

German Mineralogical Society

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PROFESSOR EMERITUS WOLFHARD WIMMENAUER APPOINTED HONORARY MEMBER OF THE GERMAN MINERALOGICAL SOCIETY

On the occasion of its 100th annual meeting, GeoMinKöln 2022, Prof. em. Wolfhard Wimmenauer, Freiburg, Germany was appointed honorary member of the German Mineralogical Society (DMG).



Wolfhard Wimmenauer was born in Leverkusen, Germany, in 1922. He grew up in Freiburg im Breisgau, Germany, where he started to study mineralogy and geology in 1940 under the supervision of Hans Schneiderhöhn, Karl Richard Mehnert, and Wolfgang Soergel. Wimmenauer's studies, however, were unfortunately interrupted by World War II through military service and a short interval in French captivity. At the end of 1945, he was able to

continue his studies. Lectures took place in the private homes of Schneiderhöhn and Pfannenstiel, as the institute building had been severely damaged. Wimmenauer soon became interested in the crystalline rocks of the Central and Southern Black Forest. In 1948, he was awarded his doctoral degree for investigations on cordierite-bearing rocks of the Schauinsland area close to Freiburg. From 1948 to 1967, he was a staff member of the "Badische Geologische Landesanstalt," now "Landesamt für Geologie, Rohstoffe und Bergbau Baden-Württemberg," where he was responsible for investigations and research on uraniumbearing ores and other ore veins in the Black Forest. Additionally, he started to investigate the extraordinary olivine-nephelinitic and melilithitic diatreme pipes of the Kaiserstuhl volcano and its surroundings. This led to his habilitation in 1952 on phonolithic and tinguaitic rocks of the Kaiserstuhl, and eventually to the first geological excursion map of the Kaiserstuhl (published in 1959, and revised in 2003). This work formed the basis for the genetic correlation of the Kaiserstuhl volcanism with the Rhine rift formation, and the re-interpretation of the so-called "Badberg marble" as a true magmatic carbonatite.

In 1967, Wimmenauer became Chair of Mineralogy and Petrography at the University of Freiburg. As such he continued his field work and maintained the importance of field evidence for his petrological and geochemical research, resulting in major contributions to three further geological maps of the crystalline Black Forest, far more than 100 scientific publications, and the well-known textbook "Petrographie der magmatischen und metamorphen Gesteine" (1985). Under his auspices, analytical laboratories were established. He maintained close research contacts with many colleagues who focused on other crystalline areas in Europe and with the carbonatite community worldwide. Since 1976, he has been a member of the Heidelberg Academy of Sciences and Humanities. From 1981 to 1982, Wimmenauer was head of the German Mineralogical Society, and organized its 62nd annual meeting in 1984 in Freiburg. He was known as a brilliant teacher and fascinating lecturer, not only to his students but also to the interested public, guiding the listeners' interest from tiny wonders like snowflakes into the universe. Wimmenauer also contributed significantly to the German continental deep drilling program (Kontinentales Tiefbohrprogramm der Bundesrepublik Deutschland, or KTB) during preliminary studies in the Central Black Forest as one of the two remaining candidates for the final drilling site.

After his retirement in 1988, Wimmenauer continued his research and public outreach activity until recently. His special interest during recent years has been in rock fulgurites, e.g., the fusion, magnetic, and planar deformation lamellae effects of lightning strike impacts on the mineral surfaces of rocks, from the sandstones at the top of the Freiburg Münster tower to isolated rock ledges. In 2022, he celebrated his 100th birthday in astonishingly good health, still going on his daily walks through the crystalline surroundings of Freiburg.

Hiltrud Müller-Sigmund, University of Freiburg

HIGH-PRESSURE SHORT COURSE REPORT

This year the Bayerisches Geoinstitut (BGI) at the University of Bayreuth (Germany) organized another hybrid short course, "High-Pressure Experimental Techniques and Applications to the Earth's Interior," with lectures and theoretical framework available online and a practical part condensed into three days of practical at the BGI. The participants were divided into two groups of six to seven participants, who had the opportunity to visit the BGI labs and facilities in the week of September 19–23, 2022.

During the short course, a wide variety of cutting-edge high-pressure and high-temperature techniques applied at the BGI were introduced. The students helped with the preparation and opreation of the piston cylinder and multi-anvil press experiments, and had the chance to learn about different diamond anvil cell applications. Besides pressure experiments covering pressures from Earth's crust to its core, the students also had the possibility to appreciate high-pressure experiments relevant to icy planets. In this regard, the experimental deformation lab was explored, where the BGI offers the possibility to investigate, for example, the rheology of materials using an independently acting anvil press. Together with some scientists from the Heinz Maier-Leibnitz Zentrum (MLZ) Garching, Germany, a cooling-deformation



Participants the high-pressure short course during the practicals in the piston cylinder (**Top**) and (**RIGHT**) multianvil laboratories at BGI.



AUGUST 2022

run was performed to test the feasibility of shearing ice varieties at high pressures. The combination of online lectures and practical demonstrations perfectly demonstrated the difficult steps needed to prepare the experiments and offered a comprehensive overview of each method. In addition, students learned how to prepare and analyze samples recovered from the experiments. To illustrate the online lectures, visits to analytical labs were also part of the short course including spectroscopic labs where Fourier-transform infrared, Raman, Brillouin, and Mössbauer spectroscopy are applied. The facilities to chemically characterize samples using LA-ICP-MS and electron beam techniques, such as SEM and TEM, as well as the FIB lab, were not to be missed during the short course.

After the second day of intense scientific lessons, an after-work meeting for beer and pretzels was offered by BGI to allow sttudents to meet up with several scientists currently enrolled in on-going high-pressure science. A casual atmosphere allowed for very interesting discussions with the experienced staff.

To sum up, the course offers a broad understanding of high-class experimental and analytical methods to explore Earth's interior and potential target bodies in the Solar System. After learning about the advantages and disadvantages of the methods, the young scientists could determine which methods to apply for their individual research projects.



"High-Pressure Experimental Techniques and Applications to the Earth's Interior"

This five-day short course will provide an introduction to state-of-the-art experimental methods in mineralogy, geochemistry and geophysics as applied to understanding the composition, structure and dynamics of the Earth's interior. Topics to be covered include high-pressure/high-temperature experimental methods, spectroscopy and X-ray diffraction at high-pressure, transmission electron microscopy, thermodynamics and phase equilibria, high-pressure crystal chemistry, equations of state, transformation kinetics, diffusion and deformation. The course will be held in the laboratories of Bayerisches Geoinstitut.

Requirements: The course is aimed primarily at advanced-level undergraduate and graduate students but is also open to postoctoral researchers. Participants should have completed at least 7 semesters of Earth Sciences and should have a basic background in mineralogy, crystallography, petrology and/or geophysics. Due to possible health care restrictions because of the cornor avrus pandemic the number of participants may be limited to 18. The official course language is English. ECTS (European Credit Transfer System): Participants may obtain 2 ECTS credit points after completion of the course and after passing a written examination. For students who do not wish to obtain an ECTS certificate, the examination is not required.

<u>Costs:</u> The course fee will be Euro 80.- which covers the course materials, refreshments during the course and the Short Course dinner on Tuesday night. We will help find reasonably priced accommodation. The course receives financial support by *German Mineralogical Society (Deutsche Mineralogische Gesellschaft - DMG)*. Non-Bayreuth student members of DMG are eligible for travel support to the amount of Euro 50,-.

Information: Further information can be obtained from

- http://www.bgi.uni-bayreuth.de/ShortCourse2023 or dmg-home.org/aktuelles/doktorandenkurse/
 - or Dr. Florian Heidelbach, e-mail: florian.heidelbach@uni-bayreuth.de Tel.: +49-(0)921-553700 Fax: +49-(0)921-553769

Applications should be sent to the following address before January 8, 2023:

2023 High-Pressure Short C Bayerisches Geoinstitut Universität Bayreuth D-95440 Bayreuth

Information and application form: http://www.bgi.uni-bayreuth.de/ShortCourse2023

It was also possible to obtain two ECTS for the short course after passing an optional exam at the end.

The course participants were very grateful for the opportunity to visit the BGI despite the still not normalized situation after the pandemic. It was a unique chance to meet passionate high-pressure scientists and to discover the exceptional equipment at BGI. A sincere recommendation to enroll in a future offering of this short course is given to all young scientists and students interested in experimental techniques.

Cordula Haupt, Münster, Melanie Siegburg, Halle (Saale)

DMG SHORT COURSES 2023

As before, DMG will support several short courses next year. All courses will be aimed primarily at advanced-level undergraduate and graduate students but, as always, are open to more senior researchers as well. Nonlocal student members of DMG will be eligible for travel support to the amount of € 50. Because there are still restrictions related to the pandemic, only three courses can be announced at this time. Further information can be found at https://www.dmg-home.org/aktuelles/ doktorandenkurse/.

(1) **High-Pressure Experimental Techniques and Applications to the Earth's Interior**, Bayerisches Geoinstitut/University of Bayreuth, Florian Heidelbach, 20–24 February 2023 (florian.heidelbach@uni-bayreuth.de)

(2) **Solid-state NMR Spectroscopy, Institute for Geology, Mineralogy and Geophysics**, Ruhr University Bochum, Dr. Michael Fechtelkord, 30 May – 2 June 2023 (michael.fechtelkord@rub.de)

(3) In Situ Analysis of Isotopes and Trace Elements by Femtosecond Laser Ablation ICP-MS, Institute for Mineralogy, Leibniz University of Hannover, Ingo Horn, Marina Lazarov, Martin Oeser, Stefan Weyer, 25–29 September 2023 (s.weyer@mineralogie. uni-hannover.de).

DMG SECTION MEETING PETROLOGY & PETROPHYSICS, AND GEOCHEMISTRY



Participants of the DMG section meeting in front of the lecture hall "Mussel" at the Johannes Gutenberg University in Mainz. PHOTO: S. BUHRE.

This year's meeting of the Geochemistry, Petrology, and Petrophysics sections of the DMG took place at the Johannes Gutenberg University in Mainz, Germany. After a very successful online meeting last year, the participants were happy to meet face-to-face again this year, as this format offers even better networking opportunities, for example, at the poster session and during the traditional BBQ on Friday evening. The research presented in many high-quality lectures and posters ranged amongst others from processes in magmatic systems and their experimental analogues through crystal growth, diffusion, and metamorphic reaction dynamics to the formation of the first continental crust. Many thanks to Stephan Buhre, Roman Botcharnikov, Audrey Bouvier, Esther Schwarzenbach, Matthias Willbold, and all the helpers for their excellent organization. We are already looking forward to the next joint meeting of the two sections, which will probably take place on June 16–17, 2023, in Bayreuth at the BGI.

Bastian Mrosko and Mees Franke, Innsbruck (Austria)

ELEMENTS

