



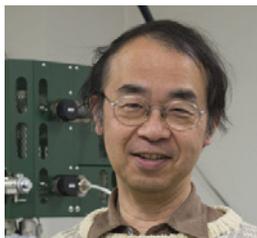
Japan Association of Mineralogical Sciences

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JAPAN ASSOCIATION OF MINERALOGICAL SCIENCES AWARDEES

The Japan Association of Mineralogical Sciences (JAMS) is proud to announce the recipients of its 2014 society awards. The **Japan Association of Mineralogical Sciences Award** is given to two scientists (a maximum in a year) for exceptional contributions to the mineralogical and related sciences. The **Manjiro Watanabe Award**—named in honor of Professor Manjiro Watanabe, a famous Japanese mineralogist, and founded by his contribution—is awarded every year to one scientist who contributes significantly to the mineralogical and related sciences over his/her long career. The **Sakurai Medal**—named in honor of Dr. Kin-ichi Sakurai, famous for finding new minerals—is awarded to one scientist who has made great contributions to the study of new minerals.

Japan Association of Mineralogical Sciences Award to Makoto Kimura



Makoto Kimura, of the Ibaraki University, Japan, studies the mineralogy of meteorites. By working with researchers from Japan, USA, China, and Germany, he combines chemical, isotopic, and crystallographic data with his mineralogical work. He and his coworkers determined the primary mineralogical and isotopic features of refractory inclusions in a CH chondrite. Their work led to the discovery of a new pyroxene group mineral, kushiroite, in an

inclusion, which is indicative of metastable crystallization conditions in the solar nebula. Kimura documented the secondary alteration features in chondrules from CV chondrites, demonstrating that CV chondrites are not always pristine material. He and coworkers recently discovered an eclogitic clast in a CR chondrite. This discovery may suggest that chondrite parent bodies (asteroids) are larger than previously thought. A new type of carbonaceous chondrite was recently reported by Kimura and coworkers. He (and his coworkers) also systematically studied silica minerals in enstatite chondrites and showed that silica polymorphs are key to understanding the thermal history of these chondrites. He and coworkers studied high-pressure minerals in shock veins in ordinary chondrites and found evidence of their back transformation, which is important for clarifying the thermal history of the veins. His work on the systematic variations in the compositions and occurrences of Fe–Ni metal and spinel in ordinary and CO chondrites is significant for determining the petrologic classification and for deciphering the thermal histories of these chondrites. Makoto Kimura has thus made many major contributions to our understanding of the evolution of solid materials in the early Solar System.

Japan Association of Mineralogical Sciences Award to Taku Tsuchiya



Taku Tsuchiya, of the Geodynamics Research Center, Ehime University, Japan, is a mineral physicist who has studied the structural and physical properties of Earth and planetary materials by means of ab initio and density functional computation methods. Dr. Tsuchiya created a new research field called “theoretical mineral physics” in Japan. He has conducted research on the central problems in deep-Earth sciences and has produced epochal achievements based on his high-level

physics background. Dr. Tsuchiya proposed a new thermal equation of state model for Au, with quantitative estimations of thermal pressure; this is now called the Tsuchiya scale and is used internationally as one of the standard pressure scales. He reported the crystal structure, elasticity, and stability of the post-bridgmanite (post-perovskite) phase of MgSiO_3 , which greatly contributed to clarifying the nature of the so-called “D” seismic discontinuity. This study also demonstrated the broad applicability of the ab initio approach in deep-Earth science around the world. He developed a new theoretical model of the electronic spin transition of iron in lower-mantle phases that explains the experimental high-temperature behaviors of iron-bearing phases. Dr. Tsuchiya also extended ab initio techniques to the study of more complicated properties, such as multicomponent phase equilibria and transport properties. He successfully calculated the lattice thermal conductivity of bridgmanite within the anharmonic lattice dynamics theory and quantitatively estimated the heat flow across the core-mantle boundary.

Manjiro Watanabe Award to Satoshi Kanisawa



Satoshi Kanisawa received a doctor of science degree in 1964 from Tohoku University. The subject of his doctoral research was the metamorphic rocks of the southwestern part of the Kitakami Mountains, under the supervision of Prof. Y. Kawano. After earning his PhD, he stayed at Tohoku University and continued working on basement-rock problems in the Kitakami and Abukuma mountains. At that time, Dr. Kanisawa and his colleagues pioneered research on 400 to 500 Ma igneous activity in the Japanese Islands.

These results led to advanced research on the formation, development, and dispersion of Gondwana in Asia. He also engaged in research on Early Cretaceous igneous activity in the Kitakami Mountains. In this research, he analyzed fluorine in biotite and hornblende from various types of igneous rocks. Through biotite and hornblende geochemistry, he demonstrated that the Mg/Fe ratio and F content of these minerals are closely related to the granite types (magnetite and ilmenite series and A-, I-, and S-types). Dr. Kanisawa and his coworkers also showed that the F contents of Quaternary volcanic rocks in Japan and around the world are closely related to K_2O and H_2O contents. They concluded that the sources of F in basaltic rocks areargasite and phlogopite. However, the sources in calc-alkaline rocks are complicated, reflecting their diverse origin. Since retirement, Dr. Kanisawa has tried to make geology and mineralogy more accessible to the general public.

Sakurai Medal to Daisuke Nishio-Hamane



Daisuke Nishio-Hamane, of the Institute for Solid State Physics, University of Tokyo, is a mineralogist who has been active in the fields of descriptive mineralogy and high-pressure mineralogy. The Sakurai Medal was presented for his discovery of miyahisaite. Miyahisaite is a new mineral in the hedyphane group in the apatite supergroup and comes from the Shimoharai Mine, Oita Prefecture, Kyushu, Japan. The mineral is named in honor of Michitoshi Miyahisa (1928–1983) for his contribution to the

study of ore deposits on Kyushu. In 2011, data on the new mineral and the name miyahisaite were approved by the IMA Commission on New

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SEM 2014: 34TH MEETING OF THE SPANISH MINERALOGICAL SOCIETY

The 34th Annual Meeting of the Spanish Mineralogical Society (SEM 2014) was held in Granada (Spain), on July 1–4, 2014. The meeting was coordinated by Salvador Morales, Fernando Gervilla and José Torres (University of Granada). The program included a one-day workshop, posters and oral presentations, and a postmeeting field trip to the iron deposits of the Guadix Basin (Betic Cordillera).

Workshop Seminar: "Active Mining"

The seminar, which took place on July 1, kept its traditional formative objective through lectures by industry experts who provided an overview of the importance of mining and its role as an engine of the economy. The program consisted of 5 lectures and a final panel discussion. The lectures were:

"Las Cruces: An Innovative Example of the New Mining Activity in the Iberian Pyrite Belt" – Ivan Carrasco Martiáñez, mine-planning head, Cobre Las Cruces, S.A.

"New Exploration Techniques for Massive Sulfides in the Iberian Pyrite Belt" – Juan Manuel Pons Pérez, exploration manager, Minas de Aguas Teñidas, S.A.

"Mining and Critical Minerals" – Alfonso Gracia Plaza, president, Desarrollo de Recursos Geológicos, S.A.

"Geology and Exploration of the Aguablanca Mine (Badajoz)" – Cesar Martínez Chaparro, geology head, Lundin Mining

"Evaluation of Mining Resources for the Re-exploitation of the Alquife Fe-Mine" – Juan García Valledor, Minas de Alquife S.L.U.

Posters and Oral Presentations

Posters and oral presentations were held on July 2 and 3. In all, 94 presentations were delivered, 53 oral and 41 posters, involving nearly three hundred scientists. Contributions covered topics on mineralogy, petrology, geochemistry, mineral resources, environmental sciences, conservation of historical, geological and mining heritage, and clay minerals, among others. The SEM 2014 program featured two plenary

lectures: "Gold Associated with the Massive Sulfide Deposits in the Iberian Pyrite Belt" (Francisco Velasco) and "Critical Minerals in Europe: Methodology and Evaluation" (Manuel Regueiro). All these scientific contributions have been published in volume 18 of the SEM's journal, *Macla*.

Awards for Young Researchers

Awards for the best communications were given to Sergio Carrero Romero (University of Huelva) for "Movilidad de contaminantes durante la neutralización anóxica de drenajes ácidos de mina" and to Idoia Garate Olave (UPV/EHU) for "Caracterización petrográfica y geoquímica de las micas asociadas al sistema granito-pegmatita del área de Tres Arroyos (Albuquerque, Badajoz)."

ENCIENDE-SEM Award

The 2014 ENCIENDE-SEM Award was given during the SEM 2014 meeting. This contest was sponsored by the Spanish Society of Mineralogy, and the award aims to recognize the best educational initiative or innovative action promoting scientific careers among children and young students at the primary and high school levels in the field of the Earth sciences, especially in mineralogy, petrology and geochemistry. The 2014 award was won for the project "International Year of Crystallography," carried out by the Nuevo Méjico Primary School (Madrid). Ana Maria Pinto Campos received this award as head of the project.



SEM Ana Maria Pinto Campos, with Carlos Ayora (SEM president, left) and Juan Jiménez-Millán (SEM vice-president, right)

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Minerals, Nomenclature and Classification (#2011-043). Miyahisaite occurs in the namansilite-rich layer adjacent to the braunite- and aegirine-rich layers of the chert. The mineral is colorless and occurs as anhedral grains that are submicron to 10 μm in size, and it often forms a pseudomorphic aggregate (up to approximately 100 μm in size) along with fluorapatite. The simplified formula is $(\text{Sr,Ca})_2\text{Ba}_3(\text{PO}_4)_3\text{F}$, and its compositional ratio is in harmony with cation sites, as Sr + Ca and Ba occupy the small *M1* and large *M2* sites, respectively. This ordered type is divided into the hedyphane subgroup in the apatite supergroup.

Dr. Nishio-Hamane also contributed to the discoveries of epidote-(Sr) (#2006-055), momoite (#2009-026), ehimeite (#2011-023), takanawaite-(Y) (#2011-099), iseite (#2012-020), minohlite (#2012-035), vanadoalinite-(La) (#2012-095), adachiite (#2012-101), iwateite (#2013-034), imayoshiite (#2013-069), ferriakasaite-(La) (#2013-126), ferriandrosite-(La) (#2013-127), iyoite (#2013-130), and misakiite (#2013-131).

JOURNAL OF MINERALOGICAL AND PETROLOGICAL SCIENCES

Vol. 109, no. 4, August 2014

ORIGINAL ARTICLES

Structural change induced by dehydration in ikaite ($\text{CaCO}_3 \cdot 6\text{H}_2\text{O}$)

Natsuki TATENO and Atsushi KYONO

Coexistence of jadeite and quartz in garnet of the Sanbagawa metapelite from the Asemi-gawa region, central Shikoku, Japan

Tomoki TAGUCHI and Masaki ENAMI

Cuprobismutite group minerals (cuprobismutite, hodrušhite, kupčikite and padéraitte), other Bi-sulfosalts and Bi-tellurides from the Obari mine, Yamagata Prefecture, Japan

Yuya IZUMINO, Kazuo NAKASHIMA, and Mariko NAGASHIMA

Ferropicrite from the Lalibela area in the Ethiopian large igneous province

Minyahl Teferi DESTA, Dereje AYALEW, Akira ISHIWATARI, Shoji ARAI, and Akihiro TAMURA