



# Japan Association of Mineralogical Sciences

[jams.la.coocan.jp](http://jams.la.coocan.jp)

## FROM THE PRESIDENT

Members of the Japan Association of Mineralogical Sciences (JAMS) actively participate in various fields of Earth and planetary sciences. We would like to introduce some of them.

Recently, the Japanese islands have experienced various types of natural disasters: huge typhoons, heavy rainfall, and earthquakes. The Japanese islands are also part of a volcanic archipelago with over 100 active volcanoes. Hence, people must be prepared to face disasters caused by volcanic eruptions. One of the countermeasures includes next-generation volcano research. The human resource development project to support this research is currently being developed. The objective of this project, which involves numerous JAMS members, is to nurture young scientists to conduct research on eruption prediction based on three broad approaches: 1) analyzing volcanic products, by applying material science techniques; 2) analyzing historical, archeological, and geological data; 3) developing simulations based on computational science.

Members of JAMS travel to Antarctica each year to conduct research and have recently been studying the formation and development of the continental crust via the involvement of crustal fluids. In 2020, the Sør Rondane Mountains will be geologically mapped over approximately two months because this region is one of the world's leading places for observing dehydration and hydration processes in the crust. Significant results are, therefore, expected to be announced soon.

At JAMS, we are currently focusing on improving the outreach associated with geosciences and related fields. As part of this, JAMS offered a public lecture entitled "Jade—Stone that Symbolizes Japan." Japanese jade culture began in the early Jomon period (~5,500–7,000 years ago) and continued until the Kofun period (spanning from the mid-third century to the seventh century). Jade and its formation can be used to introduce the public to various geological phenomena that are progressing within the local plate subduction zones.

Next, we would like to introduce the "Chikyu–Oman Project," wherein JAMS members play a central role. During the years 2017–2018, more than twenty JAMS scientists dedicated themselves to a logging campaign for core samples obtained from the Samail ophiolite in Oman, drilled by the ICDP (International Continental Scientific Drilling Program) Oman Drilling Project. Core samples (totaling some 3,200 m in length) were collected, including the transition portion between the oceanic crust and upper mantle. These samples revealed lithologies such as basalt, gabbro, wehrlite, and dunite, with minor amounts of felsic trondhjemite and tonalite. These samples were transported to the drilling vessel *Chikyu* and were subsequently analyzed by 177 scientists from 18 countries. The results are being published in sequence.

The spacecraft *Hayabusa 2* ("Hayabusa" meaning "peregrine falcon") was launched in 2014, and in 2018 it safely reached the asteroid Ryugu (meaning "palace of the sea god", according to a Japanese legend). Data suggests that it has succeeded in sampling rock. By the time you read this, *Hayabusa 2* will be on its way back to Earth to deliver the collected samples. Members of JAMS have gained a lot of experience in analyzing such material from their study of samples of the asteroid Itokawa, which were brought back by *Hayabusa*. Now, JAMS researchers look forward to the arrival of the valuable Ryugu samples at the end of the year 2020.

In May 2020, the joint meeting of Japan Geoscience Union (JpGU) and the American Geophysical Union (AGU) (wherein JAMS is a primary member) will be held in Makuhari Messe, Chiba (near Tokyo, Japan) for the first time in three years. And there are planned joint sessions with the Asia Oceania Geoscience Society (AOGS) and the European Geosciences Union (EGU). We look forward to seeing everyone at Chiba.

**Prof. Masaki Enami**



Field survey in Antarctica.

## INVITATION OF THE JAPAN GEOSCIENCE UNION–AMERICAN GEOPHYSICAL UNION JOINT MEETING 2020

The 2020 annual meeting of the JAMS will take place 24–28 May 2020 at the Makuhari Messe (Chiba, Japan) as part of the larger Japan Geoscience Union (JpGU) and American Geophysical Union (AGU) Joint Meeting 2020, this following the first cooperative effort with the AGU in 2017. The JpGU has recently grown to embrace over 51 members of academic societies and has over 10,000 individual members. The attendance at the 2019 annual meeting exceeded 8,400 total participants (including ~2,400 students), with over 650 participants from abroad (covering 41 nations and areas). The 2020 meeting will provide an indispensable opportunity for participants from the fields of Earth and planetary science to interact. More information is available at [http://www.jpгу.org/meeting\\_e2020/](http://www.jpгу.org/meeting_e2020/).



## JOURNAL OF MINERALOGICAL AND PETROLOGICAL SCIENCES

**Vol. 114, No. 6, December, 2019**

### Original article

**Metamorphic pressure–temperature conditions of the Lützow–Holm Complex of East Antarctica deduced from Zr–in–rutile geothermometer and Al<sub>2</sub>SiO<sub>5</sub> minerals enclosed in garnet** – Kota SUZUKI and Tetsuo KAWAKAMI

### Letters

**Viscosity of K<sub>2</sub>TiSi<sub>4</sub>O<sub>11</sub> melt at high pressure** – Akio SUZUKI

**Zircon U–Pb ages of the Ryoike granitoids from the Takanawa Peninsula, northwest Shikoku, southwest Japan** – Kazuya SHIMOOKA, Satoshi SAITO, and Kenichiro TANI

**Boron isotope compositions of antigorite–grade serpentinites in the Itoigawa–Omi area of the Hida–Gaïen Belt, Japan** – Chinatsu YAMADA, Tatsuki TSUJIMORI, Qing CHANG, and Jun–Ichi KIMURA

**Sr–Pb isotope compositions of lawsonites in a Pacheco Pass metagraywacke, Franciscan Complex, California** – Tomomi HARA, Tatsuki TSUJIMORI, Kennet E. FLORES, and Jun–Ichi KIMURA

**Two groups of fluid inclusions in the Yunotani eclogite from the Hida–Gaïen Belt: Implications for changes of fluid salinity during exhumation** – Yuzuki SHINJI, Tatsuki TSUJIMORI, and Tatsuhiko KAWAMOTO