



The Clay Minerals Society

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THE PRESIDENT'S CORNER



The topic of this column is the Clay Minerals Society (CMS) awards. These awards recognize outstanding researchers who have made significant contributions to clay science. I hope the following brief descriptions of these awards will encourage you, the members, to nominate worthy candidates.

The Bailey Award is the highest honor of the Clay Minerals Society. It is awarded solely for scientific eminence in clay science as evidenced primarily by the publication of outstanding original scientific research.

The G. W. Brindley Clay Science Lecture is most interesting and creative in its simplicity. This lecture recognizes a clay scientist who will infuse the society with new ideas, someone who is both a dynamic speaker and is involved in innovative research. The speaker should deliver a presentation that Professor Brindley would applaud.

Marion L. and Chrystie M. Jackson Mid-Career Clay Scientist Award recognizes mid-career scientists for excellence in the contribution of new knowledge to clay minerals science through original and scholarly research. This description speaks for itself. Deserving recipients should show the inspiration and drive to keep pushing the boundaries during the second half of their careers.

Pioneer in Clay Science Lecture recognizes research contributions that have led to important new directions in clay science. The local organizing committee of the CMS Annual Meeting selects a person who will strengthen the technical program, which may include a symposium in an area where the Pioneer awardee is recognized.

The society also has a generous grants program for students. There are many deserving scientists and students that just need a concerned colleague or professor to initiate the nomination process.

You can find nomination criteria and expectations for all CMS awards on CMS website (<http://www.clays.org/Awards/Grants>).

Douglas K. McCarty (mccardog@gmail.com),
President, The Clay Minerals Society

56th ANNUAL CLAY MINERAL SOCIETY MEETING

The 56th Annual CMS Meeting will be held 1–5 July 2019 in Paris (France) at the Jussieu Campus of the Pierre and Marie Curie University in conjunction with the Euroclay meeting of the European Clay Groups Association (ECGA) and the 6th Mediterranean Clay Meeting. Information about the meeting can be found on the conference website: <http://euroclay2019.sciencesconf.org>.

CMS MEMBERSHIP RENEWAL

Don't forget to renew your membership for 2018!

STUDENT RESEARCH SPOTLIGHT

Congratulations to **Sarick Matzen** (University of California, Berkeley, USA) and **Jeff Hannon** (University of Cincinnati, USA) for winning a 2018 CMS Student Research Grant!



Sarick Matzen is interested in the **biogeochemical cycling of contaminants at the rhizosphere scale**, particularly how soil properties (such as clay, iron oxide, and organic matter content) control the uptake of metal(loid) contaminants in plants. His CMS-supported work will determine how the arsenic-hyperaccumulating fern *Pteris vittata* releases arsenic from iron and aluminum oxides in soils with different clay contents. The fern takes up this released arsenic and hyperaccumulates it in its aboveground biomass where the arsenic reaches very high concentrations. Because arsenic is likely less phytoavailable in soils with higher clay and iron/aluminum oxide content, understanding how the fern accesses these fractions is key to the development of sustainable remediation methods for arsenic-contaminated soils. Matzen will apply his findings to work with urban farmers, helping them rehabilitate contaminated urban land for agriculture.



Jeff Hannon's doctoral research focuses on **analyzing the isotopic signatures of Cretaceous bentonites**, a claystone predominantly consisting of smectite that originates from diagenetically altered volcanic ash. The Sr composition of plutonic rocks is determined by the amount of radiogenic ⁸⁷Sr inherited through magmatic fractionation. The bentonite clay retains the bulk elemental composition of the plutonic source, but it is not clear if the original Sr signature is also retained. Hannon's research will determine the viability of using bentonites to track changes in Sr composition through time using inductively coupled plasma mass spectrometry (ICP-MS). This study is currently underway on bentonite samples from the Western Interior Seaway, a source of dozens of bentonites originating from Cretaceous magmatism associated with widespread convergence and terrane accretion along the Pacific margin of North America. Additionally, he will use the ICP-MS data in conjunction with mineralogical data from X-ray diffraction to correlate regional Cretaceous stratigraphy along the Western Interior Seaway.

55th ANNUAL CLAY MINERAL SOCIETY MEETING

On 1 February 2018, registration and abstract submission will open for the 55th Annual CMS Meeting (www.conferences.illinois.edu/cms) to be held 11–14 June 2018 at the University of Illinois at Urbana-Champaign (USA). The title of the meeting is "New Visions in Clay Science." The meeting will include the workshop "Medicinal Applications of Clay Minerals", which will be led by Professor Jin-ho Choy (Ewha Womans University, South Korea) and comprise the following thematic sessions:

- "Clay Interactions with Contaminants and Radionuclides: From Molecular Mechanisms to Environmental Fate", organized by Jeff Catalano (Washington University in St. Louis, Missouri, USA) and Nik Qafoku (Pacific Northwest Laboratory, Washington, USA).
- "Extracellular Electron Transfer (EET) Goes AC/DC: Microbial Oxidation and Reduction of Insoluble Fe Oxides and Phyllosilicates in Soil and Sedimentary Environments", organized by Eric Roden (University of Wisconsin, USA) and Jinwook Kim (Yonsei University, South Korea).



- “The Isotopy of Clay Minerals – Mysteries in the Sheets”, organized by Fred Longstaffe (University of Western Ontario, Canada).
- “Abiotic Redox Processes Related to Clays and Clay Minerals”, organized by Yuanzhi Tang (Georgia Institute of Technology, USA).
- “Molecular Studies of Clay Minerals and Related Structures”, organized by Jeffrey Greathouse (Sandia National Laboratories, USA).
- “Phyllosilicates Throughout the Solar System”, organized by Michael Velbel (Michigan State University, USA).
- “The Role of Clay Minerals in Controlling the Properties and Geochemical Processes Associated with Hydrocarbon Systems”, organized by David Cole (Ohio State University, USA).
- “Structures and Reactivity of Clays and Nanoparticles in Soils and Water”, organized by Youjun Deng (Texas A&M University, USA), Mengqiang Zhu (University of Wyoming, USA) and Yuji Arai (University of Illinois, USA).
- “Illite–Smectite Group in Geological Systems, Soils, Laboratory, and Computer: The Complete Picture” organized by W. Crawford Elliott (Georgia State University, USA) and Jan Środoń (Institute of Geological Sciences, Polish Academy of Sciences).
- “New Visions in Clay Science: Bio-Nanoclays in Medicine”, organized by Jin-Ho Choy (Ewha Womans University) and Lynda Williams (Arizona State University).
- “Intensively Managed Clays in the Critical Zone”, organized by Paul Schroeder (University of Georgia).
- “Volcanic Ash as Source Material for Clay and Zeolite Mineral Formation”, organized by Rona Donahoe and Kim Genereau (both of the University of Alabama, USA).
- “Bentonite Barrier”, organized by Georg Grathoff (Ernst-Moritz-Arndt Universität Greifswald, Germany) and Stephan Kaufhold (Bundesanstalt für Geowissenschaften und Rohstoffe, Germany).
- “Teaching and History of Clay Sciences”, organized by Stephen Altaner (University of Illinois).
- “Applications of Infrared Spectroscopy to Clay Mineral Systems”, organized by Sabine Petit (Institut de Chimie des Milieux et Matériaux de Poitiers, France) and Jana Madejová (Institute of Inorganic Chemistry, Slovak Academy of Sciences).
- “Palygorskite: From Fundamental Research to Functional Materials”, organized by Ai Qin Wang and Junping Zhang (both Institute of Chemical Physics, Chinese Academy of Sciences).
- “Applications of NMR Spectroscopy to Clays and Clay Mineral Systems”, organized by Wei Li (Nanjing University) and Brian Phillips (SUNY Stony Brook)

Yuji Arai, Organizing Committee Chair

OBITUARY: JEAN-LOUIS ROBERT (1948–2017)

The Société Française de Minéralogie et de Cristallographie (SFMC) sadly lost Jean-Louis Robert, one of its long-time and active members. He passed away 17 July 2017 in Orléans (France). Jean-Louis presented his thesis (Thèse d’État) at Orsay University (France) in 1981 on the crystal-chemistry of micas and amphiboles. He was a recognized expert on the structural and spectroscopic properties of micas, clays and amphiboles. He also inherited the Orléans tradition of experimental mineralogy and developed new synthesis methods for clays and micas. Author of more than 100 articles, he was also a co-author on Milan Rieder’s classic article “Nomenclature of the Micas”. Jean-Louis animated many sessions and meetings in national and international meetings.



Jean-Louis Robert at the EMU School 2004 in Vienna.

Jean-Louis spent his career within France’s national scientific research organization, the CNRS, mostly at the Centre de Recherche sur la Synthèse et la Chimie des Minéraux, now the Institut des Sciences de la Terre d’Orléans (ISTO). He investigated the substitution processes and the extent of solid solutions in natural and synthetic micas and amphiboles through detailed structural and spectroscopic studies. Through numerous collaborations, he was well recognized by the international mineralogical community. In 2006, he joined the Institut de Minéralogie, de Physique des Matériaux et de Cosmochimie (IMPMC) in Paris, where he was a dynamic member of the Earth science team. There, he continued to develop his activity on micas and amphiboles and introduced new experimental approaches to mineral synthesis. Recently, Jean-Louis turned to research areas, the structural control of clay hydration. He was a member of several professional societies, including the SFMC and the Groupe Français des Argiles (GFA), which he chaired from 2011 to 2015. He was also President of the ECGA (European Clay Groups Association) for the period 2015–2019 and Chair of the organizing committee of EUROCLAY 2019. He was well-known for his enthusiasm for science and society and for his devotion to our community. He was a passionate *aficionado* of clays, clay science and experimental mineralogy, and he always had a door open to help students and researchers.

Clay science has lost a great and active scientist, society member, friend, and colleague. Jean-Louis Robert will be fondly remembered for many years.

**Etienne Balan, Georges Calas,
Laurence Galois, and Maguy Jaber**

AWARD PRESENTATION

William Rapin, co-winner of the 2017 Häuy-Lacroix Prize (awarded for the best PhD thesis in mineralogy), received his medal from Bertrand Devouard, SFMC President, in Paris on 5 October 2017. On this occasion Rapin presented his PhD work on the hydration of Mars surface using the data collected by the *Curiosity* rover.

