



The Clay Minerals Society

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THE PRESIDENT'S CORNER

Dear CMS community,



As introduced in the *Participating Societies* section of this issue, The Clay Minerals Society (CMS) was founded in the 1960s with the mission of stimulating research and disseminating knowledge across all aspects of clay science and technology. Over the past six decades, the scope of our field has grown tremendously, and clay science is now deeply integrated into numerous disciplines.

Today, we explore clays across vast spatial and temporal scales. On the microscopic end, theoretical and experimental tools now enable us to investigate atomic and crystallographic structures with sub-angstrom precision. At the opposite end, researchers study clay mineral transformations on a planetary scale—including on worlds hundreds of millions of kilometers away. Temporally, we span from molecular dynamics simulations tracking atomic movements at the femtosecond scale, to geological processes taking place over billions of years. Clays continue to play critical roles in a diverse array of applications, from advanced biohybrids and drug delivery systems to nanocomposites, nuclear waste containment, environmental remediation, and space exploration.

It is an honor to serve as President of The Clay Minerals Society during such an exciting time. I'd like to express my sincere appreciation to our immediate Past President, Dr. Ian C. Bourg, for his dedication and leadership. His efforts in addressing the Society's challenges, enhancing engagement with early-career scientists and students, and strengthening CMS's financial footing have laid a strong foundation for the years ahead.

As this issue of *Elements* reaches you, many of you will have just returned from the 2025 International Clay Conference in Dublin, Ireland. To carry forward the energy, dialogue, and collaboration from that event, I encourage you to submit session proposals for the 2026 CMS Annual Meeting, to be held in Provo, Utah, USA in early July 2026. Further details are available on our website: <https://clayconferences.org/>.

CMS is committed to supporting the next generation of clay scientists. We offer free student memberships, which provide discounted conference registration and eligibility for research grants, travel awards, and presentation prizes. For early-career researchers, the newly launched **Warren Huff Clay Science Pathway Award** is designed to support professional development and growth in the field.

We also welcome volunteers to serve on CMS committees. If you're interested in contributing your time and expertise, please reach out to me or the CMS business office at cms@clays.org.

Among the many programs CMS offers, one of the highlights is our biennial mineral analysis competition: the **13th Reynolds Cup**, which will be held in 2026. It will be organized by Dr. Mark Raven, winner of the 12th Cup, and his team. If you're passionate about quantitative mineral analysis and would like to hone your skills using previous contest samples, please contact the CMS office to learn more.

I look forward to an exciting year ahead. Your ideas and feedback are always welcome. I encourage you to visit www.clays.org to explore our full range of member services, publications, awards, educational resources, and more.

Warm regards,

Youjun Deng, CMS President

CMS PROFESSIONAL AWARD

Pioneer Lecture 2025

Prof. Chris Greenwell receives the CMS 2025 Pioneer in Clay Science Award in recognition of his work on the use of computer simulation to understand the structure and properties of layered minerals. Chris is a professor of geochemistry in the Department of Earth Sciences, and a former Head of the Department of Chemistry and co-director of the Institute of Advanced Study at the University of Durham, UK. He undertook his PhD on hybrid organo-layered double hydroxide materials at the University of Cambridge (UK), working under the supervision of Prof. Bill Jones. The need to blend many different analytical methods to understand interlayer structure in these materials fascinated Chris and led him to the use of molecular simulations. Early work, while in the team of Prof. Peter Coveney, at University College London (UK), used high-performance computing to develop large-scale atomistic simulations (>250K atoms) of layered minerals, enabling realistic complexity, derivation of mechanical properties, and understanding of biomolecule uptake mechanisms. Subsequently, his work addressed understanding surface-liquid affinities (wettability) and prediction of swelling alteration, allowing improved shale swelling inhibitors to be designed for geotechnical applications. Chris's team has worked closely with industry on many layered mineral science projects. He served as Chair of the Clay Minerals Group of the Mineralogical Society of Great Britain and Ireland (2014–2017), has been an Associate Editor of *Clay Minerals – Journal of Fine Particle Science*, and is a recipient of the Max Hey Medal and a Distinguished Lecturer Award from the Mineralogical Society of Great Britain and Ireland.



STUDENT AWARD 2025 SPOTLIGHTS

Congratulations to our six Student Research Award winners for 2025: **Owen McCaffrey**, The University of Texas at Dallas, Dallas, Texas, USA; **Elias Fernandes Cardoso Neto**, Texas Tech University, Lubbock, Texas, USA; **Bethany Morgan**, Texas Tech University, Lubbock, Texas, USA; **Viktória Planetová**, Institute of Inorganic Chemistry SAS, Bratislava, Slovakia; **Rafique Uddin**, University of Newcastle, Callaghan, NSW, Australia; and **Segun Olabanji Oladele**, The Pennsylvania State University, University Park, PA, USA.

Mr. Oladele is also the recipient of the Robert J. Reynolds, Jr. Research Award for his top-scoring grant.

We are featuring Mrs. Planetová's biography in this issue—read more in the next one!

Viktória Planetová's research focuses on photoactive hybrid materials composed of smectite-group clay minerals and organic dyes, characterised by tunable optical properties. Her CMS research grant will support the study of charge interactions between dye molecules and the smectite surface. While surface charge is known to affect the arrangement of luminophores and their optical behaviour, systematic studies on the mutual influence between dye charge distribution and smectite surface charge are still lacking. The knowledge gained may enhance the materials' photoactivity and stability, paving the way for applications in photocatalysis, optoelectronics, solid-state luminescent materials, and photosensitisers.

