000** to Professor Simon Lopez D'Sola at the University of Florida at Gainesville.

> The Division provided registration and speaker support for Sermacs (**\$2,500**) and Pacifichem (**\$8,000**). The Division provided **\$5,119.81** in pre-conference support for the 25th WFC.

OUTLOOK FOR 2022:

> In 2022 the Division provided **2** Moissan Summer Undergraduate Research Fellowships in the amount of **\$5,000 each**. The recipients were Professor Jean-Denys Hamel at the University of Lethbridge and Professor Socrates Munoz at Kansas State University.

> The Division will provide necessary funding for expenses related to the 25th WFC that was held in January 2022.
 > The Division will provide advanced sponsorship spending for the 26th WFC that is to be held at Clearwater, Florida in January 2023. ■

MOISSAN SUMMER UNDERGRADUATE RESEARCH FELLOWSHIPS (SURF)



SURF 2021 WAS AWARDED TO:

LAURA POELSTRA, Department of Chemistry, University of Florida

Supervisor: Prof. Simon E. Lopez

Mr. Polestra presented the results of his research work as a poster in the 25th Winter Fluorine Conference held during January 16-21 at the Hyatt Regency Hotel, Clearwater Beach, Florida.

SURF 2022 AWARDEES

MORGAN LYNN HAYNES, Dept. of Chemistry, Fort Hays State University, Kansas, USA

Supervisor: Prof. Socrates Munoz

AUDRA LUTTEROTTI, Dept. of Chemistry, University of Lethbridge, Canada

Supervisor: Prof. Jean-Denys Hamel

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2022 ACS AWARD FOR CREATIVE WORK IN FLUORINE CHEMISTRY



PROFESSOR JINBO HU, Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences has been selected for the 2022 ACS Award for Creative Work in Fluorine Chemistry from the American Chemical Society. Jinbo was honored during the 25th Winter Fluorine

Conference at Hyatt Regency Clearwater Beach Resort, Clearwater, FL, January 16-21, 2022.

Jinbo was born in Zhejiang, China in 1973. After he completed his B.S. (Hangzhou University) and M.S. (Chinese Academy of Sciences) degrees, he did his Ph.D. work during 1997 to 2002 at the University of Southern California with Professors G. K. Surya Prakash and George A. Olah. After his postdoctoral work at USC, he joined the Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences (SIOC, CAS) as a full professor in early 2005, where he served as the Head of the CAS Key Laboratory of Organofluorine Chemistry during 2010 to 2020. He is a highly creative and imaginative organic chemist, who has made major contributions to the field of synthetic organofluorine chemistry, especially in developing new reagents and reactions that make fluoroalkylation and fluoroolefination easier. Difluoromethyl 2-pyridyl sulfone, *N*-tosyl-*S*-difluoromethyl-*S*-phenylsulfoximine, 2-[(difluoromethyl) sulfonyl]-benzo[d]thiazole, together with their derivative sodium difluoromethanesulfinate, have received wide use in academia and have been recognized as “Hu’s Reagents”. Jinbo has pioneered the development of novel difluorocarbene reagents from fluoromethylsilanes.

He has disclosed (bromodifluoromethyl)trimethylsilane as the most versatile and general difluorocarbene source for introducing difluoromethyl, difluoromethylene and difluoromethylidene motifs into various organic molecules. He has also co-developed (trifluoromethyl)trimethylsilane as a convenient difluorocarbene source. The *gem*-difluorocyclopropanation of alkene with (trifluoromethyl)trimethylsilane is an important reaction in pharmaceutical research. His related contributions include the on-site generation of tetrafluoroethene from (trifluoromethyl)trimethylsilane for its safe use in academia and the selective assembly of fluorinated carbons by using (bromodifluoromethyl)- and (trifluoromethyl)trimethylsilane to synthesize tetrafluoroethylene-, pentafluoroethyl-, and bis(difluoromethyl)methylene-containing organic molecules.

Jinbo has also achieved several ground-breaking fluorination methods, including the organocatalyzed Balz-Schiemann fluorination, the selective deoxyfluorination of electron-rich alcohols with 3,3-difluoro-1,2-diarylcyclopropenes (CpFluors), the rapid deoxyfluorination of alcohols with *N*-tosyl-4-chlorobenzenesulfonimidoyl fluoride (SulfoxFluor) at room temperature, and the fluorinative cross-coupling of *gem*-difluoroolefins and non-fluorinated olefins. All these methods are state-of-the-art in synthetic organofluorine chemistry.

Jinbo is highly prolific with more than 200 publications (with H index 58) and thirty patents. His published work has been highly cited and he has received many awards and accolades including RSC Fluorine Award, Novartis Chemistry Lectureship and IOCF Lectureship. ■

(SPONSORED BY ARKEMA INC.)

2021 ACS AWARD FOR CREATIVE WORK IN FLUORINE CHEMISTRY

The 2021 ACS Award for Creative Work in Fluorine Chemistry from the American Chemical Society was bestowed upon **PROF. DR. BEATE KOKSCH** of Freie Universität Berlin for her outstanding contributions to fluorine chemistry at the interface of chemistry, biology, as well as protein science and engineering with exceptional originality and creativity. Beate received the Award at the award ceremony during the 25th Winter Fluorine Conference at Hyatt Regency Clearwater Beach Resort, Clearwater, FL, January 16-21, 2022.

Beate received a Ph.D. degree from University Leipzig and pursued postdoctoral studies at The Scripps Research Institute, La Jolla and postdoctoral lecture



qualification at University Leipzig under the mentorship of Klaus Burger. She has been Professor of Organic and Natural Product Chemistry at Freie Universität Berlin since 2004. Her group investigates fluorinated amino acids in the context of peptides, proteins, and cells, studies amyloid formation, develops new peptidic multivalent scaffolds, catalytically active peptide-nanoparticle conjugates and foldamers and applies phage-display technology

to find binding partners for artificial amino acids and peptides. Her group has published more than 150 scientific papers. She has been the organizer of the 8th Peptide Engineering Meeting 2018 and the 10th German Peptide Symposium 2011, both held in Berlin, Germany. ■

2020 ACS AWARD FOR CREATIVE WORK IN FLUORINE CHEMISTRY



DR. ROBERT (BOB) SYVRET, ACS Fellow and Principal of F2ChemTech, LLC, received the 2020 ACS Award for Creative Work in Fluorine Chemistry from the American Chemical Society. Bob received the Award for industrialization of Selectfluor® and

DeoxoFluor™ fluorination agents and development of selective fluorination processes for high-purity electronics and low-GWP gases and fluorinated biologically active materials. Bob was honored during the 25th Winter Fluorine Conference (January 16-21, 2022) in Clearwater Beach, Florida.

Bob has a Ph.D. in main group fluorine chemistry from McMaster University with 30+ year industrial experience creating new molecules, developing new process technology, and commercializing a number of new high-value products. He has hands-on experience with new molecule synthesis for applications in electronics (fluorine etchants and deposition agents), pharmaceuticals (fluorinated steroids, nucleotides, and aromatics), agricultural (fluorinated herbicides, and pesticides), low-GWP refrigerants and foam expansion agents, fluorinated monomers and polymers, fluoro-surfactants, and inorganic fluorine compounds.

During his career, Bob has provided technical leadership in activities including new molecule discovery, process development and optimization, scale up, plant

support, hazards assessment and regulatory issues, analytical methods development, product stewardship, and safety testing. He was the technical leader on projects that delivered successful commercial products including Selectfluor® (I) and (II) electrophilic fluorination agents, DeoxoFluor™ reagent, and improved process technology for important commercial products that include NF₃, SiF₄, C₄F₆, and F₂. In the recent past he was responsible for HF process research for the development of low GWP fluorochemicals 1234yf and 1233zd as well as diversification of fluorochemical products and technologies outside of traditional refrigeration and foam expansion applications.

Bob has held the position of visiting scientist at the University of Albany since 2009 and is a Research Fellow in the Chemistry Department of Lehigh University since 2017.

Currently he is Chief Scientist of Electronic Fluorocarbons with responsibilities for the development of high-purity products for advanced semiconductor manufacturing including new ALD, ALE, and RIE candidates and also Principal of the consulting company Fluorine Chemistry and Technology (F2ChemTech), LLC.

Bob served the ACS Division of Fluorine Chemistry as Vice-Chair Secretary-Treasurer (1999-2001), Chair (2002), and as Treasurer from 1999 to present. Bob was inducted into the 2016 Class of ACS Fellows. ■

2021 ACS DIVISION OF FLUORINE CHEMISTRY DISTINGUISHED SERVICE AWARD IN FLUORINE CHEMISTRY

PROF. DR. GARY J. SCHROBILGEN, FRS (Canada), ACS Fellow, from Department of Chemistry, McMaster University was honored with the **2021 Distinguished Service Award in Fluorine Chemistry** for his distinguished service to the ACS Division of Fluorine Chemistry. He received the award at the award ceremony during the 25th Winter Fluorine Conference at Hyatt Regency Clearwater Beach Resort, Clearwater, FL, January 16-21, 2022.

Gary J. Schrobilgen, a native of Eastern Iowa (USA), received his B.S. degree in chemistry from Loras College (Dubuque, Iowa), a M.Sc. degree in inorganic chemistry from Brock University (St. Catharines, Ontario, Canada), and carried out his Ph.D. research in inorganic fluorine chemistry at McMaster University (Hamilton, Ontario) under the supervision of Prof. Ronald J. Gillespie. Prof. Schrobilgen was a Natural Sciences and Engineering



Research Council (NSERC) of Canada Postdoctoral Fellow at Leicester University, U.K. and joined the McMaster Chemistry Department as an NSERC University Research Fellow (1980-90) and member of faculty, and was promoted to full Professor in 1988.

He has made important contributions in several areas of synthetic and structural inorganic chemistry: main-group, and transition metal fluorine chemistry and the polyatomic anions of the main-group elements. His research relies on the use of modern methods of structural elucidation, including multi-NMR spectroscopy, X-ray crystallography, and vibrational spectroscopy, and quantum-chemical calculations to characterize novel bonding situations among main-group and high-oxidation state transition element species. He is best known for his work in the

experimentally challenging field of inorganic fluorine chemistry, encompassing the syntheses and structural characterization of a large percentage of the known compounds of krypton and xenon, as well as the fluoro- and oxofluoro-derivatives of main-group and transition elements in their highest oxidation states and at the limits of coordination. He is also known for his work in two areas of radiochemistry; the syntheses of ^{99}Tc fluorine compounds that are relevant to the uranium fuel cycle and ^{18}F -labelled radiopharmaceuticals of use in PE (positron emission) imaging of the human brain. His fundamental work has been of importance in our understanding of structure and chemical bonding in hyper-valent molecules and main-group ring, cage, and cluster species. Many of his compounds are now textbook examples.

Prof. Schrobilgen is recipient of the President's Award for Excellence in Graduate Supervision at McMaster University (1997); the American Chemical Society Award

for Creative work in Fluorine Chemistry (1998); several Canadian Society for Chemistry Awards: the Alcan Lecture Award (2002), the Award for Pure or Applied Chemistry (2002), the E.W.R. Steacie Award in Chemistry (2003); Thirty from the Past Thirty Award (Recognizing Excellence Among Brock University Alumni); and has held a Canada Council Killam Research Fellowship (1998-99). He was elected a Fellow of the Royal Society of Canada in 1999 and received a Senior Humboldt Forschungspreis (Research Award) from the Alexander von Humboldt Foundation (2010), the McMaster University Distinguished Alumni Award in the Sciences (2011), the Brock University Distinguished Alumni Award in Mathematics and the Sciences (2014), the Lifetime Achievement Award in Fluorine Chemistry sponsored by SciFluor (2012) and was elected a Fellow of the American Chemical Society (2013). ■

2021 ACS DIVISION OF FLUORINE CHEMISTRY DOCTORAL THESIS AWARD

DR. BENJAMIN SCHEIBE received the 2021 ACS Division of Fluorine Chemistry Doctoral Thesis Award in the award ceremony during the 25th Winter Fluorine Conference (January 16-21, 2022) in Clearwater Beach, Florida.

Benjamin studied chemistry at the Philipps Universität Marburg in Germany after completing his training as a chemical-technical assistant in 2011. In 2014, he finished his B.Sc. with a thesis on ionic liquids. Afterward, he continued with his M.Sc. studies at the university in Marburg. He joined the research group of Prof. Dr. Florian Kraus in 2015 where he focused on inorganic fluorine chemistry and obtained his M.Sc. in 2017 with a thesis on the Lewis-acid properties of uranium pentafluoride. Thereafter, he began his doctoral



studies which spanned the chemistries of chlorine trifluoride and of the fluorides of uranium, neptunium, and plutonium. He finished his doctorate in 2021 with *summa cum laude* and is currently a postdoctoral research scholar in the research group of Prof. Dr. Thomas Albrecht-Schoenart at Florida State University, exploring the chemistry of the transuranium elements.

Benjamin has been extremely productive with 21 peer-reviewed publications, 12 of them as first author. During his time as a graduate student, he has visited the Helmholtz-Zentrum Dresden-Rossendorf and Prof. Antti Karttunen at Aalto University in Finland for collaborative work. ■

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DIVISION OF FLUORINE CHEMISTRY IS TO FOLLOW OUR TWITTER ACCOUNT
LOCATED HERE: [TWITTER.COM/FLUORINECHEM](https://twitter.com/fluorinechem).



ACS DIVISION OF FLUORINE CHEMISTRY 25TH WINTER FLUORINE CONFERENCE

The 25th Winter Fluorine Conference took place at Hyatt Regency Clearwater Beach Resort, Clearwater, FL from Sunday, January 16 to Friday, January 21, 2022. In spite of all the restrictions and the challenges due to COVID-19, there was good attendance with 93 talks delivered in five areas, divided into thirteen sessions. In two poster sessions (on Sunday and Wednesday), 34 posters were presented. Thanks to all participants for coming and presenting their results and recent developments in fluorine research. Special thanks to Viacheslav (Slava) Petrov (Conference Chair), David Vivic (Conference Co-Chair), and Bob Syvret (Treasurer) for their hard work and excellent arrangements.

HIGHLIGHTS FROM 25TH WINTER FLUORINE CONFERENCE Students/Supervisors Receive Poster Awards



CASSANDRA HAGER (prize received by her advisor Joe Thrasher – Clemson University, USA) Synthesis and characterization of novel fluoropolymers



THOMAS HOHMANN (Freie Universitat, Germany) Fluoropeptides: systematic study of the impact of fluorination degree on peptide hydrophobicity and conformation



BJORN N. KOCH (Philips Universitat Marburg, Germany) High pressure fluorine chemistry and crystal structure of $(O_2)2Hg2F[SbF_6]_5$



MARTIN MOBS (Philips Universitat Marburg, Germany) Chemical synthesis of F₂ at room temperature elucidated



MUHAMMAD KAZIM (John Hopkins University, USA) Structural proof of a [C-F-C]⁺ fluoronium cation



SHANKAR GAIRHE (University of South Dakota, USA) Optical properties of perfluorinated tetrabenzo[a,c,h,j]phenazines

The 26th Winter Fluorine Conference will take place at Hyatt Regency Clearwater Beach Resort, Clearwater, FL, January 8–13, 2023. Early registration starts in late July/early August 2022. Details regarding the registration fee, abstract submission, hotel reservation, etc. will be available soon in the 26th WFC website:

winterfluorineconference.com.



Technical programming areas will include:

- > Organic and Bioorganic Fluorine Chemistry
- > Inorganic Fluorine Chemistry
- > General Fluorine Chemistry
- > Industrial Fluorine Chemistry
- > Physical Fluorine Chemistry

We are looking forward to seeing all of you in Florida next year.

For questions or additional information, please contact the conference organizers:

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PACIFICHEM 2021

The Pacificchem 2021 was held virtually from December 16 to December 21, 2021 via zoom. Three Fluorine Chemistry Symposia were included.

- 1.** The Chemistry of 18F, 11C and Radiometal-based Probes for Molecular Imaging & Precision Medicine (**Symposium #178**) *Organizers: Vasdev, Neil; VanBrocklin, Henry; Luyt, Leonard; Tamagnan, Gilles; Choe, Yearn Seong; Reiner, Thomas; Davis, Thomas.*
- 2.** Diversity in Inorganic Fluorine Chemistry, from Fundamental Aspects to Applications for Global Challenges (**Symposium #243**) *Organizers: Gerken, Michael; Hagiwara, Rika; Matsumoto, Kazuhiko; Mercier, H el ene; Schrobilgen, Gary J.; Syvret, Robert.*
- 3.** Innovative Fluorination/ Fluoroalkylation/ Fluoro-functionalization (**Symposium #368**) *Organizers: Shibata, Norio; Amii, Hideki; Hu, Jinbo; Vicic, David.*

Thanks to all organizers for organizing the virtual sessions well.

CALL FOR NOMINATIONS

ACS DIV. OF FLUORINE CHEMISTRY
DOCTORAL THESIS AWARD

— DEADLINE SEPT 1, 2022 —

THE ACS DIVISION OF FLUORINE CHEMISTRY DOCTORAL THESIS AWARD acknowledges an outstanding doctoral student each year for excellence in conjunction with her/his doctoral research in any area of fluorine chemistry. The doctoral thesis may be written in any language. The Doctoral Thesis Award will be given to a worthy candidate regardless of the candidate's nationality and country from which the thesis originated. The doctoral student must be nominated by the student's doctoral supervisor. The nominating supervisor must hold concurrent memberships in the American Chemical Society and the ACS Division of Fluorine Chemistry.

The nomination must include (1) an electronic copy of the thesis, (2) an English abstract of the thesis, and (3) a nomination letter from her/his supervisor that (a) provides the date of the thesis defense, (b) a statement relating to the significance and (c) the quality of the student's the doctoral research work, and (d) a list of publications that have thus far resulted from the student's doctoral research work.

The nomination deadline is September 1 of the year in which the award is presented; the student must have successfully defended the doctoral thesis during the preceding 12 months (Sept 1 of the previous award year to August 31 of the present award year) to be eligible for the award in that year. Students who defend after September 1 are eligible for the Award in the following year. All nominations must be submitted electronically to Olga V. Boltalina, the Chair of the ACS Division of Fluorine Chemistry: olga.boltalina@colostate.edu.

The awardee will receive (1) a certificate, (2) one-year registration as a full ACS and ACS Division of Fluorine Chemistry member, (3) an invitation to present a lecture at the next ACS Winter Fluorine Conference, and (4) a cash award of \$300 US. In the event the student is already an ACS Member (and/or an ACS Division of Fluorine Chemistry Member), the membership fee(s) will be added to the cash award. ■

CALL FOR NOMINATIONS

ACS DIV. OF FLUORINE CHEMISTRY
UNDERGRADUATE RESEARCH AWARD

— DEADLINE OCT. 31, 2022 —

THE ACS DIVISION OF FLUORINE CHEMISTRY UNDERGRADUATE RESEARCH AWARD recognizes outstanding undergraduate research students each year for excellence and achievement in any area of fluorine chemistry at his/her home institution. A maximum of one award will be given per qualifying institution worldwide in a given year.

The undergraduate student must be sponsored by a faculty member at his/her home institution (B.A. and/or B.S. awarding). The faculty sponsor must be a member of the American Chemical Society Division of Fluorine Chemistry. Only one nomination per institution may be submitted for consideration, and only one nomination is allowed during an academic year.

The nomination must include a brief letter of support from his/her sponsor and/or supervisor commenting on the quality of the student's research and performance in coursework.

Eligible students can be at any stage during their undergraduate careers. Students are limited to one certificate during their course of undergraduate study. All nominations must be submitted electronically to Olga V. Boltalina, the Chair of the ACS Division of Fluorine Chemistry: olga.boltalina@colostate.edu.

An awardee will receive (1) a certificate and (2) an invitation to present a poster at the next ACS Winter Fluorine Conference (the registration fee will be waived).



ACS NEWS

THE BIENNIAL NEWSLETTER FOR THE AMERICAN CHEMICAL SOCIETY DIV. OF FLUORINE CHEMISTRY

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