



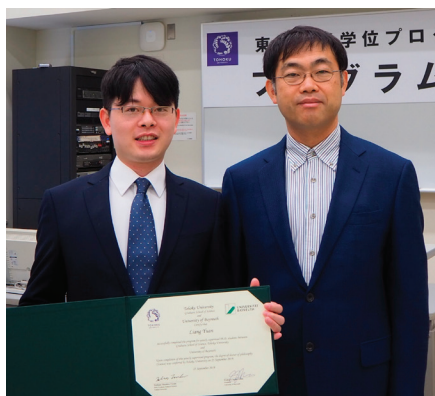
Japan Association of Mineralogical Sciences

<http://jams.la.coocan.jp>

JOINT GRADUATE PROGRAM BETWEEN TOHOKU AND BAYREUTH UNIVERSITIES

The Department of Earth Science, Graduate School of Science, Tohoku University (Sendai, Japan) has been running an international joint graduate program with the Bavarian Research Institute of Experimental Geochemistry and Geophysics (Bayerisches Geoinstitut), University of Bayreuth (Germany) since 2016. Several JAMS members at Tohoku University are actively participating in the program, including Akio Suzuki, Eiji Ohtani, Tatsuya Sakamaki, Tomoki Nakamura, Naoto Hirano, Tatsuki Tsujimori, and Satoshi Okumura. The graduate school on the German side is the International Research Training Group (IRTG) funded by the Deutsche Forschungsgemeinschaft (DFG), which is coordinated by Dan Frost. Tohoku University is funded by the Japan Society for the Promotion of Science's Japanese–German Graduate Externship for Research on Deep Earth Volatile Cycle, which is coordinated by Michihiko Nakamura. These programs operate in conjunction, but students must meet the requirements for, and be accepted separately into, each program.

The primary purpose of the joint program is to promote information and cultural exchange between Japan and Germany by supporting dual student enrollment. Graduate students work on a wide range of research projects and attend joint seminars/workshops, which are held twice a year in Sendai and Bayreuth. Several Tohoku students have recently attended the annual February DMG short course at the Bayerisches Geoinstitut. Field trips are conducted during seminars and workshops and provide students with an excellent opportunity to look at geology in varied and contrasting tectonic settings of a subduction zone and continent.



Liang Yuan, who was awarded a certificate for a jointly supervised PhD, with his supervisor, Akio Suzuki, after the ceremony at the International Joint Graduate Program in Earth and Environmental Science, Tohoku University.



International Joint Graduate Program in Earth and Environmental Sciences field trip to Haleakala Crater, Maui, on the Hawaiian Islands (March 2019). During their stay in Sendai, Bayerisches Geoinstitut students traveled to “the other side of the Earth”; their visit included trips to SPring-8, Academia Sinica, and the University of Hawai‘i at Manoa.

Select students take part in an extended residence at their partner institution to carry out research. Twelve PhD students are financially supported by IRTG and must, therefore, work on-site with Tohoku professors for at least six months. In addition, several Tohoku graduate students have been supported by the International Joint Graduate Program in Earth and Environmental Sciences (abbreviated to GP–EES) and funded by Tohoku University and the Japanese government (MEXT; Ministry of Education, Culture, Sports, Science and Technology Scholarship); 80% of an annual Japan Society for the Promotion of Science grant of approximately €100,000 is exclusively for use toward travel and accommodation. All student scholarships and research assistant applications must be prepared separately. Students of the GP–EES stay at the Bayerisches Geoinstitut for at least three months. Some students spend a total of 5–10 months there to conduct high-pressure and crystallographic characterization experiments or to study numerical modelling. Those who successfully complete each component in the joint program are awarded a joint program certificate along with their PhDs. By December 2019, two Tohoku students were awarded JSDs and three more are expected to graduate by March 2021. An International Research and Training Group student is expected to be awarded in early 2020 and at least two by 2021.



The Japan Society for the Promotion of Science's Japanese–German graduate externship international workshop entitled Volatile Cycles, which was held 5 June 2019 at Tohoku University.



The joint program encourages various types of collaboration. Some students choose to employ the methodological strengths of the partner university as part of their primary PhD projects. Through collaboration and discussion with supervisors, students are tackling innovative research themes that would otherwise not be possible. The program also provides them an opportunity to carry out a secondary project during their residency at the partner university. Examples include one student's work on a numerical experiment at the Bayerisches Geoinstitut with a second experimental project on determining the physical properties to be used in that numerical model. Two other students, whose primary projects at the Bayerisches Geoinstitut were high-pressure experiments, obtained and analyzed natural volcanic rock samples in Tohoku and then took them to the Bayerisches Geoinstitut to examine them using a high-resolution transmission electron microscope or a laser ablation inductively coupled plasma mass spectrometer. Our graduate students benefit from exploring different ways of thinking about research, as well as being exposed to different cultures. These collaborative projects are already beginning to be published in highly regarded journals such as *American Mineralogist*, *Nature Communications*, *Nature Geoscience* and *Scientific Reports*. The first assessment of the program is due in 2020, with the International Research and Training Group proposing a four-year extension.

Michihiko NAKAMURA

Graduate School of Science, Tohoku University

REFERENCES

- The International Joint Graduate Program in Earth and Environmental Sciences (GP-EES) <http://gp-ees.tohoku.ac.jp/en/index.html>
- The Japanese–German Externship for the Research on Deep Earth Volatile Cycle <http://jgge-sci.tohoku.ac.jp/en/achievement/>
- International Research and Training Group “Deep Earth Volatile Cycles” <http://www.deepearthvolatiles.de/>

JOURNAL OF MINERALOGICAL AND PETROLOGICAL SCIENCES

Vol. 115, No. 1, February 2020

Original Articles

Mineralogical heterogeneity of UHP garnet peridotite in the Moldanubian Zone of the Bohemian Massif (Nové Dvory, Czech Republic) – Julia MURIUKI, Daisuke NAKAMURA, Takao HIRAJIMA, Martin SVOJTKA

Revisiting Pb isotope signatures of Ni–Fe alloy hosted by antigorite serpentinite from the Josephine Ophiolite, USA – Mayu KAKEFUDA, Tatsuki TSUJIMORI, Katsuyuki YAMASHITA, Yoshiyuki IIZUKA, Kennet E. FLORES

Three types of greenstone from the Hidaka belt, Hokkaido, Japan: Insights into geodynamic setting of northeastern margin of the Eurasian plate in the Paleogene – Toru YAMASAKI, Futoshi NANAYAMA

K–Ar phengite geochronology of HP–UHP metamorphic rocks – An in-depth review – Tetsumaru ITAYA

Letter

Preparation and crystal structural properties of Er³⁺–exchanged GTS-type sodium titanate silicate – Keiko FUJIWARA, Naomi KAWATA, Akihiko NAKATSUKA

FORTHCOMING DMG SHORT COURSES

Fundamentals of Petroleum Exploration and Production Lifecycle: From Concept to Oil, Institute for Geography and Geology, University Würzburg, Prof. Hartwig Frimmel, 25–28 May 2020, <https://dgm.de/veranstaltungen/fcto-2020/> **CANCELED DUE TO THE COVID-19 (CORONAVIRUS) CRISIS.**

Online Class: Cosmochemistry, Meteorites, and the Origin of the Planetary Systems, Institute for Geology and Mineralogy, Cologne University, Prof. Dominik Hezel, August 2020 (Online term), 24–25 September 2020 (Meeting in Cologne), dominik.hezel@uni-koeln.de, <https://metbase.org/>

Application of Diffusion Studies to the Determination of Timescales in Geochemistry and Petrology, Institute for Geology, Mineralogy and Geophysics, Ruhr University Bochum, Prof. Sumit Chakraborty, 28 September–2 October 2020, sumit.chakraborty@rub.de, www.gmg.rub.de/petrologie/

In situ Analysis of Isotopes and Trace Elements by Femtosecond Laser Ablation ICPMS (In situ-Analyse von Isotopen und Spurenelementen mit (MC-) ICPMS gekoppelt mit Femtosekunden-Laserablation), Institute for Mineralogy, Leibniz University Hannover, Prof. Stefan Weyer and others, 5–9 October 2020, s.weyer@mineralogie.uni-hannover.de

Introduction to Secondary Ion Mass Spectrometry in the Earth Sciences, GFZ German Research Centre for Geosciences (GFZ Helmholtz Centre Potsdam), Dr. Michael Wiedenbeck, 16–20 November 2020, <https://sims.gfz-potsdam.de/short-course/>

DMG AWARDS FOR YOUNG SCIENTISTS

The **Paul Ramdohr Award** is given for the best oral and poster presentation by a student at the annual meeting of the German Mineralogical Society (DMG). Student DMG members may apply when submitting an abstract for emc²⁰²⁰ in Cracow (Poland). The application form can be downloaded from https://www.dmg-home.org/fileadmin/user_upload/Form-Paul-Ramdohr-Preisallg_v2019.pdf.

In memory of the late petrologist and geochemist Beate Mocek, the **Beate Mocek Prize** of the German Mineralogical Society was created by her family to encourage young female scientists to study petrology and geochemistry. Female undergraduate or PhD students who are also members of the DMG are eligible to apply for this prize. Please submit your application by 30 June 2020 to DMG President Reinhard X. Fischer (rfischer@uni-bremen.de).

JOINT MEETING OF DMG GEOCHEMISTRY AND PETROLOGY/PETROPHYSICS SECTIONS

The annual meeting of the DMG sections of Geochemistry and of Petrology and Petrophysics will take place at the Goethe University Frankfurt, specifically the Geozentrum, Campus Riedberg (Altenhöferallee 1, 60438 Frankfurt am Main). Please see the following for more details: www.uni-frankfurt.de/48936053/How_to_get_to_the__Institut_für_Geowissenschaften.

The meeting, initially planned 6–7 June 2020, will be postponed due to the COVID-19 (corona) pandemic. We are constantly monitoring the situation and keep you informed about the new date.

Stay healthy!

Questions: DMG-Frankfurt@geo.uni-frankfurt.de.

Horst Marschall (Frankfurt), **Axel Schmitt** (Heidelberg)