Japan Association of Mineralogical Sciences

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2012 AWARDEES

The Japan Association of Mineralogical Sciences (JAMS) is proud to announce the recipients of its 2012 society awards. Each year, the **Japan Association of Mineralogical Sciences Award** is given to a maximum of two scientists 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 funded by his own contribution—is awarded every year to one scientist who has contributed 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 studies on new minerals.

Japan Association of Mineralogical Sciences Award to Akira Yoshiasa

Akira Yoshiasa

Akira Yoshiasa, of the Graduate School of Science and Technology, Kumamoto University, Japan, is a mineralogist who has studied the correlation between the structures and physical properties of minerals. In his research, he has derived dynamical structural information from both the long-range-order structure using the diffraction method and the local structure by the XAFS method. Using a combination of both techniques, he successfully determined the pressure-dependent potential parameters and characteristic values of various materials under high *P*–*T* conditions, and he contributed to the quantitative understanding of their structural stability. He elucidated the conduction mechanism of ionic superconductors such as AgI and CuI, by performing anharmonic thermal vibration analysis; he also clarified their phase relations and phase transition mechanism through in situ experiments under various *P*–*T* conditions using synchrotron radiation. He applied this technique to the study of mantle minerals and proposed that their ionic superconduction attributed to anharmonic thermal vibrations can result in high electric and low thermal conductivities in the Earth's lower mantle. His research interests also include the structures of melt and glass. He discovered that the local structures of atoms in a melt change rapidly with pressure following first-order phase transition processes. He attempted to understand the past histories of the Earth and planets from the local structures of the trace elements in minerals, tektite impactite glass, and K–T boundary clays. Recently, he extended his research to atomic-level structural analyses under extreme conditions, such as ultragravity. He has thus contributed significantly to the advancement of fundamental Earth science knowledge.

Manjiro Watanabe Award to Masayasu Tokonami

Masayasu Tokonami

Masayasu Tokonami was matriculated to the graduate course of the University of Tokyo in 1958. Along with Profs. R. Sadanaga and Y. Takeuchi, he elucidated the crystal structure of mullite, Al_2SiO_5, using the single-crystal X-ray diffraction method. He accepted a position in the Institute for Solid State Physics, University of Tokyo, in 1962 and, along with Prof. S. Hosoya, put forth a systematic method for unraveling a periodic vector set. He also presented a table of values of the atomic scattering factor for O^{2-}. In 1967, he moved to the Institute of Scientific and Industrial Research, Osaka University. Along with Prof. N. Morimoto, he discovered the domain structure of pigeonite and clinoenstatite, and with Prof. K. Otsuka and others, he studied the crystal structure of stress-induced β_1□ martensite in a Cu–Al–Ni alloy using neutron diffraction. From 1971, he worked as a guest professor for two years with Prof. E. Helmer at Marburg University, Germany, and solved the complicated structure of the sulfosalt senandorite, $PbAgSb_3S_6$. In 1981, he moved to the University of Tokyo, where, with Dr. J. Ye and Prof. K. Otsuka, he analyzed the structure of γ_1'Cu–Al–Ni martensite using conventional X-rays and synchrotron radiation. In 1998, he moved to the Saitama Institute of Technology and, with Prof. R. Negishi and others, he showed that elliptically polarized light can propagate in a crystal of alkali amphibole.

Sakurai Medal to Tetsuo Minakawa

Tetsuo Minakawa

Tetsuo Minakawa, of the Department of Earth Science, Ehime University, has made great contributions to the field of descriptive mineralogy. In the nomenclature of epidote-group minerals, $A_2M_3(T_2O_7)(TO_4)(O,F)(O,OH)$, as recommended by Armbruster et al. (2006), piemontite-(Sr), clinozoisite-(Sr), and manganipiemontite-(Sr) have been described as clinozoisite subgroup minerals with Sr dominant in the A2 site. Although the Sr analogue of epidote, $CaSrAl_2Fe^{3+}(Si_2O_7)(SiO_4)O(OH)$, was undiscovered in nature, Armbruster et al. (2006) had listed it as a possible member of the clinozoisite subgroup minerals. Minakawa and his coworkers discovered Sr-rich epidote as a gangue mineral in the Nagakawara, Matsukabu, and Honomori deposits in the Ananai manganese mine in Kochi Prefecture, Japan. They identified this mineral as similar to epidote-(Sr). In 2006, data on the new mineral and the name *epidote-(Sr)* were approved by the IMA Commission on New Minerals, Nomenclature and Classification (#2006-055). The details of the mode of occurrence and the mineralogical data concerning epidote-(Sr) were provided by Minakawa et al. (2008). Epidote-(Sr) occurs as prismatic crystals up to 1 cm in length in the manganaxinite veins cutting braunite–caryopilite ores and is associated closely with Mn^{2+}-pumpellyite and bannisterite. The crystals are brown to brownish red in color, owing to the high Mn^{3+} content. Subsequently, Minakawa and coworkers also discovered a new manganese–vanadium garnet, momoiite, $(Mn,Ca)_3(V^{3+},Al)_2Si_3O_{12}$ (IMA CNMNC, #2009-026), from the Kurase (Ehime Pref.), Fujii (Fukui Pref.), and Hokkejino (Kyoto Pref.) metamorphosed manganese deposits in Japan.

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Laihunite in planetary materials: An FTIR and TEM study of oxidized synthetic and meteoritic Fe-rich olivine
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Sector-zoned aegirine in Sanbagawa quartz schist from the western Kii Peninsula, central Japan
Yasuyuki Banno and Shigeo Yamada

Influence of garnet hosts on the Raman spectra of quartz inclusions
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