

# The Clay Minerals Society

[www.clays.org](http://www.clays.org)

## THE PRESIDENT'S CORNER



Firstly, I would like to say what an honor it is to serve The Clay Minerals Society (CMS) as President. Last year as Vice President, one of my tasks was to find people willing to serve on the various standing committees. Along with our Council, these committees (there are currently ten of them) and the business they conduct are key to the vitality of CMS. Vacancies on these committees and on Council arise each year as a result of the rolling programs of membership. This year, I would like to welcome Ian Bourg as Vice President Elect and Pilar Aranda, Shane Butler, and Anne-Claire Gaillot as our new Council members. If you count all our officers, councilors, and standing committee members, you may be surprised to learn that over 60 people contribute to the running of our society. You can find details of our committees on our website, and if you are willing to serve in some capacity, please get in touch with our Vice President Sabine Petit, who will be very happy to hear from you. To everyone already contributing, thank you for your energy, enthusiasm, and willingness to shape the future of The Clay Minerals Society.

**Stephen Hillier**, CMS President

## CMS STUDENT RESEARCH AWARD WINNERS

The 2022 Student Research Grant Awardees are Maria Arizaleta, Yuqing Bai, Savannah Rathbun, and Himanshu Yadav. Here, we are featuring Savannah and Himanshu, while Maria and Yuqing were the spotlight in the previous issue.



**Himanshu Yadav's** research with Professor T.V. Bharat and Professor Sachin Kumar examines the containment of inorganic ions, heavy metals, and viral pathogens with clays and surface-modified clays. Municipal solid waste contains high concentrations of inorganic salts and heavy metals, which migrate to the groundwater, leading to its contamination. Clay-based barriers are utilized to avoid such contaminations due to its high sorption ability, low hydraulic conductivity, and high

specific surface area. Himanshu's work involves experimentation on the sorption, hydraulic, and diffusion characteristics of bentonite, kaolin, and polymerized clays. He is also investigating the fate and transport parameters of viruses for containment applications. He is thankful to the CMS for supporting his research.



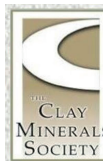
**Savannah Rathbun** expressed her gratitude to the CMS for awarding her a student research grant that will further her master's research. She graduated from the University of Georgia (USA) with a Bachelor in geology and is currently at the University of Mississippi (USA) earning her Master's degree in geological engineering. Her research focuses on reconstructing Paleocene critical zone conditions prior to the onset of Paleocene-Eocene hyperthermal warming

events. This work will continue to establish our understanding of the magnitude of Paleocene-Eocene hyperthermal warming events, and of climate change effects in the mid-south. This grant will provide funding for deuterium and oxygen stable isotope analysis on kaolinite found in a section of alternating paleosol and lignite seams from the Naheola Formation in NE Mississippi. Stable isotope results will aid in reconstructing the paleotemperature, meteoric water line, and surface air temperatures.

## 11<sup>th</sup> REYNOLDS CUP WINNER

The 11<sup>th</sup> edition of the Reynolds Cup was organized by Rieko Adriaens and Gilles Mertens of Qmineral (Belgium) with the support of the Clay Minerals Society, DTTG, and the Royal Belgian Institute of Natural Sciences. Three test samples were carefully prepared as mixtures of pure minerals to represent realistic rock assemblages: a 'shale deposit', a 'lacustrine deposit', and a 'ball clay deposit'. In total, 93 laboratories registered with ultimately 68 labs submitting their results. Top finishers were (i) Steve Hillier and Helen Pendrowski (The James Hutton Institute, Scotland) with a total bias of 35.2, (ii) Mark Raven and team (CSIRO, Australia) with a total bias of 46.0, and (iii) Peter Uhlík and team (Comenius University, Slovakia) with a total bias of 70.4.

A full report can be found on the CMS website ([https://www.clays.org/reynolds\\_past\\_winners/](https://www.clays.org/reynolds_past_winners/)).



### Do you know? FROM CMS HISTORY

Established in 2000, the Reynolds Cup was opened for competition in 2002. The inaugural winner was Reinhard Kleeberg, the University of Mining and Technology, Mineralogical Institute, Freiberg Germany.



Steve Hillier and Helen Pendrowski.

## 2023 The Clay Minerals Society Annual Meeting

UT Austin - JJ Pickle Research Campus -  
Commons Conference Center  
May 20, 2023—May 25, 2023  
10100 Burnet Road  
Austin, TX 78758

## CMS MEMBERSHIP RENEWAL

Don't forget to renew your membership!