Geochemical Society

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THREE ELECTED TO GS BOARD

Society members elected a new vice president and two directors with terms beginning 1 January 2016. Our new vice president, who will take up a two-year term, is **Roberta Rudnick**, a professor in the Department of Earth Sciences at the University of California, Santa Barbara (USA). Her research focuses on the origin and evolution of the continents, particularly the lower continental crust and the underlying mantle lithosphere. Roberta specializes in integrating data from a wide diversity of sources, including petrography, petrology, major and trace element geochemistry, stable and radiogenic isotope geochemistry, and geophysics, in order to determine the bulk composition of the crust, the processes that have influenced crustal composition through time, and answer the basic question of why the Earth has continents.

Dominique Weis was elected to a three-year term on the board of directors, representing North America. She is Professor and Canadian Research Chair Tier I at the University of British Columbia, Vancouver (Canada). She is also Director of the University of British Columbia's Pacific Centre for Isotopic and Geochemical Research, an integrated research facility that promotes innovative analytical developments and multidisciplinary research. Her research interests include the geochemistry of the Earth's mantle, especially the Hawaiian and Kerguelen mantle plumes, the isotopic evolution of the northern Cascades volcanoes, and low-temperature studies using new applications of transition metal geochemistry.

Tim Eglinton was elected to a three-year term representing Europe. He is Professor of Biogeoscience and Chair of the Geological Institute at Eidgenössische Technische Hochschule (ETH) Zürich (Switzerland). His research focuses on the application of molecular and isotopic (most notably radiocarbon) tracers to understand the origin, cycling and legacy of biospheric carbon over a range of spatial and temporal scales. Current research includes the production, transport and fate of organic matter within river basins and on continental margins.

SHOGO TACHIBANA TO DELIVER GAST LECTURE

In December, Professor Shogo Tachibana of Hokkaido University (Japan) was selected to deliver the 2016 Paul W. Gast Lecture at a plenary session of the forthcoming 26th Goldschmidt Conference in Yokohama (Japan). This lecture opportunity is awarded to a mid-career scientist for outstanding contributions to geochemistry. Professor Tachibana studies the origin and evolution of the Solar System and the chemical diversity within planets, which he does by conducting laboratory experiments to simulate the chemical reactions that occur around evolved stars, in protoplanetary disks, and within asteroids and planets. Tachibana compares his experimental results with observations, with analyses of natural samples, and with models to clarify the chemical evolution of the Solar System, including the Earth.

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STUDENT PROGRAMS AT THE V. M. GOLDSCHMIDT CONFERENCE 2016 (YOKOHAMA, JAPAN)

Students are not just observers at Goldschmidt conferences: they are active participants, and their role is becoming increasingly important each year. In addition to traditional favorites such as the student poster award and continuing the highly successful mentoring and "Meet the Plenary" programs that were introduced during the preceding two conferences, the Yokohama meeting will feature workshops and short courses aimed specifically at students, to take place on the Sunday before the meeting. Details about abstract submission, funding opportunities, travel, student programs, field trips being planned around Japan, and more are available at goldschmidt.info/2016.

MEMBERSHIP RENEWAL

Your membership of the Geochemical Society (GS) helps support our programs and our services to the scientific community. If you have not already done so, please visit the GS website to renew today: www.geochemsoc.org/join/. If you have questions about accessing your record or whether you have already renewed for 2016, contact gsoffice@geochemsoc.org.

Please consider making a donation with your membership. Donations are tax deductible where applicable. All gifts designated for the student travel program go directly to helping students attend the Goldschmidt 2016 Conference. And finally, word of mouth is a valuable part of our membership growth. If you know of a peer or student who isn't a member, please encourage them to join.

Contact the GS Office

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XRD analysis of a stony-iron meteorite using a 2D HPAD detector

A stony-iron meteorite was analyzed using a SmartLab® equipped with a HyPix-3000 2D HPAD detector. Inside a stony-iron meteorite, there are transparent parts similar to glass and opaque parts similar to metal. The transparent parts were thought to be non-crystalline (amorphous). However, when measurement of the transparent part was actually performed, only one diffraction line was observed.

In general, when measurement is done with a 0D or a 1D detector, the range in which diffraction X-rays can be detected from the sample is limited to a certain region. However, it is possible to acquire information on multiple lattice planes by using a wide 2D area detector while oscillating the sample.

When the 2D diffraction image obtained (Fig.1) was converted to a 2θ-I profile (Fig. 2), and qualitative analysis of the transparent part was carried out, it was possible to identify forsterite (Mg_2SiO_4). Since diffraction spots were observed, it was conjectured that the glass-like transparent part is a single crystal or is comprised of an extremely small number of crystal grains.

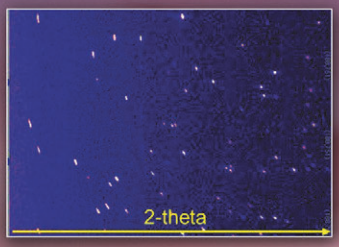

Fig. 1

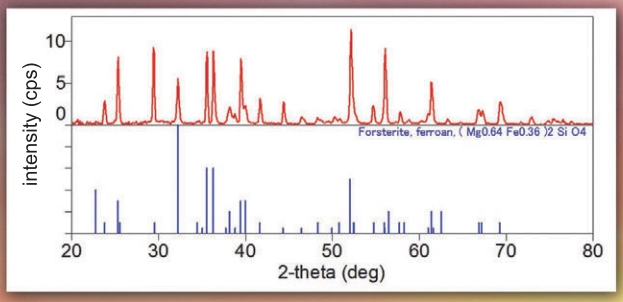

Fig. 2

SmartLab diffractometer with HyPix-3000 detector

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