



DIVISION NEWSLETTER



Fall 2021

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GET INVOLVED!

- Call for symposia proposals for Fall 2022 meeting**
- Call for volunteers for new subcommittees**

MESSAGE FROM THE CHAIR

Greetings Geochemistry Division Members,

Can you believe it is already November? As we approach the end of 2021, I hope you are sailing smoothly toward a (relatively more) normal life. It is also the time of year to reflect the recent activities of the Geochemistry Division and make more exciting plans.

The Geochemistry Division has a new website! Please check out <https://www.acsgeoc.org/> for updated information about the Division, meetings and events, news, awards, and job opportunities.



Fall 2021 Meeting recap. Following the successful live virtual Spring 2021 ACS meeting, the Fall 2021 meeting featured 10 symposia and over 120 abstracts for the Geochemistry program, in a very challenging hybrid mode. We hosted a symposium in honor of Dr. Michael Hochella, the 2021 Geochemistry Medal recipient, as well as a symposium in memory of Dr. R. James Kirkpatrick. The other symposium topics spanned over a range of spatial scales and disciplines, such as interface for society, ultrahigh resolution mass spectrometry characterization of natural organic matters, nucleation in porous media, and molecular scale processes of phosphorous in natural and engineered systems. Thanks to the tremendous efforts from the Program Chair Adam Wallace and all the symposia organizers, the transitions between hybrid and virtual sessions/presentations went smoothly. The presenters and audience also had the opportunities to interact and discuss science via multiple modes. It was very exciting for me personally to see many familiar faces in Atlanta!

We continue to support our young scientists. The Fall 2021 Geochemistry program launched the symposium for Undergraduate Research in Geochemistry, which we plan to continue for future meetings. We are also experimenting on providing more flexibility and incentives to encourage the participation of undergraduate researchers, such as the incorporation of virtual poster presentations with live/recorded lightning talks. The Fall 2021 meeting also recognized one Early Career Scientist and two Student Travel Awards. Please check out the winners in the awards section.

Spring and Fall 2022 Meetings. We have lined up 15 exciting symposia for the Spring 2022 Meeting, March 20-24 in San Diego, CA. Topics include a tribute to Dr. John Zachara, connecting chemistry in the Americas, mineral-water interaction over multiple scales, contaminant transport, reactions at nanoconfined interfaces, microbially-driven geochemical reactions, and geochemistry in extreme environments. We are currently preparing for the Fall 2022 ACS Meeting, August 21–25, 2022 in Chicago, IL. The meeting theme is "Sustainability in a Changing World", which would be an excellent opportunity to showcase the significance of geochemistry in sustainability research and education, as well as to promote the importance of "Advancing knowledge of Earth's chemistry to benefit humanity" – our Division vision. Please find more details in the Call for Symposia section and consider submitting a symposium topic proposal.

We need your support to help us execute the Division Strategic Plan. Following the Division Strategic Planning that occurred earlier this year, we are continuing the efforts on task execution. We need your support! We have heard back from many volunteers but are still in search for volunteers for several new subcommittees, including membership, professional development, mentoring, internal-external relations, and meeting programming. Students and postdocs are welcome! Check out the Call for Volunteers section for more details.

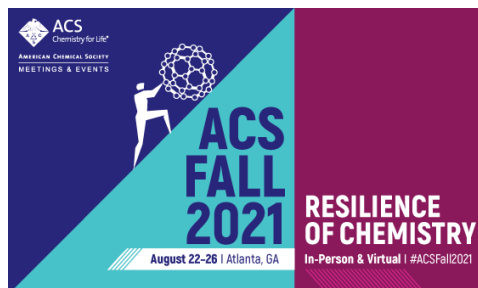
Division Election. The Division is up for election of two executive committee members, the Program Chair Elect and Councilor. Please check the Election section for voting information and candidate bios. Remember to cast your vote!

In closing, I would like to thank the Division executive committee members for their time and energy in serving and promoting the Division and fulfilling the needs of the members. I would also like to thank all of you, our Division members, for your continuous supports of the Division program and activities. It has been my pleasure serving as the Division Chair in 2021. See you in San Diego!

Division Chair
Yuanzhi Tang

FALL 2021 MEETING RECAP

The Fall 2021 Meeting in Atlanta, GA was a bit shaken up by uncertainty surrounding COVID-19. In-person attendance was light, but we did have 120 abstracts over 10 symposia, and thanks to the efforts of our members the quality of the hybrid and virtual programs was top notch. We also honored this year's GEOC Medal recipient, Michael Hochella and celebrated the late R.J. Kirkpatrick.

**Fall 2021 Meeting Symposia**

- Fundamental Reactions Driving Macroscopic Geochemical Processes
- Symposium in Honor of Prof. Michael Hochella, 2021 Geochemistry Medal Recipient
- GEOC Division Medal Symposium
- Interfaces for Society: The Next Frontier
- Experimental and computational approaches to molecular-scale understanding of mineral-fluid interactions (Session in memory of R. James Kirkpatrick)
- The Evolution of Macromolecular Carbon through Space and Time
- Advances in Ultrahigh Resolution Mass Spectrometry for Tracking Natural Organic Matter in Global Systems
- Experimental and Modelling Approaches for Nucleation in Porous Media
- Molecular scale processes of phosphorus cycling in natural and engineered systems
- Undergraduate Research in Geochemistry
- General Geochemistry

Student and Early Career Scientist Travel Award Winners**Early Career Scientist Travel Award:**

Viktoria Steck (Scripps Institution of Oceanography)

Student Travel Award:

Simin Zhao (Georgia Institute of Technology)

Spencer Moller (University of Delaware)

SPRING 2022 MEETING ANNOUNCEMENTS

The Spring 2022 ACS National Meeting, “Bonding Through Chemistry”, will be held in March 20-24 in San Diego, CA. The meeting format will include hybrid and virtual sessions.



General meeting information can be found at

<https://www.acs.org/content/acs/en/meetings/acs-meetings.html>

Abstract submissions closed on October 11th. Please come out and support the following GEOC symposia:

- The ties that bond: A tribute to the science and legacy of John Zachara
- Connecting chemistry in the Americas (co-sponsored with COMSCI)
- Mineral-water interactions over multiple scales – connection between laboratory and field scale observations
- Undergraduate research in geochemistry
- Adsorption of environmental contaminants at aqueous interfaces
- Constraining the internal constitution of the earth with condensed matter geochemistry
- Reactivity of nanoconfined environmental interfaces
- Transport, fate and remediation of emerging contaminants in freshwater environments: implications for aqueous and terrestrial environmental health
- Microbially-driven geochemical reactions: kinetics and communities
- Microbial and chemical transformation of environmental contaminants and their engineered applications for remediation
- Microfluidics and the confined mineral-water interface
- Trace metal(loid) bioaccessibility and bioavailability: current approaches, persistent challenges
- Contaminant cycling in natural and built environments within urban and industrial areas
- Geochemistry in extreme environments
- General geochemistry

For detailed session descriptions and organizer contact information see the call for abstracts:

<https://communities.acs.org/t5/Geochemistry-Division/Abstract-Submission-open-for-2021-Fall-ACS-Meeting-ACS/ba-p/85779?attachment-id=20299>

ELECTION AND VOTING INFORMATION

The polls will open Nov. 1 and will close Nov. 15th at midnight (Pacific time)
Please access the ballot via this link: <https://eballot.vote/ACSGEOC/login.cfm>
Your username is **your ACS ID #** (no preceding zeros—must be a current division member)
Your password (case sensitive) is: **vote2021**

The system will ask you to enter your Username and Password (listed above). Online voting should take you less than 10 minutes. Note the online ballot can be accessed from any smartphone or device that has full browser capabilities.

Please contact Jacky Bracco (jacquelyn.bracco@qc.cuny.edu) if you require any assistance.

DR. LYNN KATZ (PROGRAM CHAIR ELECT CANDIDATE 1)**Dr. Lynn Katz**

Director - Center for Water and the Environment & Hussein M. Alharthy Centennial Chair in Civil Engineering, University of Texas

Dr. Katz received her Ph.D. from the University of Michigan and has been a faculty member at the University of Texas (UT) since 1998. Dr. Katz has over twenty-five years of interdisciplinary research experience examining reaction phenomena at interfaces and evaluating the impact of these processes on the fate and transport of organic and inorganic contaminants in the environment. Her research has involved both fundamental and applied studies funded by DOE, NSF, EPA, USDA and has included the utilization of macroscopic and spectroscopic data to refine mathematical models for predicting contaminant fate and transport. She has successfully developed collaborations with faculty across numerous disciplines including geological sciences, environmental engineering, chemistry and petroleum engineering. She has organized symposia for ACS conferences and served as program and division chair for the Geochemistry Division, Associate Editor for the Journal of Environmental Management and Chair of the Association of Environmental Engineering and Science Professors Foundation. More recently, she co-led the resource extraction road mapping effort for the Department of Energy's Hub, the National Alliance for Water Innovation, and serves as co-chair of the UT Gender Equity Task Force. She is interested in expanding the division's efforts to diversify the membership, develop mentorship opportunities, provide programming that addresses current grand challenges and contributes to the division's strategic planning.



DR. AMY MCKENNA (PROGRAM CHAIR ELECT CANDIDATE 2)**Dr. Amy McKenna**

Research Faculty III, Analytical Chemist,
National High Magnetic Field Laboratory

Dr. Amy M. McKenna is an analytical chemist at the National High Magnetic Field Laboratory, and a Research Faculty III at Florida State University. Dr. McKenna is the manager of the Ion Cyclotron Resonance user program, and specializes in complex organic mixture analysis by ultrahigh resolution FT-ICR mass spectrometry, which spans dissolved organic matter, petroleum and crude oil fractions, soil organic matter and weathered oil from natural and anthropogenic releases. Dr. McKenna has published more than 100 papers and is a firm believer in the power of community colleges and the role they have in preparing students for the STEM fields. A former community college graduate herself, she currently serves as a research faculty member at the Magnetic Field Laboratory (MagLab). The MagLab is home to a cadre of world-class scientists and engineers who conduct high-level research recognized nationally and internationally. In 2013, Professor McKenna received the Glenn Award from the Energy and Fuels Division of the American Chemical Society, and in 2010, was awarded the Richard A. Glenn Award for the best paper. She is a graduate of the University of Tampa and Florida State University and has published numerous works on environmental chemistry, works with students throughout the country and researchers to improve the inclusion of women and girls in STEM. She has mentored over 200 students and researchers in the application of advanced analytical chemistry to solve environmental challenges.



DR. ANASTASIA G. ILGEN (COUNCILOR CANDIDATE 1)**Dr. Anastasia G. Ilgen**

Principal Member of Technical Staff, Geochemistry Department, Sandia National Laboratories

Dr. Anastasia G. Ilgen is an experimental geochemist, specializing in molecular mechanisms of chemical reactions at solid-water interfaces, including ion adsorption, chemically-assisted fracture, and surface-mediated redox reactions. Anastasia received an M.S. equivalent degree in water quality and engineering from Kamchatka State Technical University, Russia in 2001. She worked at the Institute of Volcanology and Seismology, Kamchatka, Russia (2001-2004), investigating the effects of volcanic eruptions on snow chemistry, researching the remediation for gold mining sites, and using remote sensing for volcano monitoring. She received her Ph.D. in Environmental Chemistry from University of Alaska Fairbanks, AK, in 2010. She joined Sandia Labs in 2012, and is now a Principal Member of Technical Staff. Her notable discoveries include identifying chemical complexation reactions which control fracturing in crystalline phases, with implications for geological carbon and nuclear waste storage. Her innovative work on silica nanopores led to new insights into the nanoconfinement-driven chemical changes to the structure and thermodynamics of surface complexation reactions for copper and lanthanide ions.



Anastasia has been a member of the ACS and the Geochemistry Division since 2008. She served a four-year rotation as Program Chair-Elect (2015), Program Chair (2016), Division Chair (2017), and Past Division Chair (2018) of the Geochemistry Division as well as a three-year term as Councilor (2019-2021). Anastasia is currently serving on the Geochemistry Division Medal Committee (2020-2024) and has organized and chaired seven symposia at ACS National Meetings. Anastasia would be greatly honored to be given the chance to continue to serve the Division as Councilor.

ANNOUNCEMENT ABOUT ACS FELLOW**2021 ACS FELLOW – JIM KUBICKI**

Congratulations to Dr. Jim Kubicki for his selection as the 2021 ACS Fellow!

Dr. Kubicki is recognized for leading the use of computational and quantum chemistry to elucidate molecular processes in environmental chemistry and geochemistry, which leads to sound management of geochemical and water systems. He is also recognized for his strong leadership in ACS Geochemistry Division, Divisional Activities Committee, and Committee on Science, and for his strong promotion of interdisciplinary science and education



FALL 2022 ACS MEETING: CALL FOR SYMPOSIA PROPOSALS

Dear Colleagues,

It is now time to propose symposia for the Geochemistry program at the upcoming Fall 2022 ACS Meeting (August 21 – 25, 2022 in Chicago, IL). The meeting theme is "Sustainability in a Changing World".



If you are interested in organizing a symposium, please send an email to Program Chair-Elect Eric Pierce (pierceem@ornl.gov) by December 31, 2021 at 12 PM EST, and include the information below. Proposals may be received after this date but may not be available when MAPS opens for abstract submission.

- Title of the proposed symposium
- A brief description of the symposium
- Name, affiliation, and contact information of the organizer(s)
- Potential co-sponsoring divisions/programs

Relevant topics include, but are not limited to:

- Soil organic carbon
- Microbially-driven geochemical cycles in freshwater systems
- Geochemical cycles in the Earth Critical Zone
- Planetary geochemistry
- Mineral-water interface structure and reactivity
- Mineral nucleation and growth
- Reactivity of biogenic minerals
- Geochemistry of subsurface CO₂
- Reactivity of nano-particles and nano-pores
- Transport, uptake, and remediation of environmental contaminants

CALL FOR VOLUNTEERS

Committee Recruitment

The GEOC Division is forming five new subcommittees and looking for 2-3 volunteers per subcommittee for one year terms. The division will provide discounted registration for one national meeting per year for each volunteer. A brief description of the committees is below:

1. Membership Committee

The new membership committee will develop programs for member retention, communication, and recruiting. For more information, please contact Yuanzhi Tang (yuanzhi.tang@eas.gatech.edu), GEOC Division Chair and Qingyun Li (qyli@stanford.edu), GEOC Membership Coordinator.

2. Programming Committee

The programming committee will assist in the diversification of its meeting programming. Members will define programming priorities and perform outreach to other professional societies and potential partners in the education, industry, and policy sectors. For more information, please contact Adam Wallace (afw@udel.edu), GEOC Program Chair.

3. Professional Development Committee

The GEOC Executive Committee is seeking one or two graduate students or postdocs to participate in the organization of professional development activities for graduate students and postdocs at the ACS National Meeting in the Spring of every year. Along with a team of faculty members and researchers, volunteers will help identify, organize, and advertise activities that may contribute to their professional development and networking. For additional information, please contact Martial Taillefert (mtaillef@eas.gatech.edu), GEOC Division Treasurer.

4. Mentoring Committee

The mentoring committee will develop a mentoring program for students and early career researchers. Members of the committee will recruit and pair mentors and mentees, facilitate communications, and evaluate progress. Time commitment is expected to be roughly 4-5 hours a month. For more information, please contact Jacky Bracco (jbracco@qc.cuny.edu), GEOC Division Secretary.

CALL FOR VOLUNTEERS

5. Internal-External Relations Committee

The Internal-External Relations Committee will promote and increase the visibility of GEOC member research within the Division and in the wider ACS community. Examples of internal relations include generating member-focused content for the GEOC newsletter such as new member spotlights and research highlights. Examples of external relations include establishing a social media presence at National Meetings and linking GEOC symposia and event highlights to ACS feeds. Volunteers at all career-stages are welcome. Time commitment is expected to be roughly 4-5 hours a month. For more information, please contact Ashaki Rouff (ashaki.rouff@rutgers.edu), GEOC Immediate Past Chair.