



The Clay Minerals Society

www.clays.org

THE PRESIDENT'S CORNER



Well, that's my term already over as President. With a shorter than usual gap between our annual meetings this time around, it certainly seems to have flown by. As President, you certainly realise how much goes on in the background of the society and how many people contribute to keeping everything running by serving on various committees and in other roles. So, a big thank you to all who have helped me in this job over the past 10 months, particularly Mary in the CMS office. I hope I have achieved a few things. Changes are afoot with our journal, which you will learn more about soon. New source clays are in the pipeline to replace old. Additionally, we should soon have a new CMS award that targets Early Career Researchers. A new type of membership is also in the pipeline, in part as a result of what our members responded in our recent survey. We hope also to have a members-only area of the website in the near future, where you can take full advantage of being a member of CMS. Lots of people have contributed to developing these initiatives; some were started by our previous President, Jeff Greathouse, and those yet to be completed will now be passed into the hands of our next President, Sabine Petit; I wish her every success in this role.

Stephen Hillier, CMS President

CMS PROFESSIONAL AWARD 2023 SPOTLIGHT



Susan L Brantley is the recipient of the 2023 Pioneer in Clay Science Lecture. She is Evan Pugh University Professor and Hubert and Mary Barnes Professor of Geosciences at Pennsylvania State University, where she also served as Director of the Earth and Environmental Systems Institute from 2003 to 2022. As a geochemist, Dr. Brantley focuses on understanding what controls the chemistry of natural water and how water interacts with the rocks through which it flows. Her recent work has focused on measuring and modeling how rock turns into soil. She also studies the environmental impacts related to the use of hydraulic fracturing ("fracking") in natural gas and oil extraction. Dr. Brantley, who has published over 300 refereed journal articles, was appointed in 2012 by U.S. President Barack Obama to serve as a member of the Nuclear Waste Technical Review Board, where she served until 2021. Brantley is a member of the U.S. National Academy of Sciences and is a foreign member of the French Academy of Sciences. She lives with her husband in State College Pennsylvania, where she watches from afar the careers of her two daughters, both geoscientists living in Minnesota.

CMS STUDENT RESEARCH AWARD WINNERS

Congratulations to eight outstanding research students on their successful bid for the CMS student research grant! The 2023 Student Research Grant Awardees are **Opeyemi Aransiola** (Georgia State University, USA), **Henry Crawford** (University of British Columbia, Canada), **Kevin Byerly** (Texas Tech University, USA), **Emily Doyle** (Texas Tech University, USA), **Jonathan Smolen** (University of Connecticut, USA), **Kirsten Hawley** (Indiana University, USA), **Sen Wang** (Queensland University of Technology, Australia), and **Md. Zubaer Hosen** (University of Newcastle, Australia). Here we feature Kevin and Emily, while others will be our spotlight in future issues.



Kevin's research focuses on rare earth element (REE) signatures in texturally diverse hydrothermal chlorite, which is found as a main alteration product of many mafic lithologies. His study will shed light on chlorite formation temperatures and textural contexts, and the chlorite REE budget. To gain analytical data, Kevin is using a range of microbeam spectroscopic and microscopical techniques, and chlorite stable isotope data. His study will provide much needed insight into the mobility of REEs in correspondence with clay mineral neoformation in hydrothermal systems.



Emily is investigating Iron Age communities in the Eastern Adriatic. The application of clay mineralogy and geochemistry in that culture is her key focus. Clay minerals are critical to this research as they largely control the plasticity of the raw material and the structural integrity of ceramic vessels used in those communities. Thorough analysis of both potential raw material sources and ceramics will help us understand insight into the everyday lives of Iron Age communities.

JOURNAL'S ISSUE UPDATE

Here are some recent papers published in *Clay and Clay Minerals* (<https://www.springer.com/journal/42860>). Volume 71, issue 1, so far, contains several articles. They are:

- Potential Uses of Local Clay Materials for the Production of Porcelain Electrical Insulators, Ethiopia, by Wondemagegnehu et al.
- Rare-Earth Minerals in Kaolin Ore, Mine Tailings, and Sands – Central Georgia, Upper Coastal Plain, by Boxleiter and Elliott.
- Molecular Dynamics Simulation of Pore-Size Effects on Gas Adsorption Kinetics in Zeolites, by Greathouse et al.
- Enhanced Adsorption Of Humic Acid On Amino-Modified Bentonite, by Jiang et al.
- The Formation and Transformation of Manganese Oxide Minerals on the Surface of Kaolinite, by Zhao et al.
- Methods for Determination of the Layer Charge of Smectites: A Critical Assessment of Existing Approaches, by Christidis et al.
- Direct Conversion of Cellulose into 5-HMF by Transition-Metal Doped Montmorillonite Catalyst in Water, by Tunç et al.
- Yttrium and REE Mineralization in Manganese Pods Occurring in Bentonite Deposits of the Eocene Texas Coastal Plain, by Berti et al.
- Anomalous Viscosity, Aggregation, and Non-Ergodic Phase of Laponite® RD in a Water–Methanol Binary Solvent, by Tiwari et al.
- Catalytic Reduction of Congo Red to Low-Toxicity Forms Using a Low-Cost Catalyst Based on Modified Bentonite Material, by Zahraoui et al.



IMPORTANT REMINDER

Join CMS

Don't forget to renew your membership or join us! Please visit www.clays.org or contact the Business Office at cms@clays.org. There are tangible benefits to the members. Additional benefits are also available for students, such as Student Research Grants (up to \$3000), Student Travel Awards (up to \$1000), and free access to the full text of *Clays and Clay Minerals*. Check more via https://www.clays.org/join_benefits_of_membership/