German Mineralogical Society

www.dmg-home.org

FROM THE PRESIDENT

Dear members and friends of the DMG,

Today, I wish to inform you of some important activities by the DMG that require your contribution.

The DMG is one of four corporate members of the Dachverband der Geowissenschaften (DVGeo) https://www.dvgeo.org, the still-young umbrella organisation for the four largest German geological societies. The aim of the DVGeo is to promote the geosciences in education, to lobby politicians, to generate more awareness among the public, and to engage in knowledge transfer. The geosciences are currently gaining an ever-increasing significance in their ability to help solve the "big" societal problems of mitigating, or dealing with, climate change; developing green energy; and safely disposing of nuclear waste. This means that the promotional tasks undertaken by the DVGeo are of a very high value.

Since January 2021, I have been one of the vice-presidents of the DVGeo. And we have been busy. We have been staging public events, planning science-related strategic developments, and been assisting in teaching geoscience in schools. To read more about our extensive activities, please subscribe to our newsletter: https://www.dvgeo.org/kommunikation/newsletter.

We need your help. Please consider doing one or more of the following:

- Inform us on science-strategic news (such as a new big project, an initiative, a meeting that is of interest beyond DMG) so that DVGeo can post them on its social media sites.
- Send us, by 30 October 2021, suggestions for an interesting item that could be displayed on the ship MS *Wissenschaft*, e.g., a Mars lander you are designing, or a drill core from 25km depth.
- Send us contacts and organisations that could reach out to schools, teachers, and students interested in geo-topics, and also inform us of existing activities for school kids. We want to compile a list of these.
- Suggest activities, or nominate a member, for a planned strategic group that could support the development of network projects, such as Collaborative Research Centres (SFB), Priority Programmes (SPP), and Research Units (Forschungsgruppen).
- Register yourself as an expert to help answer the many queries we receive from journalists.
- Encourage your university department to participate in the Fakultätentag (Faculty Day) of the Council of the Natural Science Departments.

If you wish to engage in any of these tasks, please send a mail to Tamara Fahry-Seelig at DVGeo info@dvgeo.org. If you have general comments or suggestions, please get in touch with me directly.

Best regards
Friedhelm von Blanckenburg

DMG SHORT COURSES 2021–2022

In the upcoming 2021–2022 academic year, DMG will support three short courses. All courses will be aimed primarily at advanced-level undergraduate and graduate students but, as always, are open to more senior researchers. Nonlocal student members of the DMG will be eligible for travel support to the amount of €50. Further information regarding any restrictions due to the pandemic can be found at https://www.dmg-home.org/aktuelles/doktorandenkurse/.

1. **Introduction to Secondary Ion Mass Spectrometry in the Earth Sciences**, Helmholtz Centre Potsdam – GFZ German Research Centre for Geosciences, Dr. Michael Wiedenbeck, 15–19 November 2021 (michael.wiedenbeck@gfz-potsdam.de).
2. **Metal Stable Isotopes as Fingerprints in the Earth and the Environment**, Freie Universität Berlin and Helmholtz Centre Potsdam – GFZ German Research Centre for Geosciences, Prof. Dr. Friedhelm von Blanckenburg, 21–26 February 2022 (fvb@gfz-potsdam.de).
3. **High-Pressure Experimental Techniques and Applications to the Earth's Interior**, Bayerisches Geoinstitut/University Bayreuth, Dr. Florian Heidelbach, 21–25 February 2022 (florian.heidelbach@uni-bayreuth.de).

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DMG AWARDS FOR 2021

Abraham Gottlob Werner Medal in Silver to Gerhard Wörner

The Abraham Gottlob Werner Medal in Silver is the most distinguished award of the German Mineralogical Society (DMG). It is presented in recognition of outstanding scientific merits for senior scientists. In 2021, this honour is being bestowed on Gerhard Wörner, professor emeritus of geochemistry at Göttingen University [All locations are in Germany unless otherwise stated] since September 2020. After graduating with a Diploma in 1977, Gerhard embarked on a doctoral thesis at Ruhr-University Bochum supervised by Hans-Ulrich Schmincke. As part of his dissertation, he interned with the US Geological Survey (Reston, Virginia, USA) and personally experienced the eruption of Mount St. Helens (Washington, USA) on 15 May 1980 while working as a field assistant. With the completion of his thesis in 1982, he authored a string of authoritative papers on the geochemical and mineralogical evolution of the phonolitic Laacher See Volcano and other volcanic systems in the Eifel region of western Germany. After postdoctoral stints at Lamont–Doherty Earth Observatory (New York, USA) and habilitating in 1988, he served as an assistant professor at Mainz University until being promoted to full professor at Göttingen University in 1993. Starting from his ground-breaking research on intraplate volcanism in the Eifel, Gerhard refined and expanded the "Wörner-brand style" of researching volcanic systems via an outstandingly holistic approach that integrated a large variety of methods, ranging from microanalytical investigations of zoned phenocrysts to the quantification of landscape evolution using satellite data. Besides always endorsing new analytical developments to advance the understanding of igneous processes, Gerhard equally valued thorough field work, not hesitating to push the limits for himself and those working with him, such as during expeditions to Antarctica, or when summiting Central Andean volcanoes, or while trekking through other physically and logistically challenging regions of the Pacific "Ring of Fire" (Central America; Kamchatka in Russia). This hard work paid off and resulted in many innovative and classic papers that bridge the gap between the traditionally separate disciplines of mineralogy and geology. His early commitment for merging mineralogy and geology not only in research but also within geoscience curricula in Germany was perceived quite controversially at the time, yet it demonstrated Gerhard's sure-footed instincts for the advancement of the discipline. It is, therefore, no surprise that Gerhard also received the Hans Stille Medal of the German Geological Society (DGGV) in 2014 – one of many distinctions he was awarded, including the Bochum University award for best doctorate thesis, the Victor Goldschmidt early career award of the DMG in 1988, the Maucher Award of the German Science Foundation (DFG) in 1989, the DFG Leibniz Award in 1997, as well as the Distinguished Career Award of the Geological Society of America in 2013. Not least because of his own efforts to always collect the best samples no matter how adverse the external conditions, Gerhard also long recognized the value of "big data" in the geosciences. As initiator of the DIGIS project at Göttingen, he remained engaged in advancing geochemical–petrological databases to the next level (e.g., GEOROC 2.0). Gerhard has also always invested considerable time and effort into serving the national and international geosciences, representing them on some of the highest DFG panels. Lastly, Gerhard has been an inspiring and engaged teacher who has left a mark by setting an example for a generation of geoscientists in Germany and beyond, and he has always emphatically conveyed his personal fascination by volcanoes to the public. It is, therefore, extremely timely to award Gerhard Wörner the Abraham Gottlob Werner Medal in Silver. This maintains a recurrence in accolades for his exceptional scientific achievements that surpasses in predictability the eruptive periodicity of many volcanoes that Gerhard has loved to study throughout his career.

Axel Schmitt, **Carsten Münker**, **François Holtz**

Victor Moritz Goldschmidt Prize to Daniel Herwartz

Victor Moritz Goldschmidt (1888–1947) often put traditional approaches aside and so reclaimed large areas of scientific wasteland for us. As in Goldschmidt's time, we are now largely concerned only with refining existing models or confirming secured knowledge through additional data. Too often our results are welcomed by our own community, but, unfortunately, remain without great impact in other disciplines. But in Daniel Herwartz we have someone who follows in the footsteps of Victor Moritz Goldschmidt.

We are delighted that Daniel Herwartz (University of Cologne, Germany) has received the Victor Moritz Goldschmidt Prize from the German Mineralogical Society. Herwartz is always on the lookout for previously unimagined approaches, and he comes up with astonishing and innovative ideas while never losing sight of the goal of publishing and communicating his science.

Daniel Herwartz studied geology in Bonn (Germany) and received his diploma there in 2007 with a thesis on the geochronology (using primarily Lu–Hf) of eclogites. For his dissertation in 2011, he worked on the possible applications of the Lu–Hf system and rare earths across a whole range of problems, from fossil bones to eclogites. For his postdoc he turned to the stable isotopes, namely ^{17}O. Recently, the inclusion of the ^{17}O in the investigations into oxygen isotope geochemistry has created a completely new field, which is expressed in the recently published Volume 86 of the *Reviews in Geochemistry and Mineralogy*, to which Daniel Herwartz contributed a widely acclaimed article.

Daniel Herwartz' list of publications already includes more than 30 papers. The questions dealt with, as noted above, cover a wide range of topics, from bones to eclogites, and from the Archean to recent processes. Daniel Herwartz' work has appeared in the most prestigious journals (i.e., *Science*, *Nature Geoscience*, *Proceedings of the National Academy of Sciences of the United States of America*, *Geochimica et Cosmochimica Acta*, and *Earth and Planetary Science Letters*) and so reaches a wide readership. Daniel Herwartz tries his hand at the big issues of geochemistry and is, despite his relatively young age, already highly recognized internationally.

During our collaboration with Daniel Herwartz in Göttingen, his very targeted way of working, his wealth of ideas, and the very relaxed working atmosphere that always surrounds him left a lasting positive impression on us.

Daniel Herwartz has exceptional scientific talents and is a more-than-worthy recipient of the Victor Moritz Goldschmidt Prize. Congratulations to him (and to the German Mineralogical Society) on the award!

Andreas Pack, **Jochen Hoefs**

OBITUARY

Hans Ulrich Bambauer 1929–2021

Hans Ulrich Bambauer was a pioneer in the study of the feldspar group minerals. He passed away 5 July 2021 at the age of 92. He was born 18 May 1929 in the small town of Idar-Oberstein in SW Germany, a centre for the trading, cutting, and polishing of gemstones. After graduating from high school, he studied mineralogy in Münster (Germany), Zürich (Switzerland), and Mainz (Germany) where he received his diploma in 1955 and a doctorate in 1957. His dissertation was a petrographic study of the Permian magmatic rocks of the Nahe syncline in SW Germany. He introduced a classification and nomenclature system that is still in use today.

After his doctorate, Hans Ulrich Bambauer initially worked for the Gebrüder Bank Gesellschaft in Idar-Oberstein from 1957 to 1958 as head of the Department of Industrial Minerals. In 1958, he returned to the Institute of Crystallography and Petrography at ETH Zürich, first as a research associate with Fritz Laves and then, from 1963 to 1965, as curator of the mineralogical collections. In 1961, Bambauer attained his habilitation degree with a study on the relationships between trace elements and colour centres in quartz the regional distribution of quartz in tension fractures of the Swiss Alps. Hans Ulrich Bambauer always spoke enthusiastically of his years in Zürich as the ones that shaped him and his career.

Laves was appointed professor at ETH Zürich in 1954 and brought with him from Chicago not only the feldspars as his research subject but also his long-lasting acrimonious dispute with British colleagues concerning the phase relationships of the alkali feldspars [N.B. Laves would be proven right ...]. And Hans Ulrich Bambauer joined the fray. In W. E. Tröger's 822-page treatise *Optische Bestimmung der gesteinsbildenden Minerale* (*Optical Identification of the Rock-Forming Minerals*), first published in 1967, Bambauer wrote a state-of-the-art chapter on the phase relationships of the entire feldspar group, on ordering–disordering processes, on exsolution phenomena, and on optical properties. This chapter is as up-to-date and instructive now as it was then. The treatise was augmented in 1979 by a companion volume, *Tröger's Optical Determination of Rock-Forming Minerals. Part I. Determinitive Tables*, written by Bambauer together with F. Taborszky and H. D. Trochim: this book can be found on the desk of every serious mineral microscopist. Both volumes have been reprinted numerous times, and the tables translated into English. At the same time, Bambauer was lead author of the Zürich working group on the X-ray diffraction and chemical characterization of the plagioclase series.

In 1965, Hans Ulrich Bambauer was appointed to the Chair of Mineralogy at the University of Münster, a position he held until his retirement in 1994. Münster offered a small and modest institute. So, Bambauer rolled up his sleeves, carried out exceptionally successful negotiations with the administration, and was able to hire technical and scientific personnel for newly created positions, notably Wolfgang Hoffmann as the new Chair of Crystallography. Thanks to his initiative, the institute expanded enormously. In 1975 he was able to bring the newly created Zentrallaboratorium für Geochronologie (Central Laboratory for Geochronology) of the German Research Foundation to Münster, with Borwin Grauert as head. Subsequently, the planetology group within the institute, led by Dieter Stöffler, was established as an independent institute. Stöffler's position as Chair of Petrology could be retained and Walter Maresch appointed.

Two things were of central importance to Hans Ulrich Bambauer in Münster. The first was teaching. During his tenure, he himself taught more than 15 thematically diverse courses. The second was an appropriate choice of subjects for diploma and doctorate students in order to prepare these students in the theory and practice necessary for a career in industry. He gave up his treasured quartz topic because he considered it to be too narrow, and, as a convinced student of Laves, he focused on the study of feldspars. Here, the entire spectrum of mineralogical methods in synthesis and analysis could be brought to bear. In the 1980s, he began to introduce projects and subjects oriented towards technical and environmental mineralogy, such as the immobilization of hazardous wastes and studies on the potential uses of fly and filter ash.

Hans Ulrich Bambauer's love of quartz and the feldspars followed him into retirement. Using his cherished Chalet in Sedrun (Switzerland) as a base camp, he mapped the microcline/sanidine transition as a three-dimensional feature over a distance of 140 km: a phenomenal effort. Parallel to this transition and shifted 10–15 km to the north, he also located a quartz recrystallization isograd extending over 90 km. Up until the end of 2020, Hans Ulrich Bambauer was involved in updating the quartz and feldspar chapters in the various editions of Martin Okrusch's comprehensive textbook on mineralogy.

The impact of Hans Ulrich Bambauer's oeuvre and his numerous publications have been recognized internationally by many prizes and honours. He is a recipient of the prestigious Océ van de Grinten Award for Environmental Protection and of the Georg Agricola Medal for Applied Mineralogy from the German Mineralogical Society, which also named him an Honorary Member in 1989. He was a Fellow of the American Mineralogical Society and was honoured with the vice presidency of the Societé Française de Minéralogie et Cristallographie.

Hans Ulrich Bambauer was enormously active in scientific management and in promoting the subject of mineralogy up to the level of the state government of North Rhine–Westphalia. For many years, he was editor of the *Fortschritte der Mineralogie*, the national journal of the German Mineralogical Society, and he also represented the society during the launch of the *European Journal of Mineralogy*. This then-new pan-European journal can be credited to his resolute negotiations over a span of more than 10 years. In 1971, he led a successful commission of the German Mineralogical Society to restructure the study of mineralogy on a national scale in such a way that students could move easily from one university to the next without any problems. Unfortunately, this is now no longer possible.

With the passing of Hans Ulrich Bambauer we have lost an eminent scientist, a passionate teacher, and a colleague willing to donate his time and energy to promoting the subject of mineralogy to an extraordinary extent at both a national and an international level.

Herbert Kroll (Münster), **Walter Maresch** (Bochum)