GORDON RESEARCH CONFERENCE ISOTOPES IN BIOLOGICAL & CHEMICAL SCIENCES

The Gordon Research Seminar and Conference on Isotopes in the Biological and Chemical Sciences met in Galveston, Texas, USA, on February 5–10, 2012. The conference celebrated both the centennial of the first observation of a stable isotope, the detection of Ne-22 by Francis Aston, and the contributions of Jacob Bigeleisen to the calculation and interpretation of isotope effects on physical and chemical processes. Isotopes in biogeochemical processes were prominently featured in sessions organized by Thomas Hofstetter and Ariel Anbar. In the initial session, devoted to biogeochemistry and pollutant dynamics, Thomas Hofstetter provided an introduction to the types of studies that employ isotope-effect measurements. Martin Elsner (Institute of Groundwater Ecology, Helmholtz Zentrum München) and Daniel Hunkeler (University of Neuchâtel) presented research on isotopic fractionation in the environment attributable to microorganisms and the interpretation of the mechanisms of decomposition. Alex Sessions (Cal Tech) and Karen Casciotti (Stanford University) communicated data on the use of H and N isotope fractionation to infer pathways of microbial metabolism.

On the second day, the presentations veered more towards the geochemical. Edwin Schauble (University of California, Los Angeles) gave a talk on isotope thermometry requiring high-precision measurements. This was followed by presentations by Laura Wasylenki (Indiana University) on metal ion coordination and David Johnston (Harvard University) on sulfur fractionation.

The Gordon Research Conference on isotopes has long focused on the development and application of the theory of isotope fractionation. The introduction and adaptation of the "Bigeleisen equation" was covered by Alex van Hook, and other contributions toward the calculation of isotope effects were presented by Steven Schwartz and Piotr Paneth. The synergy of studying isotope fractionation in the environment coupled with the determination of isotope effects on enzyme systems was apparent during the discussions at this meeting.

The Geochemical Society (through its Meeting Assistance Program), the Biological Chemistry Division of the American Chemical Society, and Thermo Fisher Scientific provided support for the conference. The next planned meeting will be held in early February 2014 in Galveston.

Vernon Anderson
Conference Chair

GEORGES PÉDRO DAY

The Société Française de Minéralogie et de Cristallographie sponsored a day of talks on the theme "Georges Pédro and Soil Clays," in Paris on December 15, 2011. The meeting was organized by Christian Feller, director of research at the Research Institute for Development (IRD), on behalf of the French Association of Soil Studies (Association Française pour l'Étude du Sol, AFES) and the French Clay Group (Groupe Français des Argiles, GFA). About 100 colleagues and former students from near and far came to share this special day. Georges Pédro is a world-scale figure in clay mineralogy and soil science. He was a precursor in the domains of nanoparticles, biogeochemical cycles and light chemistry. He is a member of several academies, among which are the Academia Europaea, the French Academy of Sciences and the Agriculture Academy of France. He has long been a scientific advisor in agronomic sciences

at the OECD and a member of the DGXII Committee at the EEC. A close friend of George Brindley and Jacques Mering, Georges Pédro made pioneering contributions in clay science, including (1) the crystal structure of clay minerals, (2) the spatial organization of weathering profiles, (3) the global distribution of soils and weathering covers with their specific mineral composition as related to the major climatic processes and (4) the protection of the soil resource and the role of soils in sustainable development. He was the first to use extensively experimental approaches to constrain the physicochemical parameters governing weathering. He was among the first to use modern mineralogical techniques to understand the nature, crystal chemistry and state of hydration of clays and associated minerals in soils. He demonstrated how the texture of soils, defined as an organized system, is directly connected to environmental conditions and affected by anthropic actions.

During the morning session, colleagues spoke of their interactions with Georges Pédro at various stages of his 55-year-long career: Christian Feller, André-Bernard Delmas, Daniel Tessier, Hélène Paquet, Alain Ruellan, Adrien Herbillon, Jean-Paul Legros and Jean-Claude Leprun. The morning session ended with a talk by Georges Pédro entitled "Vision on a Life Devoted to Investigating Clays and Soils." The afternoon session illustrated some recent developments: properties of soil clays (Laurent Caner, University of Poitiers), interactions among clays, organic matter and biological activity (Claire Chenu, AgroParisTech, Grignon; Christian Feller, Institut de Recherche pour le Développement), clays and health (Hervé Quiquampoix, Agronomic Research Institute, Montpellier; Nicole Liewig, University of Strasbourg; Michel Rautureau, University of Orléans), and clays as nanomaterials (Claudine Noguera, University Pierre and Marie Curie). With a cocktail reception at lunch time and extensive discussions at the end of the meeting, this special day was an occasion for transmitting experience among generations of scientists working on clays, soils and the environment.

Georges Calas and **Hélène Paquet**