American Chemical Society
Division of Environmental Chemistry

Call for Papers

ACS Spring 2024: Many Flavors of Chemistry

New Orleans, Louisiana – March 17-21

Dear Colleagues,

On behalf of the ACS Division of Environmental Chemistry, it is my pleasure to invite you to share your recent research in the Division of Environmental Chemistry at ACS Spring 2024 in New Orleans, LA and online. This meeting will include in-person and virtual technical programming and social events.

Abstract Submission: **August 7 – October 2, 2023**. Please submit abstracts to the Division of Environmental Chemistry at http://MAPS.ACS.org. Abstracts will be accepted for oral and/or poster presentation in each symposium unless otherwise noted.

Sincerely,

ENVR Spring Program Chair
Slawo Lomnicki, PhD
Associate Professor
Louisiana State University
Dept. Environmental Sciences
Slomni1@lsu.edu

Environmental Justice, Education, and Policy

Achieving Environmental Justice in the Chemistry Enterprise: Connecting Innovation, Global Impacts, and Burden
Edward J. Brush (ebrush@bridgew.edu), Laurel A. Royer (laroyer@carinalis.com), Jane E. Wissinger (jwiss@umn.edu), *Organizers*
Cosponsored by CES (formerly CEI), AGRO, AGFD, SCHB, PAPR, CPRC, and ACS Campaign for a Sustainable Future

The United States Environmental Protection Agency defines Environmental Justice ”as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies . . .achieved when everyone enjoys: (1) The same degree of protection from environmental and health hazards, and (2) Equal access to the decision-making process to have a healthy environment in which to live, learn, and work”. Extraordinary advances in chemical innovation have also contributed to some of the most complex environmental issues facing the globe. Environmental justice is critical to the chemistry enterprise because it provides a framework to solve these global environmental and human health impacts that continue to disproportionately burden communities of color, vulnerable and low-income populations. This symposium will engage a multi-stakeholder, multi-disciplinary discourse of speakers and participants focused on a re-evaluation of our business-as-usual practices through the lens of

environmental justice: community groups and organizations, education, green chemistry, UN Sustainable Development Goals, climate justice, policy statements, and industrial practices.

Integrating Science with Community Participants to Address Environmental Justice

Julie Peller (julie.peller@valpo.edu), Graham Peaslee (gpeaslee@nd.edu), Kenneth Brown (brownk@hope.edu), Ellen Wells (wells54@purdue.edu), Chris Iceman (chris.iceman@valpo.edu), *Organizers*

Environmental justice communities benefit from partnerships with scientists and other professionals. Rigorous analytical science relays critical chemical information to assess pollution loads, but partnerships with the community to effectively understand the pollution problems are also essential. This session seeks presentations that describe how scientific investigations can integrate with community participation to help address disproportionate pollution exposures that affect environmental justice communities.

Perspectives on Climate Change Literacy & Education: Local to International
Gregory Foy (gfoy@ycp.edu), Keith Peterman (peterman@ycp.edu), *Organizers*

Climate change literacy and education is one of the recommended actions highlighted in the ACS Public Policy Statement on climate change. This symposium is designed for individuals to share perspectives on enhancing climate science literacy in the classroom or public forums. We invite papers that focus on efforts towards education, mitigation, adaptation, or other scientific issues surrounding this global crisis.

Use of Cheminformatics, Geospatial Data and Visualization in Assessing Risk of Facilities with Hazardous Substances
Antony J. Williams (williams.antony@epa.gov), Sean Thimons (thimons.sean@epa.gov), Fran Kremer (kremer.fran@epa.gov), *Organizers*
Cosponsored by CHAS

There are over 300 CWA hazardous substances (HS) and the most updated human health and environmental risk information and associated geospatial data on the CWA HS facilities, drinking water supplies, public receptors, and fish, wildlife and sensitive environments are needed. This contributes to assessing potential community impacts, especially EJ communities in a changing climate in coastal areas. How can speakers contribute to solving this problem?

Technology and Engineering in Environmental Chemistry

Artificial Intelligence and Machine Learning in Environmental Chemistry
Supratik Mukhopadhyay (mmukho1@lsu.edu), *Organizer*

[Description to follow]

Rare Earth Elements: Occurrences, Extraction Method Development, and Application
Sushil Kanel (sushil.kanel.3.ctr@us.af.mil), Buz Barstow (bmb35@cornell.edu), Chia Suei Hung (chia-suei.hung.2@us.af.mil), John Boeckl (johnboeckl@us.af.mil), Mallikarjuna Nadagouda (nadagouda.mallikarjuna@epa.gov), *Organizers*
Cosponsored by ANYL, GEOC, INOR

Rare Earth Elements (REEs) are essential elements of technology industries such as mobile industries, automobiles, colored glass, computers, smartphones, lamps, colored TV screens, lasers, lenses, ceramics, etc. In addition, population growth demands more use of high technologies, of which REE is essential. However, there are many challenges to sustainable and environmentally-friendly recovery and use of REE in devices, including sustainable and environmentally friendly benign techniques to extract and purify REE from their occurrence, e.g., minerals, sediments, industrial byproducts, and coal mining. This symposium aims to highlight how we obtain and selectively separate REEs from their occurrences and apply them in different technologies. Presentations are solicited in one or more aspects of the selective purification of REE and their applications: 1) Occurrences of REE in various countries around the world; 2) Environmentally benign extraction and selective REE reparation method; 3) Sustainable and environmentally benign extraction and selective reparation of REE from their occurrence, e.g., from ores, mine

tailings, coal, acid mine drainage, e-waste, wastewater, or other non-traditional sources; 4) Application of REE in material science and other fields.

Interdisciplinary Approaches to Environmental Challenges

Addressing Anthropogenic Contaminants in the Coastal Regions
Zhiyue Wang (zhiyue@hawaii.edu), Tao Yan (taoyan@hawaii.edu), *Organizers*

Anthropogenic activities are threatening the coastal ecosystem and human health with biological and chemical contaminants. This symposium encourages submissions on monitoring and mitigating human originated pollutants in the coastal regions including sewage, hydrocarbons, antibiotics, personal care products, and other emerging contaminants.

Virtual Graduate Students Symposium in Asia-Pacific Region on Current Environmental Issues
Chun Zhao (pureson@163.com), Chunxiao Zheng (czheng@acs-1.org), Jing Zhang (zhang_jing@hit.edu.cn), Mingshan Zhu (mingshanzhu@yahoo.com), *Organizers*

This virtual symposium is initiated and co-organized by Southwestern China Chapter. The graduate students in Asia-Pacific region are welcome to showcase their most recent research on Environmental Chemistry and gain experience as oral speakers at an international setting. We will try to arrange all the presentations during day time in the region.The symposium will cover all aspects of Environmental Chemistry and in particular will focus on Water and Waste Water Treatment, Advanced Oxidation Processes, Emerging Contaminants and Environmental Nanotechnology.

Environmental Chemistry Analysis

Advances in Non-Targeted Analysis of Complex Samples
Phillip Potter (potter.phillip@epa.gov), Saer Samanipour (s.samanipour@uva.nl), Zhenyu Tian (tianzy@uw.edu), Sarit Kaserzon (k.sarit@uq.edu.au), Jake O'Brien (j.obrien2@uq.edu.au), *Organizers*

Recent advances in analytical instrumentation (i.e. GC/LC-HRMS) and data processing approaches have paved the path to the discovery of a growing number of chemicals of interest (e.g. of biological relevance) in complex samples. However, the non-targeted analysis (NTA) experiments are extremely challenging to set up and may require specifically developed tools/approaches, depending on the initial hypothesis. In this session we aim at discussing the existing tools from the experimental setup to data processing approaches for the NTA experiments when dealing with complex samples. The experimental strategies will include novel HRMS acquisition methods as well as chromatographic approaches (e.g. LCxLC). Discussion on the data processing tools will cover the latest developments related to the steps taken during the NTA experiments from the feature detection to the identification of unknown unknowns. This session will provide a forum for discussing the state of the arts in NTA and the needed future developments from the experimental setup to the digital approaches. This symposium will give the developers (i.e. both experimental and digital) the means to present their research while the application oriented researchers will be able to discuss their future needs and desires.

Complex Contaminant Mixtures in Biological Samples: Characterization, Transformation, and Prioritization
Carrie McDonough (cmcdonou@andrew.cmu.edu), Dilani Perera (dilanip@andrew.cmu.edu), *Organizers*

Characterizing low-level mixtures of xenobiotics in complex biological matrices is a challenging but essential step in understanding the impacts of chronic contaminant exposure. This symposium will highlight emerging analytical and bioanalytical approaches for improved characterization of contaminant mixtures that accumulate within living organisms, including humans and wildlife. Advancements in identifying and prioritizing bioaccumulative contaminants as well as progress towards understanding how contaminant mixtures transform *in vivo* will be discussed.

Environmental Chemistry at the Micro- and Nanoscales

Applications and Implications of Nanomaterials in the Environment
Sudip Chakraborty (sudip.chakraborty@unical.it), Sushil Kanel (sushil.kanel@wright.edu), Mallikarjuna Nadagouda (nadagouda.mallikarjuna@epa.gov), Tanapon Phenrat (pomphenrat@gmail.com), Changseok Han (hanck@inha.ac.kr), *Organizers*

Nanotechnology is an area with a wide field of applications that has been gaining increasing attention from researchers in recent decades. Combination of membrane with nanomaterials become another vast and focused area to explore due to different advantages. So, this topic of Spring symposium has the potential for solving the worldwide pollution issue whereas it is water, air or soil.

Microplastics in the Environment: Analysis, Occurrence, and Toxicity
Phillip Potter (potter.phillip@epa.gov), Souhail Al-Abed (al-abed.souhail@epa.gov), *Organizers*

The field of microplastic (polymer particles < 5mm in size) research is quickly growing and there are critical research gaps regarding standardization of sampling methods, sources and transport in the environment, and mechanisms of toxicity. This symposium will address these gaps with presentations on emerging techniques in the microplastic field.

Synergistic Approaches for Microplastics Research: Integrating Quantitative and Fate Assessment Methods
Omar Tantawi (otantawi@mit.edu), Desiree Plata (dplata@mit.edu), Wendel Wohlleben (wendel.wohlleben@basf.com)), *Organizers*

As research about plastic waste gains more attention, it is imperative to develop integrated and complementary tools to efficiently address this issue. In this symposium, we aim to facilitate discussions among research groups investigating the quantification, formation, and degradation rates of microplastics and nano plastics. Additionally, we will delve into understanding the fate and impact of dissolved organic carbon produced during degradation on the surrounding environment. This session offers a platform to share the latest advancements, and foster collaborations in the field of microplastics research.

Advancing Water Chemistry Technologies

Novel Trends in Environmental Applications of Advanced Oxidation Processes
Dionysios (Dion) D. Dionysiou (dionysdd@ucmail.uc.edu), Antonio Arques (aarques@txp.upv.es), Ricardo Antonio Torres Palma (ricardo.torres@udea.edu.co), Virender K. Sharma (vsharma@tamu.edu), *Organizers*

Advanced oxidation processes have deserved increasing attention from researchers in the last decades, because of its ability to deal with many types of chemical contamination. However, in most cases, AOPs cannot compete with other treatments and now research is focused on niche applications where milder alternative methods are inefficient. For this purpose, modification of existing processes, development of novel materials (e.g., catalysts), coupling of different technologies or application to complex aqueous matrices, at low pollutant concentration or novel families of pollutants, not only chemicals, but also biological (e.g., pathogens or antibiotic resistant genes). At the same time, mechanistic studies to know the role of different reactive species, formation of reaction by products and their influence in the performance of the treatment (e.g., toxicity or biodegradability). Contributions are welcome on photolysis, chemical oxidation, sonolysis, and coupling AOP with other technologies, including reductive processes or membrane treatments.

Aquatic Photochemistry
Garrett McKay (gmckay@tamu.edu), Kristopher McNeill (kristopher.mcneill@env.ethz.ch), William Arnold (arnol032@umn.edu), Kimberly Parker (kmparker@wustl.edu), *Organizers*
Cosponsored by AGFD, GEOC

Aquatic photochemical transformations are important in geochemistry and environmental chemistry in diverse contexts, from natural systems where sunlight is acting on surface waters to engineered systems using UV irradiation. Light may act directly upon target compounds or indirectly through interactions with redox-active species including minerals, dissolved organic matter, and small molecule sensitizers. Understanding the roles of photochemistry in these complex systems will provide insight into the fate of chemical and biological species in the environment. In this

symposium, we invite submissions that explore the direct and indirect photochemical transformations of natural and anthropogenic compounds, as well as interactions of light with organic matter, biomolecules, redox-active minerals, and microorganisms.

Aquatic Redox Chemistry
Christopher Gorski (gorski@psu.edu), Paul Tratnyek (tratnyek@ohsu.edu), Kevin Rosso (Kevin.Rosso@pnnl.gov), Jasquelin Pena (pena@ucdavis.edu), *Organizers*

This session invites presentations focused on recent developments in aquatic redox chemistry. Redox reactions play critical roles in determining the quality, chemistry, and biology of aquatic systems. These reactions can occur naturally, be driven by electrochemical reactions, or be caused by the addition of chemical reactants. Elucidating the mechanisms, pathways, kinetics, and implications of these redox reactions is essential for understanding and modeling natural biogeochemical processes and designing engineered water treatment processes. In this broad and inclusive session, we invite contributions on recent developments that explore all aspects of aquatic redox chemistry, from mechanistic molecular-based studies to field-scale experiments and simulations. We particularly encourage contributions that examine interfacial redox reactions at mineral-water interfaces or electrodes. We additionally invite contributions that make use of novel experimental and analytical techniques to study aquatic redox reactions, such as those that use electrochemical, spectroscopic, and computational modeling techniques.

Electrified Water Treatment Processes
Neha Sharma (nehash@stanford.edu), Wensi Chen (wensichen1117@gmail.com), William Tarpeh (wtarpeh@stanford.edu), Xing Xie (xing.xie@ce.gatech.edu), *Organizers*

Most existing water treatment processes rely on the use of chemical inputs, such as coagulants, oxidants, and disinfectants. The transportation and storage of these chemicals can jeopardize the resilience of centralized water treatment and create intrinsic challenges for distributed water treatment. Recent attention has been drawn to treatment processes that mainly consume electricity instead of chemicals. These processes use electricity to drive separation processes (e.g., electrodialysis), provide direct redox power (e.g., electrochemical redox processes), or generate chemicals in situ (e.g., electrocoagulation, electrochemical acid/base production). Compared to chemical inputs, electricity is easier to deliver, can be generated locally upon grid disruption, and can be produced using sustainable energy for remote applications. As energy cost decreases and the treatment needs evolve (e.g., more stringent standards, zero-liquid discharge, and resource recovery), previously cost-prohibitive electrified processes may become economically favorable. In the meantime, new high-performance and energy-efficient electrified treatment processes are emerging. Therefore, we invite abstract submissions on electrified water treatment processes. The relevant technical areas include, but are not limited to, electrocoagulation, electrochemical redox processes, electrodialysis, electrified membranes, electrosorption and capacitive deionization, electrochemical or electrophysical water disinfection, electric-field assisted processes, and electrochemical resource recovery. Abstracts on techno-economic analysis (TEA) and life cycle assessment (LCA) of electrified water treatment processes are also welcome.

Water Purification Technologies for Sustainable Development: Decentralized Treatment, Wastewater Reuse, and High Efficiency Processes
Samuel Snow (ssnow@lsu.edu), Volodymyr Tarabaca (tarabaca@msu.edu), Kevin McPeak (kmcpeak@lsu.edu), *Organizers*

This session explores advances in water purification technologies to improve access, quality, and reliability to water and sanitation. Presentations will shed light on the underlying physical, chemical, and biological processes that enable innovations for sustainable water treatment and wastewater reuse.

Atmospheric Chemistry

Environmental Behavior of Atmospherically Transported Chemicals
Jeffrey Perala-Dewey (jeffrey.perala-dewey@usu.edu), Kimberly Hageman (kim.hageman@usu.edu), Yu-Ping Chin (yochin@udel.edu), Jennifer Guerard (guerard@usna.edu), *Organizers*
Cosponsored by CES (formerly CEI), GEOC, TOXI

This symposium will explore the influence of, and interaction between, chemical properties, environmental processes (e.g. meteorology, chemical transformation, etc.), and ongoing environmental changes (e.g. climate change, drought,

etc.) on the behavior of atmospherically transported chemicals. Research focused on pollutants and locations of current concern are of particular interest.

Addressing PFAS and Sustainability Challenges

AIChE/ACS Frontiers of Chemistry, Materials Science & Chemical Engineering for Circular Economy
Alexander Orlov (alexander.orlov@stonybrook.edu), Shweta Singh (singh294@purdue.edu), *Organizers*
Cosponsored by I&EC

This symposium will highlight the latest developments in environmental/green chemistry, materials science and chemical engineering that lay foundations for developing circular economy of the future. It will offer sustainable solutions for numerous environmental problems by focusing primarily on waste prevention as a primary strategy with secondary strategy focused on waste recycling. For example, specifically it will include such important topics as waste plastics, reuse of construction and other materials, critical materials (such as rare earth metals) that can be of interest to both ACS and AIChE communities. The submissions can include both experimental results and modeling to demonstrate a clear link of the research to circular economy and sustainability.

Bio-based Smart Packaging for Sustainable Environment
Sudip Chakraborty (sudip.chakraborty@unical.it), Stefano Curcio (stefano.curcio@unical.it), Ichiro Imae (imae@hiroshima-u.ac.jp), *Organizers*

Bioplastics are becoming a vast and focused area to explore due to different advantages over single used plastic. Recent food industries must guarantee safety and sustainable solutions for increasing shelf life and decreasing contamination. Bio-based smart packaging is a potential option, where sustainability and real-time monitoring of food quality are combined assuring health safety and providing economic and environmental benefits towards carbon footprint.

Understanding Degradation of Polymeric Materials for Sustainable Design
Melissa Maurer-Jones (maujones@d.umn.edu), Maryam Salehi Esfandarani (mshfp@missouri.edu), Boya Xiong (bxiong@umn.edu), *Organizers*

Designing our future polymers without threatening ecosystem and human health is only possible without proper understanding of how polymers degrade. This session aims to discuss state-of-art methods, mechanisms, and predictions of biotic and abiotic polymer degradation that can inform property-structure-degradation relationships to design future environmentally benign polymers. This includes degradation at the end-of-life, chemical recycling, and/or the processes that leads to unintended emission. We hope to gather cross-disciplinary expertise and lenses from polymer chemistry and physics, material science and engineering, environmental chemistry and engineering, exposure science and ecotoxicology, and life cycle assessment to discuss how we can design our future polymers without unintended health consequences.

Environmental Implications of PFAS Use in Clean Energy Technologies
Lee Ferguson (lee.ferguson@duke.edu), Jennifer Guelfo (jennifer.guelfo@ttu.edu), *Organizers*

There is increasing awareness of per- and polyfluoroalkyl substances (PFAS) use in the energy sector. As clean energy initiatives expand, the use of PFAS in infrastructure such as lithium ion batteries and solar panels is of particular concern. This symposium will focus on environmental implications of PFAS use in the clean energy sector including manufacturing, use, and disposal scenarios, but all efforts at the intersection of PFAS and energy will be considered.

Advances in PFAS Research and Future Outlook
Manoj Shukla (Manoj.K.Shukla@usace.army.mil), Manoj Kolel-Veetil (manoj.kolel-veetil@nrl.navy.mil), Mallikarjuna Nadagouda (nadagouda.mallikarjuna@epa.gov), Nancy Kelley-Loughnane (nancy.kelley-laoughnane.1@us.af.mil), *Organizers*

Per-and polyfluoroalkyl substances (PFAS) are man made chemicals and have been widely used since their development in 1940s. These synthetic compounds are resistant to degradation due to the presence of carbon-fluorine (C-F) bonds and are nicknamed as â€œforever chemicalsâ€□. PFAS have been also used in military within aqueous film forming foams (AFFF) for fire training and emergency response purposes. It is estimated that around 110 million Americans find PFAS contamination in their drinking water supplies. Exposure of PFAS including their short-chain

cousins has been linked to several health-related issues such as cancer, elevated cholesterol, obesity in humans. Recently, the Biden-Harris Administration and U.S. Environmental Protection Agency (EPA) proposed a national drinking water standard for perflurooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS) as well as mixtures of several PFAS compounds. Various traditional techniques have been attempted to degrade and remove PFAS from contaminated media. The incineration of PFAS with other wastes have potential to produce the active greenhouse gases. This symposium will discuss recent advances in research efforts on the degradation, destruction, detection, isolation, removal, and sensing of PFAS. Moreover, research in the area of fluorine free PFAS alternatives and future outlook on PFAS research will also be discussed.

Addressing Emerging Contaminants in Food and the Environment through Remediation, Sensing, and Replacement Innovations
Emanuela Silvana Andreescu (eandrees@clarkson.edu), Nirupam Aich (nirupam.aich@unl.edu), Kalumbu Malekani (kmalekani@smithers.com), *Organizers*

The goal of this session is to provide a forum for scientific and technical exchanges for researchers to discuss current research and emerging challenges related to emerging contaminants, with a focus on PFAS, in food, food packaging, and the environment. The presence of contaminants in food and the environment has become a global challenge, requiring the development of effective remediation, detection, and replacement methods. The session invites contributions highlighting fundamental and practical research on topics including but not limited to (1) Emerging contaminants exposure and testing in food, food packaging, and environment; (2) The design and development of rapid and effective methods and sensors to measure the presence of contaminants in food and the environment, (3) PFAS replacements; (4) Advanced materials and membranes for removal and degradation of emerging contaminants from food waste and wastewater; (5) Use of data-science and additive manufacturing processes for rapid development of removal technologies and PFAS-free packaging. The session welcomes scientists from different fields (agrochemistry, environmental science and engineering, materials science and nanoscience, analytical chemistry, electrochemistry, chemical engineering, etc.) to discuss the latest developments, challenges, and opportunities in this exciting area of research.

Chemical, Physical and Biological Processes in the Environment

Biogeochemistry of Organic Matter in Marine Environments
Alex Goranov (aleksandar.i.goranov@gmail.com), Juliana D'Andrilli (jdandrilli@lumcon.edu), Yu-Ping Chin (yochin@udel.edu), Andrew S. Wozniak (awozniak@udel.edu), *Organizers*
Cosponsored by ANYL, CES (formerly CEI), GEOC

Organic matter (OM) in marine environments is a major carbon reservoir rivaling the carbon content of the atmosphere. Marine OM serves as the primary energy source for heterotrophic organisms and holds immense ecological importance. The dynamics of this OM pool are closely connected to the sequestration of carbon in the ocean as well as to the air-sea exchange of aerosols and gases with implications for ecosystem production, atmospheric chemistry, and climate. With its profound impact, marine OM emerges as a crucial factor in understanding the intricate dynamics of carbon cycling and climate regulation in marine ecosystems and on a broader scale. For this symposium, we invite contributions from all research areas on marine OM biogeochemistry. This includes studies that identify new concepts and research directions, tackle emerging challenges (e.g., impacts of sea level rise to coastal systems and their resilience, environmentally friendly practices for the future), or employ novel and existing analytical methods to address fundamental problems in marine OM research. Since inland waters are important contributors of OM to marine environments, we also welcome studies on the dynamics of OM through the freshwater-marine continuum.

Environmental Health and Toxicology
Carsten Prasse (carsten.prasse@jhu.edu), Matthew Newmeyer (mnewmey1@jhmi.edu), *Organizers*
Cosponsored by AGFD, AGRO, ANYL, TOXI

Understanding the exposure to chemicals and the resulting impacts on our health is critical for the development of mitigation strategies. This requires the development of analytical techniques to measure exposures to complex mixtures and assess the resulting effects on a molecular level and via different pathways. This symposium focuses on novel research and development activities that improve the understanding of how chemicals impact environmental health.

Homogeneous and Heterogeneous Catalytic Oxidative Systems: A Symposium Honoring Prof. Dan Meyerstein
Virender K. Sharma (vsharma@tamu.edu), Dionysios (Dion) D. Dionysiou (dionysios.d.dionysiou@uc.edu), Tomer Zidki (tomerzi@ariel.ac.il), *Organizers*

Professor Dan Meyerstein, FRSC, is an Israeli academic and former president of Ariel University Israel. Prof. Meyerstein is Professor Emeritus, Ben-Gurion University of the Negev and Professor of Chemistry, Chemical Sciences Department, Ariel University. He has been honored with many awards including Meitner-Humboldt Research Prize, Kolthoff prize, and Member Academia Europea. Professor Meyerstein has made seminal contributions to kinetics and electrochemistry metal-redox reactions, Fenton reaction in presence of natural waters, aquatic radical chemistry, and advanced oxidation processes. Professor Meyerstein' s research has pioneered the development of fundamentals and mechanism of many reactions of environmental interests. advanced technologies to efficiently provide access to safe drinking water. Among various accomplishments, his group has studied the fundamentals and environmental. We invite presentations related to Prof. Meyerstein's work on environmental catalysis; radical processes; radiation chemistry; advanced oxidation processes; sol-gel; electrochemistry; electron exchange columns; Inorganic and Bioinorganic chemistry.

Showcasing Emerging Investigators and Future Perspectives: A Symposium by the RSC Environmental Science Journals
Emma Eley (eleye@rsc.org), Jon Ferrier (ferrierj@rsc.org), Grace Thoburn (ThoburnG@rsc.org), *Organizers*
Financially supported by RSC Environmental Science Journals

This *invitation-only* symposium will highlight high-quality, cutting-edge research carried out by rising stars in the environmental sciences, alongside presentations from the Editors of the Royal Society of Chemistry's Environmental Science journals - Environmental Science: Processes & Impacts, Environmental Science: Nano, Environmental Science: Water Research & Technology, Environmental Science: Atmospheres and Environmental Science: Advances.

ACS Award for Creative Advances in Environmental Science & Technology
Virender K. Sharma (vsharma@tamu.edu), *Organizers*
Financially supported by Aerodyne Research

By invitation only. This ACS National Award symposium will honor **Prof. Andre J. Simpson** of the University of Toronto Scarborough, Canada, for his use of NMR Spectroscopy to understand environmental processes at the molecular-level. The ACS Award for Creative Advances in Environmental Science & Technology, sponsored by ENVR and Aerodyne Research, was established to encourage creativity in research and technology or methods of analysis to provide a scientific basis for informed environmental control decision-making processes or to provide practical technologies that will reduce health risk factors.

2024 James J. Morgan Early Career Lectureship
Chris Toro (c_toro@acs.org), Margaret Mills (mmills@acs-i.org), Bryan Brooks (brooks@estlett.acs.org), *Organizers*
Financially supported by ES&T Journals, ES&T Letters

By invitation only. This symposium celebrates the winners of the 2024 James J. Morgan Early Career Award. The award recognizes early career researchers who are pursuing new ideas, persisting despite adversity and pushing the environmental science and technology community in exciting directions. The symposium features oral presentations by the winners of the award alongside other invited speakers

2024 Outstanding Achievements in Environmental Science and Technology Award
Chris Toro (c_toro@acs.org), Margaret Mills (mmills@acs-i.org), Bryan Brooks (brooks@estlett.acs.org), *Organizers*
Financially supported by ES&T Journals, ES&T Letters

By invitation only. This symposium celebrates the winners of the 2024 Outstanding Achievements in Environmental Science & Technology Award. The award recognizes individuals who have contributed to fields of environmental

research that have substantially contributed to improvements in human health and/or the environment, and whose work may have been adopted into new public policies, new devices or treatment systems, or widely adopted by industry and/or researchers. The symposium features oral presentations by the winners of the award alongside other invited speakers.

General Environmental Chemistry

General Session - Advances in Environmental Chemistry
Slawo Lomnicki,slomni1@lsu.edu; Hanoz Santoki, hsantoke@csub.edu, *Organizers*

This symposium is open to papers and posters on environmental chemistry or environmental engineering that may be beyond the focus of the specific topics addressed in other ENVR symposia.