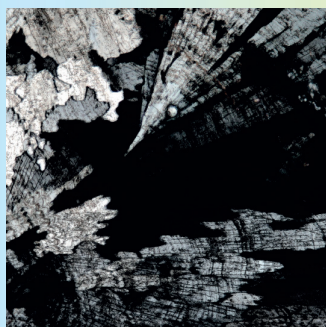


PETROGRAPHICS

Science and Art in Dire Times

Mineralogists are all familiar with the most important petrographic technique, the investigation of thin sections with a polarizing microscope, and surely, most of them when first introduced to this method in their university courses were stunned and impressed by its esthetic aspects. Michael M. Raith, Prof. Emeritus at the University of Bonn (Germany), has used his vast collection of thin sections to combine beautiful, but sometimes also frightening and awesome, images with lyrics. Here is one example: a poem by the famous poet Anna Akhmatova (1889–1966). She wrote this poem in 1917, in the middle of World War I, which was then published in 1921 in her poetry collection 'Plantain'. The combination with the petrographic artwork appeared 100 years later in Raith's book 'Petrografiken 2021'.

Gerhard Franz (Berlin)

 PetroGraphics –
 Science and Art in dire times


Anna Akhmatova
 from her poem collection, 'Plantain'.

And all day, terrified by its own moans,
 the crowd churns in agonized grief,
 and across the river, on funeral banners
 sinister skulls laugh.
 And this is why I sang and dreamed,
 they have ripped my heart in half.
 As after a burst of shots, it became still,
 and in the courtyards, death patrols.

Summer 1917

'Harbinger of doom'

Petrographics, Michael M. Raith
 Thin section of the mineral whitlockite
 Width of the photomicrograph = 2 mm

In these dark times of the war in Ukraine, the lyrics of the famous poet Anna Akhmatova (* Odessa/Ukraine 1889, † Moscow/Russia 1966) unfold timeless relevance. The unimaginable suffering, death and despair, horror and shock at the height of World War I, resonate in her lyrical work. Michael M. Raith, Prof. Emeritus at the University of Bonn (Germany), has combined Akhmatova's poem with an example of his recent petrographic artwork (Grafiken 2021). The deeply shattering poem, together with the image of the thin section, immediately stimulates to realize the dangerous situation the world faces today. Artwork—in words and image—speaks for itself and so we leave the reader pondering!

What a strange contrast are the dry words and numbers about the mineral depicted:
 Whitlockite, $\text{Ca}_2(\text{Mg,Fe}^{2+})(\text{PO}_4)_2(\text{PO}_3\text{OH})$, trigonal, space group = R 3c
 Optical uniaxial (-), $n = 1.626$, $n_g = 1.629$, $\Delta = 0.003$

Sources: Michael M. Raith Grafiken (2021);
 Anna Akhmatova, The complete poems. Canongate Books, Edinburgh, 2021
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NEWS FROM DVGeo

In recent months, the DVGeo, which is the umbrella organization for geosciences in Germany, has devoted itself to the further development of internal and external structures for the promotion of geosciences.



Internal Structure

After welcoming the German-Austrian-Swiss Clay Group DTTG as an associated member, the DVGeo is seeing a growing interest from other organizations to join or—at least—to cooperate. The societies in the umbrella association are discussing possibilities to work more closely together in order to speak with one voice and reduce administrative costs.

Revival: Conference of the Geosciences Departments

From the DVGeo's point of view, the German university landscape has so far lacked an organization that discusses developments in geoscientific research and teaching. Therefore, it initiated the new formation of the Conference of Geosciences Departments.

Representatives from 20 universities came together for the (online) kick-off meeting in March. Claudia Trepmann from LMU Munich was elected as interim spokesperson. More universities attended the second meeting in May, which included the adoption of a constitution and the election of a team of spokespersons. The DVGeo will be happy to support this new organization.

Geosciences in School

Because Germany is one of the countries in Europe where geosciences are not offered as a school subject, the DVGeo is trying to broaden geoscientific knowledge in schools. The members of the DVGeo have been offering interesting tools that are used by schools for a long time, e.g., the Mineralogical Teaching Kit of the DMG, mileko.



One of the DVGeo's first goals was to connect these individual actions with each other. As a next step, all offers are to be collected and made easily available on the internet. Because responsibility for school education in Germany lies with the federal states, each federal state must additionally be addressed individually. In Berlin, further training events for teachers in the field of geosciences will be offered this year and we hope to expand this success.

Tamara Fahry-Seelig (Berlin)



AGRICOLA MEDAL FOR PROF. DR. HARTMUT SCHNEIDER



Prof. Dr. Hartmut Schneider is the recipient of the Agricola Medal of the DMG in 2022 for his outstanding research in the field of Applied Mineralogy. Hartmut Schneider studied mineralogy at the University of Tübingen where he obtained his diploma in 1969. Two years later, in 1971, he received his PhD with a thesis on the transformation behavior of biotite. He then worked as an assistant professor at the University of Karlsruhe. In 1976, he became the department

head of the German Industrial Institute for Ceramics and Refractories (DIFK) in Bonn with a research focus on high-temperature materials and refractories, high-temperature behavior of SiO₂ phases and silica refractory bricks, refractory grade bauxites, transformation of aluminosilicates to mullite, and transition-metal doping of mullite. He finished his habilitation in 1986 at the University of Münster on the synthesis, properties, and applications of mullite. From 1989 to 1990, he was a member of the board of directors of the DIFK. In 1990, he moved to the Institute of Materials Research at the German Aerospace Center in Cologne where he was head of the Ceramics Department until 2006. In that period, he continued his research on the crystal chemistry and properties of mullite. In 1996, he became a professor at the University of Hannover. He was also a guest professor at the University of Vienna and the National Taiwan University in Taipei. In 2013, he was awarded as a Fellow of the University of Bremen where he is still active with his research on mullite. The scientific work of Hartmut Schneider is internationally recognized, as expressed by the Japanese Government Research Award in 1990, the German Lilienthal award in 1995, and his appointment as a Fellow of the American Ceramic Society in 2013. He has published more than 270 scientific papers in international journals. The workshop "Mullite and Mullite Ceramics" was organized in 2006 to honor his scientific work.

Reinhard Fischer (Bremen)

EMU NOTES IN MINERALOGY: SPECIAL MEREMA VOLUME

The European Mineralogical Union (EMU) annually sponsors international workshops (EMU Schools) where experts give review lectures starting at the traditional university level, but also providing the participants with insights to understand even the latest trends in the covered field.

The International School on Mantle Dynamics (MEREMA 2nd Edition) took place in Sestri Levante (Italy) on 24–29 October 2021. The MEREMA School focused primarily on discussing the present state of knowledge about the structure, chemical differentiation, and dynamics of the Earth's mantle, combining the information coming from different methodologic approaches and disciplines, such as petrology, geochemistry, mineral physics, and geophysics. For more information about the International School on Mantle Dynamics, see the February issue (vol. 18, no. 1) of *Elements* or the MEREMA website available at www.socminpet.it/Merema.

The financial support from the EMU was mostly used to reduce the registration fee for participants, to pay the expenses of the lecturers, and to produce a book from the **EMU Notes in Mineralogy** series as an outcome from individual lectures.

The proposed Volume 21 of the EMU Notes in Mineralogy entitled **"Chemical geodynamics of the Earth's mantle; new paradigms"** will be edited by Costanza Bonadiman (University of Ferrara, Italy) and Elisabetta Rampone (University of Genoa, Italy), both representing the Italian Society of Mineralogy and Petrology (SIMP), who were the main organizers of the MEREMA School.

This volume will cover the scientific issues presented in the past second edition of the MEREMA International School on Mantle Dynamics, as well as contributions from the first edition (MEREMA 2017 Winter School), with the aim of following a common thread of the Earth's mantle dynamics.

Thanks to the contribution of top-level scientists who took part in both school editions, together with scientists who contributed to the contents, this volume will assess the cutting edge knowledge of chemical differentiation and dynamics of the mantle as a whole system, and will explore the effects of reaction mechanisms at the Earth's major interfaces: the core–mantle–boundary (CMB) and the crust–mantle boundary. Different methodological approaches and disciplines (petrology, geochemistry, mineral physics, and geophysics) will offer an overview of the Earth's mantle whole system beyond the line of reasoning driven by the physics of the continuum medium.

The main topics that this volume will address are:

- 1) Chemical differentiation and internal structure of the Earth;
- 2) Tomography and rheological properties the Earth's mantle;
- 3) Origin and length scale of chemical/isotope mantle heterogeneities;
- 4) Transfer of heterogeneities from the deep mantle to the melting mantle source regions and finally to the extruded melts.

Such a volume will serve as an essential guide for the international geochemical, petrological, and mineralogical community, allowing them to understand the dynamics of the Earth's mantle well beyond the important geophysical aspects.