

International Association of Geoanalysts

http://geoanalyst.org

IAG HONORARY FELLOWSHIP AWARDED TO KLAUS PETER JOCHUM

The International Association of Geoanalysts (IAG) has pleasure in announcing that Dr Klaus Peter Jochum of the Max Planck Institute for Chemistry (Mainz, Germany) has been awarded the association's highest award: IAG Honorary Fellowship. This award recognizes his decades-long distinguished and enormous contribution to many branches of the geoanalytical sciences.



© CARSTEN COSTARD, MAX PLANCK INSTITUTE FOR CHEMISTRY

Klaus Peter joined the Max Planck Institute for his Diploma thesis in 1966, became a staff member in 1972, and was awarded his PhD in 1973. His research interests include studies related to cosmochemistry, geochemistry, biogeochemistry, and climate geochemistry. In the laboratory, his motivation is to devise ways of improving analytical methods so that the most appropriate solution is found to solve a specific research problem.

He is still a very prolific and highly cited scientist, having published over 250 papers, many in high-ranking publications. From the beginning of his career, Klaus Peter has been engaged in developing analytical methods centred around the application of mass spectrometry to geological materials. For many years, these methods involved elemental analysis by spark source mass spectrometry (SSMS) before he moved to laser ablation inductively coupled plasma mass spectrometry (LA-ICP-MS). As he was always keen on in situ analysis, he developed an automated iridium-strip heater to facilitate the melting of small amounts of rock powder in the preparation of glass beads for whole rock analysis by LA-ICP-MS. His numerous publications on nanosecond LA-ICP-MS and femtosecond LA-ICP-MS reflect his passion for LA-ICP-MS applications.

Besides implementing new analytical methods, one of his most significant achievements was the development of the GeoReM database, which was launched in 2005. This includes data on more than 3,780 geological and environmental reference materials and is an invaluable a source of information for many geoanalysts. So far, over 565,000 queries have been recorded from all over the world.

In addition to compiling data on reference materials measured by other scientists, Klaus Peter has also been active in developing and characterising reference materials required to shed light on many analytical problems in the Earth sciences.

Over his long career, he established worldwide cooperations with researchers from other disciplines, including biology, chemistry, archaeology, and the environmental sciences. Some of these became close friends. Moreover, Klaus Peter always felt it was crucial to encourage and support young scientists at the start of their career. Many of the PhD and postdoctoral students that he mentored have now become successful researchers in their own chosen field of science.

Klaus Peter joined the IAG during the Geoanalysis 2006 conference in Beijing (China) and served as a member of the IAG Council between 2007 and 2017. He continues to be a strong supporter of our association and promotes its aims whenever possible.

Those who have met him personally know that his profession was always more like a hobby to Klaus Peter. Although he officially retired in 2008, Klaus Peter has continued to work intensely at the Max Planck Institute.

We are planning to make a formal presentation of the IAG Honorary Fellowship to Dr Jochum at the next Geoanalysis Conference in Freiberg (Germany) in August 2022.

> Regina Mertz-Kraus Jacinta Enzweiler

WINNERS OF THE IAG YOUNG SCIENTIST AWARD FOR 2021

We are proud to announce that the winners of the 2021 IAG Young Scientist Award are Alicja Wudarska (Warsaw, Poland) and Tao Luo (Wuhan, China). They presented their research at the 2021 virtual Goldschmidt conference (4–9 July) and also received their IAG awards. For more information, see the awards page at https://goldschmidt. info/2021/medalsView.



Alicja Wudarska is a postdoctoral researcher at the Institute of Geological Sciences of the Polish Academy of Sciences in Warsaw. She develops new reference materials for the isotopic analysis of apatite using secondary ion mass spectrometry (SIMS). She has recently completed two projects related to chlorine and oxygen isotopes that she conducted in collaboration with the SIMS laboratory at the GFZ Potsdam (Germany). The results of her work were

published this year in *Geostandards and Geoanalytical Research* (Wudarska et al. 2021), and the metrological splits of the apatite samples described therein can be obtained through IAGeo Limited (iageo.com). Currently, Alicja and her team from the SIMS laboratory in Warsaw are working towards developing reference material(s) for the U–Pb dating of apatite. Her project is being supported by an IAG Geoanalytical Research and Networking Grant.

Alicja undertook the study of new apatite reference materials in order to collect the SIMS data for her PhD project, which investigated the geochemical processes that shaped the early Archean Isua Supracrustal Belt (SW Greenland) by making hydrogen and chlorine isotope measurements in minerals of the apatite group (Wudarska et al. 2020). She is now planning to apply stable isotope analyses to bioapatite research and is especially interested in the application of these methods to wildlife conservation.

When Alicja is not working, she enjoys exploring the world with her husband, as well as gardening, crafts, and reading about Australian wildlife.

- Wudarska A and 14 coauthors (2021) Inter-laboratory characterisation of apatite reference materials for chlorine isotope analysis. Geostandards and Geoanalytical Research 45: 121-142, doi: 10.1111/ggr.12366
- Wudarska A and 8 coauthors (2020) Chlorine isotope composition of apatite from the >3.7 Ga Isua Supracrustal Belt, SW Greenland. Minerals, doi: 10.3390/ min10010027



Japan Association of Mineralogical Sciences

http://jams.la.coocan.jp/e_index.html

The Japan Association of Mineralogical Sciences (JAMS) is proud to announce the recipients of its 2021 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. [All locations below are in Japan unless otherwise stated.]

JAPAN ASSOCIATION OF MINERALOGICAL SCIENCES AWARD TO TAKASHI MIKOUCHI



Takashi Mikouchi is a professor at the University Museum of the University of Tokyo. He specializes in the mineralogy and crystallography of extraterrestrial materials, especially differentiated meteorites and spacecraftreturned samples. He began his academic career by studying meteorites at the University of Tokyo, researching angrites (one of the oldest known achondrites) in collaboration with

researchers at NASA's Lyndon B. Johnson Space Center (Texas, USA), and soon became involved in the study of Martian meteorites. Since

Cont'd from page 352



Tao Luo was made an associate professor at the China University of Geosciences in Wuhan after receiving his PhD degree. He investigates elemental and isotopic fractionation by using laser ablation inductively coupled plasma mass spectrometry (LA-ICP-MS), and he develops novel non-matrix-matched methods for U–Th– Pb dating of accessory minerals.

Tao started to work in geoanalytical research

during his master's degree and was responsible for running an LA-ICP-MS laboratory as a student-assistant. He investigated ICP-induced fractionation behaviours in LA-ICP-MS machines and evaluated the influence of argon and helium carrier gases on signal intensities and elemental fractionation in analysis by both nanosecond and femtosecond LA-ICP-MS. In addition, Tao has developed a novel, water vapour-assisted method for non-matrix-matched determinations of U-Th-Pb ages in accessory minerals (Luo et al. 2020). This method greatly broadened the application of in situ U-Th-Pb geochronology to diverse accessory minerals without the strict requirement of matrix-matched reference materials (Luo et al. 2018). He applied this water vapour-assisted method to develop a new in situ LA-ICP-MS method by which to date wolframite by the U-Pb method. This then solved a very challenging question concerning the timing and duration of hydrothermal W mineralisation.

Currently, he is working on the development of new reference materials for microbeam analysis of U–Pb geochronology and Hf–O isotopes. When not working in the lab, Tao enjoys hiking and cycling.

Luo T and 7 coauthors (2018) Water vapor-assisted "universal" nonmatrix-matched analytical method for the in situ U–Pb dating of zircon, monazite, titanite, and xenotime by laser ablation-inductively coupled plasma mass spectrometry. Analytical Chemistry 90: 9016–9024, doi: 10.1021/acs.analchem.8b01231

Luo T and 8 coauthors (2020) Non-matrix-matched determination of Th-Pb ages in zircon, monazite and xenotime by laser ablation-inductively coupled plasma mass spectrometry. Geostandards and Geoanalytical Research 44: 653-668, doi: 10.1111/ggr.12356 then, he has collaborated with researchers from Japan, the USA, and Europe, and he combines isotopic and chemical data with his mineralogical and crystallographic work for various extraterrestrial materials. In his early work, Takashi Mikouchi used crystallization experimental results to deduce that some shergottite Martian meteorites had experienced magma undercooling and that they represented parent magma compositions. He also revealed that nakhlite Martian meteorites had a petrography and mineralogy that could be explained by crystallization at different burial depths in a common cooling cumulate pile. His study of angrites pointed out the importance of olivine xenocrysts in quenched angrites and showed that bulk compositions of quenched angrites were controlled by resorption degrees of these xenocrysts. He is one of the first meteoriticists to apply electron backscatter diffraction (EBSD) analysis to characterize new minerals in meteorites, and he and his coworkers found several new minerals by this technique, such as dmitryivanovite, and reyivanovite, and kushiroite. He has been also involved in studying particles from comet Wild 2 and particles from the Itokawa asteroid, strengthening the interpretations of the origins of these bodies by using electron beam and synchrotron radiation analyses. At present, as a preliminary analysis team member, he is analyzing Ryugu samples returned by the Hayabusa2 spacecraft.

Takashi Mikouchi has, thus, made many major contributions to our understanding of the formation processes and evolution of solid materials in the early Solar System, as well as in large bodies such as Mars and the Moon.

JAPAN ASSOCIATION OF MINERALOGICAL SCIENCES AWARD TO TATSUKI TSUJIMORI



Tatsuki Tsujimori is a professor of geological sciences at Tohoku University's Center for Northeast Asian Studies. His PhD was supervised by Prof. Akira Ishiwatari at Kanazawa University and was awarded in 1999. He then completed post-doc fellowships at Okayama University of Science (2000–2002) and Stanford University (California, USA) (2002–2006). From 2006 to 2015, he was a faculty member of Okayama

University at Misasa and has been a Tohoku University faculty member since 2015. Prof. Tsujimori's research specialties are in the fields of petrology and tectonic processes, with a particular emphasis on highpressure-ultrahigh-pressure (HP-UHP) metamorphic rocks, such as blueschists, eclogites, and jadeitites. His early research focused on the petrotectonic characterization of the Japanese Paleozoic serpentinitematrix mélanges that enclose blocks of various HP metamorphic/ metasomatic rocks. As a part of this research, he reconstructed the fossilized mantle wedge-slab interface that contained blueschist, jadeitite, and a newly discovered eclogite. Since joining Tohoku University, his research program has focused on better understanding the geodynamic and geochemical processes of Proterozoic and Phanerozoic active convergence margins at different scales as deduced from mineral equilibrium up to plate tectonic levels. Additionally, his work seeks to link the HP-UHP metamorphism of ancient subduction zones to geophysical observations of modern analogs by evaluating hydration and dehydration from within the subduction interface and the subsequent slab-mantle interactions.

Prof. Tsujimori has an extensive record of research in metamorphic petrology, geochemistry, and tectonics, including collaborative research projects with local (Japanese) and overseas researchers, such as Tetsumaru Itaya, J.G. Liou, Gary Ernst, Ruth Zhang, George Harlow, Sorena Sorensen, Jinny Sisson, Bob Stern, and the late Bob Coleman. Also, as a faculty member of Okayama University's International

Cont'd on page 354