

Newsletter

of the

International Association of GeoChemistry

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Leadership Announcement

Our former Vice-President, Jodie Miller, accepted a new position that precludes her from participating in a leadership role in professional societies, so she has resigned her position in the IAGC governance. We thank Jodie for her service and wish her the best in her future endeavors while we continue to work with her in her as a general member. In order to maintain continuity, Neus Otero will continue as President for an additional two-year term, and Philippe Négrel will continue to serve in the role of Past-President. We are happy to announce that **François Chabaux** is our new Vice-President.

François Chabaux is Professor of Geoscience and Geochemistry at the “Ecole et Observatoire des Sciences de la Terre (EOST)” at the University of Strasbourg, France, and member of the laboratory “Institut Terre et Environnement de



Strasbourg.” He is an associated researcher of the GEOTOP research center in Montréal (Canada) and was a visiting scientist (2018-2020) at the Institute of Surface-Earth System Science (ISESS) of the Tianjin University (China). He is Policy Officer at National Institute for Earth Sciences and Astronomy of the “Centre National de la Recherche Scientifique” (CNRS-France).

Since starting in Strasbourg in 1994, François has researched the mechanisms and time constants of weathering and erosion processes in critical zone by developing and popularizing a variety of element and isotopic techniques, notably U-series nuclides. François has been also involved in the application of geochemical tracing approaches, including the classical radiogenic isotopes (Sr, Nd, Pb), U-Sr isotopic coupling, and the stable isotopes (Ca, B, Li). More recently he has investigated the nature of water-rock interactions that control the chemical composition of waters in watersheds and aquifers by applying coupled hydrogeochemical modelling approaches. A significant part of his work was carried out on the Strengbach watershed in the Vosges Mountain (France) as part of research at the Observatoire HydroGéochimique de l'Environnement at Strasbourg University. This work has contributed to making this watershed one of the current reference sites of the French critical zone observatory network, a distributed network of research observatories around France and worldwide, known as OZCAR.

François is Associate Editor of the Society journal, *Applied Geochemistry*, Co-Editor in chief of *Comptes Rendus Geoscience*, the Scientific journal of the French Science Academy, and a member of the editorial board of *Chemical Geology*. He is member of the scientific council of the Institut National des Sciences de l'Univers (INSU)/ National Institute for Earth Sciences and Astronomy in CNRS, France and from 2012 to 2016, a member of the scientific expertise committees of the ANR (the French National Agency for Research). He was also member (2008-2010) of the European Association for Geochemistry (EAG) council. He was awarded 2015-16 Outreach Lecturer of the EAG-GS Outreach Program to Africa, and the 2019 Ingerson Lecturer of the IAGC.

2022 PhD Student Research Grant Applications

We receive great interest in our Elsevier/IAGC PhD Student Research Grants each year, and they have become a high-profile recruiting tool for the organization. We will post instructions for applying for the PhD Student Research Grant program on 1 October, 2021. Applications will be due on 1 December. Keep an eye on our website and Twitter for the announcement:

www.iagc-society.org/phd_grants.html

Twitter: [@IAGeoChemistry](https://twitter.com/IAGeoChemistry)

2021 IAGC Awards

We are pleased to announce our Society Awards for 2021. Congratulations to the recipients and thank you for your service to the IAGC and the geochemical community!

IAGC Fellows

Janet Hering is the Director of the Swiss Federal Institute of Aquatic Science and Technology (Eawag) and Professor at the Swiss Federal Institutes of Technology (ETH) in Zürich and Lausanne. Previously, she was on the faculties of Caltech and UCLA. She is a member of the U.S. National Academy of Engineering. Her research interests include knowledge exchange at the interface of science with policy and practice, trace element biogeochemistry, and water treatment for the removal of inorganic contaminants. As Director of Eawag, she oversees a staff of over 500,



including ca. 175 researchers and 100 technical staff members. Eawag hosts over 100 doctoral students conducting their thesis research. Research at Eawag focuses broadly on water and the water environment, encompassing the continuum from relatively unperturbed aquatic ecosystems to fully engineered water and wastewater management systems. In addition to its research activities, Eawag's mandate encompasses both education and expert consulting.

Yanxin Wang is a Professor of Hydrogeology and Environmental Engineering at China University of Geosciences. He was elected as Academician of Chinese Academy of Sciences in 2019. In the past 30 years, he and his group have made substantial efforts in studying the genesis of groundwater quality to provide theoretical support for safe drinking water supplies. Actively engaged in international collaborations, he has integrated multi-disciplinary approaches of hydrogeochemistry, groundwater hydraulics, sedimentology, geostatistics, isotope geochemistry, and geomicrobiology to better understand the processes and factors controlling mobilization/immobilization of geogenic As, F, and I in aquifer systems. His work is not only fundamental, but practical. He has pioneered and tested novel cost-effective methods for removing contaminants from groundwater. From his fundamental understanding of arsenic hydrogeochemistry, he recently identified and field tested an innovative method to deliver oxidants to aquifers to create precipitates in-situ to immobilize arsenic. He was the recipient of John Hem Award of National Ground Water Association of the U.S., Applied Hydrogeology



Award of International Association of Hydrogeologists, and Elsevier's Award of Most Cited Chinese Researchers in the field of Earth and Planetary Science.

Ebelmen Award

Kimberly Parker is an assistant professor of Energy, Environmental and Chemical Engineering at Washington University in St. Louis. She earned her PhD at Stanford University, where she was supported by the Abel Wolman Fellowship (American Water Works Association), the Gerald J. Lieberman Fellowship (from Stanford), and the National Science Foundation Graduate Research Fellowship. She was then awarded a Marie Curie Individual Fellowship (European Commission) to conduct research at ETH Zurich (Switzerland) prior to joining the faculty at Washington University. Her research has been recognized with honors including the Best Science Paper of the Year published in *Environmental Science & Technology* (2016) and the Paul V. Roberts/AEESP Outstanding Doctoral Dissertation Award (2017).



Kharaka Award

Guilin Han is a professor at China University of Geosciences (Beijing). She received her Ph.D. in environmental geochemistry at the Institute of Geochemistry, Chinese Academy of Sciences (IGCAS) in 2003. The next decade, she became an associate professor, then gained a professorship at the IGCAS. Meanwhile, she has been to the



Lawrence Berkeley National Laboratory (USA), the Institute of Geophysics in Paris (France), Leibniz Institute of Oceanography (Germany) as a visiting scholar. She then worked at the Institute of Earth Sciences, China University of Geosciences (Beijing). She now works on the surficial environment geochemistry in China, focusing on the stable isotopes and their applications on the earth's surface. Her significant contributions include developing methods for purifying K, K-Ca-Sr from geological matrix for precise isotope analysis, measuring the Ca and Sr isotopic composition of rainwater in different eco-system in China, and watershed weathering and global C cycles based on Sr and C isotopes.

Peng Lu is a Geological Specialist at EXPEC Advanced Research Center, Saudi Aramco and the Leader of Geology Technology Team of Beijing Research Center, Aramco Asia. Before joining Aramco, he worked as an inorganic geochemist at Calera Corporation in the San Francisco Bay area. He received a Bachelor's (2000) and Master's (2003) degree in geology from Nanjing University, China and a Ph.D. degree in geochemistry from Indiana University, U.S. (2010). His research focuses on integrating field observations, experiments and numerical modeling to investigate the underlying processes and mechanisms of water-rock-interactions. The applications of his fundamental research include many urgent energy and environmental problems, such as reservoir quality prediction of petroleum reservoirs, toxic metal contamination, geological carbon storage, and water quality. He received EXPEC Advanced Research Center Awards in 2019 and AAPG ACE 2017 Top Presentations Award. He was a finalist for Best Exploration Technology Award – World Oil Awards in 2017. Dr. Lu has more than 70



technical publications with a total citation of 1473 and an H-index of 19, according to Google Scholar. He holds 8 U.S. patents.

Hitchon Award

The Hitchon Award is given annually to a paper of significance published in the IAGC journal, *Applied Geochemistry*. The award is given to the *Applied Geochemistry* paper from 5 years ago (to allow for time to make an impact) that has the most citations according to SCOPUS. All authors will receive recognition here in the IAGC Newsletter and on the IAGC website.

This year's recipient of the **Hitchon Award** is **Yang-Guang Gu's** 2016 paper:

Yang-Guang Gu, Yan-Peng Gao, Qin Lin. Contamination, bioaccessibility and human health risk of heavy metals in exposed-lawn soils from 28 urban parks in southern China's largest city, Guangzhou (2016) *Applied Geochemistry*, 67, pp. 52-58.

Yang-Guang Gu is a Professor of Hundred Talents Program of Chinese Academy of Fishery Sciences (CAFS) at South China Sea Fisheries Research Institute, CAFS, China. He received his M. S. and Ph.D. in hydrobiology in Institute of Hydrobiology at JiNan University in 2009 and 2012. He is a China Committee Membership of North Pacific Marine Science Organization (PICES) and a Committee Membership of Marine Environmental Protection Professional Committee of Guangdong Environmental Science Society. His research interests are: (1) Environmental geochemistry and ecological risk of pollutants (metals and



POPs) in aquatic ecosystem; (2) Environmental fate, sources, transformation and history reconstruction of pollutants in aquatic ecosystem based on traditional & non-traditional isotope techniques; (3) Bioavailability of pollutants in aquatic ecosystem associated with risk assessment. He has published over 80 peer-reviewed papers.

Honorable Mentions

Charlotta Tiberg, Jurate Kumpiene, Jon Petter Gustafsson, Aleksandra Marsz, Ingmar Persson, Michel Mench, Dan B. Kleja
Immobilization of Cu and As in two contaminated soils with zero-valent iron – Long-term performance and mechanisms (2016) *Applied Geochemistry*, 67, pp. 144-152.

Kelsey E. Young, Cynthia A. Evans, Kip V. Hodges, Jacob E. Bleacher, Trevor G. Graff. A review of the handheld X-ray fluorescence spectrometer as a tool for field geologic investigations on Earth and in planetary surface exploration (20146) *Applied Geochemistry*, 72, pp. 77-87.

Devon Renock, Joshua D. Landis, Mukul Sharma, Reductive weathering of black shale and release of barium during hydraulic fracturing (2016) *Applied Geochemistry*, 65, pp. 73-86.

Elsevier PhD Student Research Grant Winners

The IAGC is happy to announce the recipients of the 2021 Student Research Grants, sponsored by Elsevier and the IAGC. This is a very competitive award, with a funding rate of around 10% this year. The success of these grantees demonstrates

the extremely high caliber of their research. Congratulations to our grantees!

Andrea Johansen – “Understanding the Contribution of Dust to Ecosystem Fertilisation in the South Pacific and Southern Ocean”

Andrea Johansen is a PhD candidate at the University of Wollongong (Australia) and a Residential Scholar at the Australian Institute of Nuclear Science and Engineering. She investigates atmospheric dust transport to islands in the South Pacific and



Southern Oceans and the role of dust fertilization in peat primary productivity. Andrea uses a combination of trace element analysis and isotopic characterization (e.g., Nd and Pb isotopes) to reconstruct dust deposition records within peat mires, allowing dust to be provenanced to its source areas, revealing how dust sources have switched on and off in response to climate variability. The peat cores are dated with ^{210}Pb (alpha spectrometry), fallout radionuclides ($^{239+240}\text{Pu}$), and ^{14}C (accelerator mass spectrometry). Relative decomposition, needed to establish the primary productivity profile, is characterized by isotope ratio mass spectrometry of $\delta^{13}\text{C}$, $\delta^{15}\text{N}$, and CN%, along with Fourier Transform Infrared analysis of the organic C components. Andrea believes that a better understanding of dust transport and air-mass movements in the Holocene will improve our knowledge of the carbon storage function of the South Pacific and Southern Oceans.

Madison Wood – *“Insight into carbon cycling over glacial/interglacial cycles from seawater strontium isotopes”*

Madison Wood graduated with a BSc in Earth Sciences with a focus in climate from the University of New Hampshire (USA) in 2019. She is now a PhD student at the University of California-Santa Cruz (USA) in the Department Earth and Planetary Sciences, where she uses geochemical signatures of seawater chemistry preserved in marine sediments to reconstruct past changes in the carbon cycle. Her dissertation work focuses on stable and radiogenic strontium (Sr) isotopes in seawater, which reflect changes in chemical weathering and marine carbonate burial over Earth history. Using geochemical data and modeling, Madison aims to constrain these carbon cycle variations over glacial/interglacial cycles and investigate the implications for the climate. She analyzes stable and radiogenic Sr isotopes in marine barite by thermal ionization mass spectrometry to reconstruct the Sr isotopic composition of the ocean over the past 0.5 million years.



Rebekah Rhodes – *“Variability in terrestrial climate during the Early Eocene Climatic Optimum: A study of the Green River Formation, southwestern Wyoming (USA).”*

Rebekah Rhodes earned her BSc in geology from the University of North Carolina at Chapel Hill (USA) in 2012 and her MSc in geology from the University of Wyoming (USA) in 2015. After teaching high school science for two years, Rebekah began a PhD in 2017 at North Carolina State University (USA) concentrating on paleoclimate and geochemistry. Rebekah’s current research focuses on understanding how

terrestrial climate varies spatially and temporally. More specifically, she is investigating the variability and sensitivity of climate during the Early Eocene Climatic Optimum (EECO) in southwestern, Wyoming. Rebekah uses stable C, O, Sr, and clumped isotope analyses on carbonates from the Green River Formation as proxies for climate during the EECO. Additionally, Rebekah hopes to expand the applications for clumped isotope thermometry by testing the method on new materials. Rebekah believes that understanding how terrestrial climate responded to past warm periods will be vital to predicting how climate will be affected by future warming.



Kristina Sukhanova – *“Trace element mobility in silicate minerals of ordinary chondrites under parent body metamorphism conditions”*

Kristina Sukhanova graduated with a specialist (equivalent master) degree cum laude (2015) in mineralogy and geochemistry from Mining University (St.-Petersburg, Russia). Now she is a Ph.D. student in the Institute of Precambrian Geology and Geochronology Russian Academy of Sciences. Kristina is studying REE mobility in silicate minerals from different types of ordinary chondrites (OC). She uses the SIMS technique to measure concentrations of trace elements and REE in olivine and pyroxene and to determine the U-Pb age of Ca-phosphate minerals. Studies of trace element composition in silicate minerals of unequilibrated OC will help to evaluate element mobilization under secondary processes



(as for thermal and impact metamorphism, fluid activity) on parent bodies. Within her PhD, for the first time, trace element analysis will be performed in silicate minerals of equilibrated OC. These data will describe the intensity of secondary processes and clarify structure models of chondrite parent bodies. As an application, these data can be helpful to petrological types determination for silicate material from Ryugu and Bennu asteroids.

Vincent Clementi – *“Pore Fluid Origins, Migration, and Carbon Storage on the Chilean Margin”*

Vincent Clementi earned his BSc in Environmental Science and Policy from the University of Maryland (USA) in 2013. He is currently conducting his PhD research at Rutgers University (USA) in Oceanography. Vincent’s dissertation focuses on pore fluid origins, migration, and carbon cycling on the Chilean Margin using new 100-meter-long sediment cores recovered during the *JR100* expedition in 2019, which document widespread freshening in pore fluids. With support from IAGC, he is using the isotopes of O, H, and Sr in pore fluids to test the hypothesis that observed freshening and elevated dissolved silica concentrations at a site proximal to Northern Patagonia are driven by submarine groundwater discharge, which could have implications for the regional marine geochemical budget.



Catching up with previous Elsevier PhD Student Research Grant Winners

The most exciting part of supporting PhD students’ geochemical work is getting to learn about the results of their project and seeing where their early career takes them next. In this issue, **Melisa Diaz** and **Christina Richardson** describe how IAGC funds helped them realize their research project and share the results of their work.

Melisa Diaz, Woods Hole Oceanographic Institution

I received an IAGC Student Research Grant in 2019 for my proposal, “Sources of sulfur and nitrogen in salts using $\delta^{34}\text{S}$ and $\delta^{15}\text{N}$ from soils along the Shackleton Glacier, Antarctica.” These funds helped support the stable isotopic analysis of water-soluble salts, which was the first chapter of my dissertation and was published in *Frontiers*[1]. Before this study, most isotopic measurements of nitrate (NO_3^-) and sulfate (SO_4^{2-}) in Antarctic soils were from northern and coastal regions, such as the McMurdo Dry Valleys. Few studies had investigated the geochemistry, and source of salts from the Central Transantarctic Mountains, which are believed to contain some of the most saline soils on Earth. The isotopic composition of NO_3^- indicated that NO_3^- was primarily derived from the atmosphere, with varying contributions from the troposphere (0–70%) and stratosphere (30–100%). The SO_4^{2-} was predominantly deposited as secondary atmospheric sulfate (SAS) and



derived from the oxidation of SO₂, H₂S, and/or dimethyl sulfide by H₂O₂, COS, and ozone in the atmosphere. Our analysis showed that atmospheric deposition and chemical weathering at the soil surface are important for salt formation in Antarctica. While NO₃⁻ and SO₄²⁻ are both oxyanions and thought to maintain their isotopic composition post-formation, post-depositional processes, such as volatilization and photolysis, may alter both N and O in NO₃⁻, while SO₄²⁻ appears less affected by these processes. Following this work, I completed my PhD at The Ohio State University summer of 2020 and have since joined the Woods Hole Oceanographic Institution as a Postdoctoral Scholar. I will begin an appointment as an Assistant Professor at the University of Colorado Boulder summer 2022. I am very thankful for the support from the Student Research Grants Program and the IAGC community!

[1] Diaz MA, Li J, Michalski G, Darrah TH, Adams BJ, Wall DH, Hogg ID, Fierer N, Welch SA, Gardner CB and Lyons WB (2020) Stable Isotopes of Nitrate, Sulfate, and Carbonate in Soils From the Transantarctic Mountains, Antarctica: A Record of Atmospheric Deposition and Chemical Weathering. *Front. Earth Sci.* 8:341. doi: [10.3389/feart.2020.00341](https://doi.org/10.3389/feart.2020.00341).

Christina Richardson, University of California at Santa Cruz

In 2018, I received an IAGC Grant, which helped support dissolved and particulate carbon concentration and stable isotope analyses as part of my dissertation research. These data were used to better constrain the magnitude and source of aqueous carbon in drained and impounded peatlands in the Sacramento-San Joaquin Delta of central California. Few existing studies had considered the importance of this pathway, and we hypothesized that lateral carbon exports from

these sites were measurable and an important carbon term in regional carbon budgets.

Indeed, our work, recently published in *JGR: Biogeosciences*[1], shows that lateral carbon exports from drained peatland sites in the Delta were (1) similar in magnitude to lateral fluxes measured in other boreal and temperate drained peatlands, and (2) the same order of magnitude as gaseous carbon emissions in this system. Globally, these results emphasize the importance of accounting for lateral carbon terms in future assessments of carbon sinks and sources in drained peatlands. Regionally, these results suggest that management tactics for the area, which are aimed at reversing local subsidence and reducing greenhouse gas emissions, will need to take into consideration this understudied transport pathway and source of carbon.



[1] Richardson, C.M., Fackrell, J.K., Kraus, T.E.C., Young, M.B. and Paytan, A., 2020. Lateral carbon exports from drained peatlands: An understudied carbon pathway in the Sacramento-San Joaquin Delta. *Journal of Geophysical Research: Biogeosciences*, 125, p.e2020JG005883. <https://agupubs.onlinelibrary.wiley.com/doi/abs/10.1029/2020JG005883>

Applied Geochemistry News

A letter from the Editors-in-Chief

We are excited to share with you that the newly JCR impact factor of *Applied Geochemistry* reached a historic high – 3.52!!! This is a remarkable achievement compared with the 2.90 last year, a 0.5 score increase. We also did very well in the new Scimago ranking and won back our Q1 status in the category of "pollution." For reference, our major competing journals received the following numbers: *GCA* 5.01, *Chem Geol* 4.01, and about the same as the ACS earth sciences flagship *Earth Space Chem* (3.47).

The number of 3.5 is meaningful for *AG*, since we are way above the magic 3.0 IF score. We are celebrating 35 year anniversary and are always proud of our internationality, which means the 24 hours of a day in any time zone, we have our readers, authors and reviewers active in our global community. It is a lovely coincidence.

With this initial success of boosting the impact factor, we are more confidence in our current efforts to further promote the influence of *AG* both as a journal and as a community representing IAGC. We have several wonderful initiatives including *AG* Classics, Emerging Investigators, Excellence-in-Review Awards. We always welcome your input, nominations and recommendations. If you are not fully aware of those activities, I would encourage you to check the recent updates in the IAGC website. In 2021, we will start to select "annual best paper award" and set up a multi-language webinar series to feature high quality papers in *AG*. The formation of a strategic advisory board and an early-career editorial board are also in in progress.

We, as well as the IAGC, are grateful for your contribution to the journal in various roles of this dynamic ecosystem. We very much appreciate it. The first year of having two co-editors-in-chief to take the helm of the journal led to this positive outcome. Keeping on this momentum, we look forward to continuing the odyssey with you that eventually creates a top flagship journal.

Thank you all – take care!

Best Regards,

Michael Kersten
Zimeng Wang



Michael Kersten, Johannes Gutenberg University Mainz, Germany



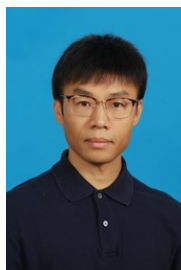
Zimeng Wang, Fudan University, China

Emerging Investigator Series

Lauren E. Beckingham is an Assistant Professor in the Department of Civil and Environmental Engineering at Auburn University. She holds a Ph.D. and MA in Civil and Environmental Engineering from Princeton University and a B.S. in Environmental Engineering from Michigan Technological University. Prior to joining Auburn, she was a Geochemical Postdoctoral Fellow at Lawrence Berkeley National Laboratory. Her expertise and interests are in understanding water–rock interactions in environmental systems, particularly in subsurface energy systems including geologic CO₂ sequestration and compressed energy storage. Her laboratory is currently supported by the NSF, including a 2019 CAREER award, ACS PRF, and DOE. Her recent paper entitled “[The impact of mineral reactive surface area variation on simulated mineral reactions and reaction rates](#)” was published in *Applied Geochemistry*, and is featured together with the Emerging Investigator Series. ([Read her full interview](#))



Wang Zheng is a "Peiyang scholar" professor of the School of Earth System Science at Tianjin University. He graduated from the University of Science and Technology of China with a B.S. degree, and received his PhD degree from Trent University (Canada). He has been a postdoctoral fellow at Oak Ridge National Lab and University of Toronto, and has worked as a research associate at Arizona State University. His research area is metal stable isotope geochemistry. Particularly, he focuses on the mechanism of metal isotope fractionation, the application of mercury isotopes in tracing the biogeochemical cycle of mercury, and the



application of metal isotopes as proxies to understand the evolution of Earth's environment and life. He received the 18th "Hou Defeng" young scientist award from the Chinese Society for Mineralogy, Petrology and Geochemistry in 2020. His recent paper entitled “[Mercury stable isotopes reveal the sources and transformations of atmospheric Hg in the high Arctic](#)” was published in *Applied Geochemistry*, and is featured with the Emerging Investigator Series. ([Read his full interview](#))

The IAGC **Emerging Investigator Series** highlights excellent work by early career independent researchers which brings new insights to the field of geochemistry or promotes geochemical applications. Multidisciplinary work related to applied geochemistry, biogeochemical processes, and environmental geochemistry are also highly welcomed. Emerging Investigators and their featured articles are advertised to diverse disciplines and communities through multiple platforms of the journal and the IAGC. The selected Emerging Investigators will also be considered as candidates for the early career honors bestowed by IAGC and the editorial engagements with *Applied Geochemistry*. The application period is continuously open.

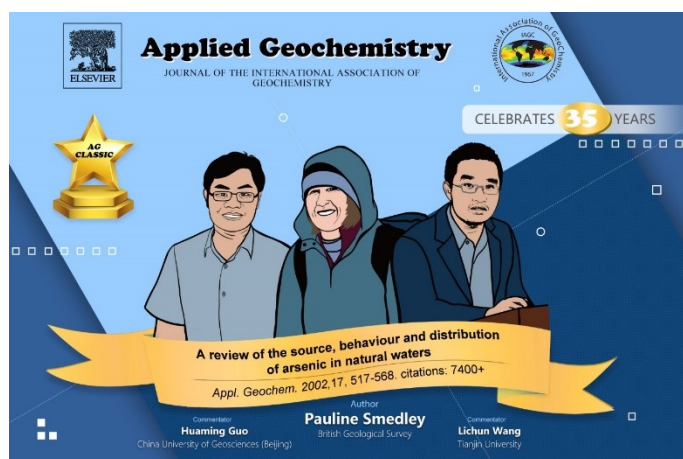
For more information visit: www.iagc-society.org/Emerging_Investigator_Series.html.

AG Classics

The celebration of 35 years is a great moment to reflect on *Applied Geochemistry's* publication milestones, which often shaped their respective research areas. In our special program “AG Classics,” we select and highlight those key publications. When possible, the journal will invite authors and a few commentators, who work in the same area and might have been influenced by the paper, to create a virtual panel discussion to present their perspectives on the evolution of the topic and identify the current frontiers, knowledge gaps, and research needs. We anticipate that this initiative will engage

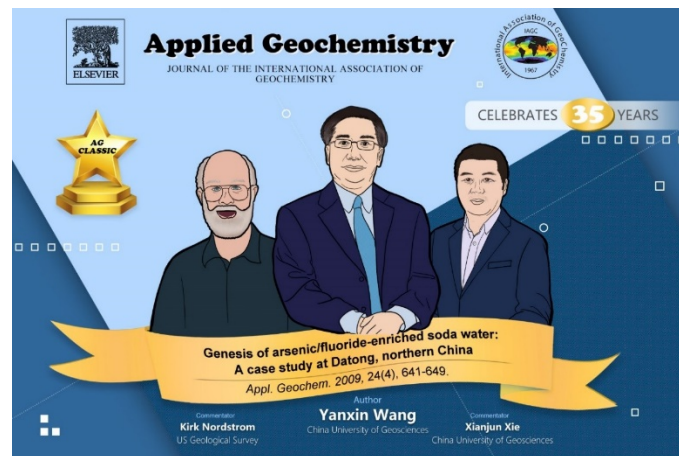
researchers all over the world with various backgrounds and eventually present valuable documentation of the journal's history and the discipline of geochemistry at large.

Issue 1. Pauline Smedley discusses her review on arsenic in natural waters



In the first issue of AG Classics, Huaming Guo (China University of Geosciences), Lichun Wang (Tianjin University) and Pauline Smedley (British Geological Survey) discuss her 2002 classic paper “A review of the source, behaviour and distribution of arsenic in natural waters.” This is the most highly cited paper on arsenic geochemistry, with over 7400 citations since its publication in 2002. Here, Pauline, Huaming, and Lichun discuss the paper and arsenic geochemistry in natural waters. [Read the whole interview here](#)

Issue 2. Yanxin Wang discusses his 2009 paper on the Genesis of arsenic/fluoride-enriched soda (Na-HCO₃) water



This issue of AG Classics is a conversation with Yanxin Wang, Kirk Nordstrom, and Xianjun Xie. **Yanxin Wang** is lead author of the 2009 AG paper “Genesis of arsenic/fluoride-enriched soda water: a case study at Datong, northern China” and Professor and President, China University of Geosciences (Wuhan), and IAGC Fellow. **Kirk Nordstrom** is a Senior Scientist (Emeritus) at the US Geological Survey, IAGC Fellow, and GSA Birdsall-Dreiss Distinguished Lecturer. **Xianjun Xie** is a Professor at China University of Geosciences (Wuhan) and Associate Editor of AG. [Read the whole interview here](#)

Recent Special Issues in AG

[Special Issue on Innovative methods for characterizing evolution and budgets in water – rock systems: A tribute to Tom Bullen and Stepan Shvartsev](#)

Edited by Romain Millot, Orfan Shouakar-Stash, Pierpaolo Zuddas, Ludmila P. Alexeeva
Last update 12 June 2021

[Applied geochemistry in porous media: Interplay of chemical reactions, physical alteration, and flow phenomena](#)

Edited by Mehdi Gharasoo, Liwei Zhang, Hang Deng

Last update 9 June 2021

[Special Issue on Big Data and Artificial Intelligence: Applications in Geochemical Exploration and the Environment](#)

Edited by Lixin Zhu, Yanpeng Liu, Scott Alan Wood, Simone Ludwig

Last update 8 April 2021

[Special Issue on Geochemistry research for cement-based materials in nuclear waste disposal applications](#)

Edited by Marcus Altmaier, Barbara Lothenbach, Volker Metz, Erich Wieland

Last update 15 January 2021

A Story of a “Watershed”: Celebrating 35 Years of Applied Geochemistry

This year we celebrate 35 years of excellence. Read the [editorial by Zimeng Wang et al.](#) contemplating this “watershed” year for our official journal, *Applied Geochemistry*.

Charitable Giving

Members can make a charitable gift to the IAGC, either for general fund support or for special initiatives (such as the new Jin Jingfu Lecture) during online membership renewal. You may donate at any time online, either during your membership renewal or separately. You can also donate right now through the IAGC web site (www.iagc-society.org/donate.html)

IAGC is a 501(c)3 non-profit organization and donations to the Society are tax-deductible in the U.S. (EIN: 48-0943367).

2021 Meetings

M-FED Conference: 2nd workshop on Microbialites: Formation, Evolution, and Diagenesis

Paris, France

13-15 October, 2021

www.microbialites.com/meeting-2021

The Muséum National d’Histoire Naturelle (MNHN) in Paris is pleased to announce the 2021 edition of the workshop Microbialites: formation, evolution, diagenesis (M-fed 2021). The scope of this meeting is to discuss emerging/state-of-the-art aspects of microbialite research, from molecules to fabrics, structures, early to late diagenetic processes, and the microbialite fossil record from the Anthropocene to the earliest traces of life. In an open forum, and with a prominent contribution from PhD students and postdoctoral researchers, we will scrutinize and build on current knowledge of microbialite formation, evolution and diagenesis. We will hold plenary keynote talks, contributed talks and posters sessions.

This workshop will also provide the opportunity to examine the MNHN Microbialite Collection that includes hundreds of specimens spanning more than 3 billion years of Earth History. Discussions in small breakout groups are also anticipated on specific topics such as methodologies used in microbialite research, community efforts for sample and data sharing, and collection curation.

The workshop seeks to encourage early-career scientists and offers an opportunity to interact with peers and network with scientists of diverse backgrounds. Funding for students will be available.

In the context of the global COVID situation, several options are worked out presently: (i) a hybrid format, combining an onsite meeting for delegates who can travel, with an online meeting for those who cannot. All appropriate safety measures will be in place; or, if by that time physical presence is not possible at all, (ii) a virtual meeting. Please continue to visit the website for updates, and looking forward to seeing you in Paris!

2022 Meetings

2nd IAGC International Conference (WRI-17 and AIG-14)

Sendai, Japan
30 July - 4 August 2022
www.wri17.com

The 2nd IAGC International Conference will be held in Japan, hosted by Secretary General Noriyoshi Tsuchiya (Tohoku University). Like the previous meeting in Tomsk, it will combine two of our most popular working groups, Water-Rock Interaction and Applied Isotope Geochemistry.

GES-12



Earth system
interactions on a
changing planet

ETH zürich

ETH Zurich, Switzerland
July 24-29, 2022.
www.ges12.com

GES-12 brings together world-leading scientists in all fields of surface geochemistry and environmental geochemistry. The conference has a strong focus on interactions between the Earth's spheres: the lithosphere, hydrosphere, atmosphere and biosphere, and how these interactions respond to changing environmental and climate conditions. The overarching theme of GES-12 is **Earth system interactions on a changing planet**.

The conference aims to strengthen connections between research disciplines and to establish new networks. It features invited plenary talks covering a wide range of cutting-edge research themes. GES12 presents eight themes at the forefront of research and features a list of excellent speakers from prestigious research institutions such as Caltech, MIT, NASA and Harvard. The extensive poster and networking sessions give ample opportunities to discuss newest research highlights and innovations and to visit the exhibitions.

ISEG 2022 (International Symposium on Environmental Geochemistry)

Moscow, Russia
23-26 August 2022
iseg2022.org

The International Symposium on Environmental Geochemistry (ISEG) is an informal association of world - class experts working in the field of geology, ecology and environmental geochemistry. The Symposium has been held on a regular basis since the late 1980s, once every three years, and has a constant success among geochemists around the world. The Symposium is usually attended by at least 200 well-known scientists and specialists from dozens of countries around the world.

The Moscow Symposium – ISEG'22 promises to become one of the landmark events in the life of the scientific community of Russia and the World. The following topics are expected to be discussed in its program:

- anthropogenic and geogenic chemical elements in the human environment;
- environmental legislation and management issues;
- regional databases of geochemical data in relation to management issues in agriculture and environmental protection;
- geochemical monitoring of production and consumption waste storage and disposal areas;
- methods of regional geochemical mapping – new ideas and approaches,
- as well as a number of other issues relevant to the implementation of strategic plans for the economic development of countries and territories in the aspect of solving urgent problems of environmental protection and public health.

1. Nutrient fluxes at catchment level
2. Integration of terrestrial and aquatic carbon fluxes across the landscape
3. Biogeochemistry of lakes and rivers
4. Biogeochemistry of wetlands
5. Remote sensing for modeling of biogeochemical fluxes
6. Fluxes between atmosphere & ecosystems
7. Aerosols and VOCs in ecosystem functioning
8. Methane and nitrous oxide fluxes from trees
9. Biodiversity issues of ecosystem behavior
10. Biogeochemistry of trace elements and micropollutants in ecosystems
11. Soil and microbial processes
12. Ecosystem restoration and rehabilitation
13. Peatland processes

BIOGEOMON 2022 (10th International Symposium on Ecosystem Behavior)

University of Tartu, Estonia

June 26 – 30, 2022

biogeomon2020.ut.ee

The focus of BIOGEOMON is on the biogeochemistry of various ecosystems as influenced by anthropogenic and environmental factors. We invite empirical and modeling studies on fluxes and processes related to the turnover of major and trace elements at the ecosystem, watershed, landscape, and global scale.

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