Meet the Authors

Thorsten Geisler studied mineralogy at the University of Hamburg (Germany), where he also received his doctoral degree. After a postdoctoral period at the Curtin University of Technology in Perth (Australia) and at the Department of Earth Sciences in Cambridge (UK), he moved to the University of Münster (Germany) to take up a position, which he still holds, as assistant professor at the Institute for Mineralogy. At present, his scientific interests focus on the mechanisms, kinetics, and thermodynamics of mineral–fluid interactions.

John M. Hanchar is a professor and head of the Department of Earth Sciences at Memorial University of Newfoundland, Canada. He received his PhD from Rensselaer Polytechnic Institute under the direction of Professor E. Bruce Watson. Previously, he was an assistant and then associate professor of geosciences in the Department of Earth and Environmental Sciences at the George Washington University in Washington, DC. His research interests span trace element and experimental geochemistry and materials science and include designing materials for storage of radioactive waste, the effects of self-irradiation of short-lived, artificial and natural radionuclides, and the trace element, radiogenic istotope, and stable isotope compositions of accessory minerals.

Simon L. Harley is professor of lower crustal processes at the University of Edinburgh. His long-term interest in the origin and evolution of granulites, especially under extreme temperature conditions, has led him to carry out integrated field, micro-analytical and experimental studies related to geothermobarometry and mineral assemblages, anatexis and melt-related processes, mineral monitors of fluid activity and the relationships that exist among mineral geochronometers, events and processes in the deep crust. This has stimulated his interest in zircon and its response to high-temperature metamorphism. He has applied this integrated research strategy to, amongst other things, the unravelling of the metamorphic and tectonic evolution of ancient crust in Antarctica and Greenland and to defining events in the construction of Gondwana.

Jörg Hermann is a fellow at the Australian National University in Canberra. He completed a master's degree and a PhD at the ETH in Zürich, Switzerland, in metamorphic petrology, structural geology, and tectonics. At the ANU, his focus switched to experimental petrology and the trace element geochemistry of metamorphic rocks. He is currently working on an interdisciplinary approach to constrain element mobility in subduction zones using high-pressure experiments and deeply subducted rocks as a natural laboratory. Other research interests include the use of trace elements to constrain high-grade metamorphic processes and the water content of mantle minerals.

Nigel M. Kelly is a postdoctoral researcher in the Grant Institute of Earth Science, University of Edinburgh. He received his PhD in geology from the University of Sydney. His research interests include the tectonothermal evolution of ancient orogenic belts as keys to understanding the behaviour of the continental crust, both now and in the past, and involve field work in places such as Antarctica, Greenland, NW Scotland and central Australia. This work has led to a focus on the behavior of dateable accessory minerals during metamorphism and on how these minerals help us place constraints on the rates of orogenic events and act as tracers of many geological processes.

Andreas Möller is a research fellow at the Universität Potsdam, Germany. He received a diploma in geology from the Christian-Albrechts-Universität in Kiel and in 1996 a doctorate from the same institution for his study of the petrology and geochronology of Palaeoproterozoic eclogites and Pan-African granulites in Tanzania. The radiogenic isotope work was carried out during a year at the Max-Planck-Institut für Chemie in Mainz. After postdoctoral positions at the University of New South Wales (Sydney) and the Johannes-Gutenberg Universität in Mainz, he came to Potsdam in 2001. He uses in situ analytical techniques to link textural, geochemical, and isotopic information for the understanding of metamorphic processes, with special focus on high-temperature terranes.

Carsten Münker is a professor of geochemistry at Universität Bonn, Germany, since 2004. He received his doctorate at Universität Göttingen in 1997. After a postdoctoral research fellowship at the University of Tasmania, Australia, he was based at Universität Münster in Germany until 2004. His current research interests focus on cosmochemistry, the evolution of the early Earth, and igneous geochemistry. Another focus is the application of multiple collector – inductively coupled plasma – mass spectrometry (MC–ICP–MS) to current problems in Earth sciences. Major research topics include the application of short- and long-lived chronometers (Lu–Hf, Hf–W, Nb–Zr) and high-precision measurements of the concentration of trace elements such as the high field strength elements, to better assess their mass budget on Earth.

Daniela Rubatto is a fellow at the Australian National University in Canberra. She moved "down under" after a degree at the University of Torino, Italy, and a PhD at the ETH in Zürich, Switzerland, where she was first introduced to zircon. She combines her experience as a metamorphic petrologist and geochronologist in studying the behavior of accessory minerals during metamorphism, particularly at high pressures and/or high temperatures. Daniela is a strong advocate of the need to link ages from accessory minerals to metamorphic conditions, particularly using trace elements. She is also interested in the rates of metamorphic processes and mountain building.

Urs Schaltegger is a professor of geochemistry and geochronology at the Section des Sciences de la Terre of Université de Genève, Switzerland. He directs a radiogenic isotope laboratory, which features two thermal ionization mass spectrometers and one gas mass spectrometer, and carries out research on the chronometry of geological processes. His research interests have been focused for a long time on the understanding of the dynamics of orogenic processes, especially their rates and durations. For this he uses mainly high-precision U–Pb dating of zircon, monazite and other accessory minerals, as well as other radiogenic parent–daughter systems for precise age determinations. He serves on national scientific committees and on the editorial boards and as a referee for various journals.

Erik E. Scherer is a junior professor at the Institut für Mineralogie, Westfälische Wilhelms-Universität Münster. He received his BA degree in geology from Colgate University and his PhD in geochemistry from the University of California–Santa Cruz. His current research interests include the early differentiation of Earth, the growth of continents, the evolution of the lower crust, and the fractionation of trace elements by eclogite and blueschist in subduction zones. He also works on improvements in geochronology, such as recalibrating decay constants and developing new ways to date metamorphic and sedimentary rocks.

Frank Tomaschek is interested in the relations between the petrological and geochronological aspects of zircon. His PhD studies at the Universität Münster focused on the zircon–xenotime miscibility gap and the factors controlling the stability and transformation mechanism of zircon solid solutions in natural and experimental systems. He enjoys blending mineralogical and geochronological approaches to address geological questions in his principal field area, the high-pressure metamorphic rocks of the Cycladic Islands.

Wim van Westrenen is a lecturer in mineralogy at the Vrije Universiteit Amsterdam. He studied geochemistry at Utrecht University and received his PhD in experimental geochemistry from the University of Bristol in 2000. Wim held postdoctoral positions in high-pressure laboratories at the Carnegie Institution of Washington and ETH Zürich before accepting a position below sea-level in the Netherlands in 2005. His research aims at understanding large-scale differentiation processes in the interiors of the Earth and the Moon using high-pressure and high-temperature experimental techniques.

Martin J. Whitehouse is a senior research fellow and director of the Nordic ion microprobe consortium (Nordsim) at the Swedish Museum of Natural History in Stockholm. His interest in applying isotope geochemistry to crustal evolution began with his PhD (University of Oxford, 1987) on the late Archean Lewisian Complex of NW Scotland. Since then his research activities have spanned nearly the entire geological age spectrum, from Hadean zircons to Miocene orogenic belts, and have recently expanded to include lunar and meteoritic samples. High-spatial-resolution radiogenic and stable isotope analyses using the ion microprobe at Nordsim now form a key component of most of his studies.