



Japan Association of Mineralogical Sciences

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AWARDS

The Japan Association of Mineralogical Sciences (JAMS) is proud to announce the recipients of its 2023 society awards. The Japan Association of Mineralogical Sciences Award is presented to a maximum of two scientists in any one year for exceptional contributions to mineralogical and related sciences. The Manjiro Watanabe Award—named in honor of Professor Manjiro Watanabe, a famous Japanese mineralogist, and founded by his bequest—is awarded every year to one scientist who has significantly contributed to mineralogical and related sciences over his or her career.

JAPAN ASSOCIATION OF MINERALOGICAL SCIENCES AWARD TO NORIYOSHI TSUCHIYA



Noriyoshi Tsuchiya is a professor emeritus of Tohoku University (Graduate School of Environmental Studies), and he is now President of the National Institute of Technology at Hachinohe College. In the early years of his career, he focused on field work and metamorphic petrology, and has since spread his research field to experimental petrology and numerical simulation. His main works are on water–rock interactions,

particularly chemical kinetics of dissolution and precipitation of minerals under geothermal conditions, and mass and heat transport phenomena through rock fractures. He had been to Antarctica three times as a member of Japanese Antarctic Research Expedition (JARE), and was the leader of Earth Scientific Research Expedition of Sør Rodane Mountains, East Antarctica in 2009–2010. He also studies and promotes supercritical geothermal resources, and is a research leader of a supercritical geothermal project in Japan. He was secretary general of the 17th International Symposium on Water–Rock Interaction (WRI-17) and Applied Isotope Geochemistry (AIG-14) held in Sendai, Japan in 2023. He still actively performs field work in Mongolia and geothermal areas in Japan and other countries. Recently, thermoluminescence geothermal exploration technology, which he developed, has been applied to several geothermal fields to evaluate thermal effects by geothermal activity. He has published more than 250 papers, not only in petrological and geochemical fields, but also geophysical journals. His work covers a wide range of water–rock interaction research, and he has made a great scientific contribution to our community.

JAPAN ASSOCIATION OF MINERALOGICAL SCIENCES AWARD TO SHOGO TACHIBANA



Shogo Tachibana is interested in understanding the processes responsible for forming the diverse planets of the Solar System, including Earth. He is particularly focused on the chemical evolution of the early Solar System by integrating laboratory experiments, analysis of extraterrestrial materials, astronomical observations, modeling, and Solar System exploration. Tachibana and his research group have conducted laboratory experiments on

(1) the evaporation/condensation of major minerals (forsterite, enstatite, metallic iron, troilite, and corundum) in circumstellar environments; (2) the crystallization and oxygen isotope exchange of amorphous silicate dust in protoplanetary disks; (3) the formation of refractory inclusions, the oldest objects in the Solar System; (4) mineral–water–organic interactions in small bodies; and (5) the photochemistry of ice in molecular clouds. By combining these studies with protoplanetary disk models, his work has placed constraints on the physicochemical conditions that Solar System materials experienced during their evolution prior to planet formation. In pursuit of pristine materials with

geologic context, Tachibana has been actively involved in the *Hayabusa2* and *OSIRIS-REx* asteroidal sample return missions. He played a key role in setting the scientific goals of *Hayabusa2* and contributed to the sample collection at asteroid Ryugu, as well as the analysis of Ryugu samples. He has also participated in astronomical observations to understand Solar System evolution in the broader context of planetary system formation in space. He is currently a professor at the UTokyo Organization for Planetary and Space Science at The University of Tokyo, and a specially appointed professor at the Institute of Space and Astronautical Science, JAXA.

MANJIRO WATANABE AWARD TO SATOSHI MATSUBARA



Satoshi Matsubara was born in Nagoya in 1946. He graduated from Kyoto University, Faculty of Science, Department of Geology and Mineralogy with his BS (1969) and MS (1971), and received his PhD (1981) from the University of Tokyo. He worked as a curator of the National Science Museum (now the National Museum of Nature and Science) from 1971 to 2011. His main research areas are field mineralogy and description of new

minerals and rare minerals. He discovered and published 34 new mineral species, and also participated in mineralogical and geological surveys in Madagascar (1973), Tasmania (1978 and 1980), and Antarctica (JARE24, 1982–1983). He conducted special exhibitions, “DIAMOND” in collaboration with AMNH (New York, USA), “CULTURE OF MINES IN JAPAN,” “THE ORIENTAL GREAT TREASURE - JADEITE,” and “KIN•GOLD - Zipangu, Land of Gold.” He has also written catalogues such as the Sakurai Mineral Collection, and many explanatory books on minerals for the public. A mineral, $\text{Sr}_4\text{Ti}_5\text{O}_8(\text{Si}_2\text{O}_7)$ in jadeite from Itoigawa, Niigata, Japan, was named “matsubaraite” for his contribution to study of strontium and barium silicate minerals. Dr. Matsubara received the Sakurai Medal in 1980, the Mineralogical Society of Japan Award in 2001, and was elected as a fellow of the Mineralogical Society of America in 2002.

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Original Articles

Petrogenesis of Oligocene to Miocene volcanic rocks from the Toyama basin of the SW Japan arc: Temporal change of arc volcanism during the back-arc spreading in the Japan Sea. Raiki YAMADA, Toshiro TAKAHASHI, Yasuhiro OGITA

Mineralogical study on zeolites in gastropod fossils in Miocene sediments in Minamisoma, Fukushima, Japan. Atsushi ISHIHARA, Hiroaki OHFUJI

Asagiite, $\text{NiCu}_4(\text{SO}_4)_2(\text{OH})_6 \cdot 6\text{H}_2\text{O}$, a new member of the ktenasite group from the Nakauri mine, Shinshiro City, Aichi Prefecture, Japan. Daisuke NISHIOHAMANE, Takeshi YAJIMA, Norimasa SHIMOBAYASHI, Masayuki OHNISHI, Takefumi NIWA

Compositional dependence of intensity tensor and electric field gradient tensor for Fe^{2+} at M2 sites of enstatites by single crystal Mössbauer spectroscopy. Keiji SHINODA, Keita ONOUE, Yasuhiro KOBAYASHI

Grain size reduction of albite porphyroblasts in pelitic schists of the Sanbagawa metamorphic belt, Kanto Mountains, Japan. Mutsuko INUI, Shuto KOJIMA, Yoshiya NAGATSUMA

Reviews

Carbon dioxide and water in the crust. Part 1: Equation of state for the fluid. Shumpei YOSHIMURA.

Carbon dioxide and water in the crust. Part 2: Solubility in silicate melts. Shumpei YOSHIMURA.