

Curriculum Vitae

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Education and Career

1982: Diploma in Mineralogy/Crystallography at Technical University (RWTH) Aachen; Master Thesis at company Dornier System GmbH, Friedrichshafen: *Crystal chemistry and electrical conductivity in oxidic La-Cr-Ni-Perovskites*.

Award: Springorum-Denkünze presented by RWTH

1989: PhD at the Mineralogic-Petrographic Institute of the University of Cologne: *The deformation of Sodium Nitrate single crystals*

1990 – 1995: research fellow at Max-Planck-Institute in Mainz (group of Gerhard Brey)

1995 – present: part of the academic staff at the Institute of Geosciences, Goethe-University; in the group of Gerhard Brey until 2014 and of Horst Marschall since 2016 (Mineralogy, petrology and geochemistry).
Supervisor of the electron microprobe and SEM labs.

2013: **Award:** Abraham-Gottlob-Werner-Medaille in Gold presented by the German Mineralogical Society (DMG)

Current research

- Development of an *in situ* method with the electron microprobe for the determination of the iron oxidation in solid materials on the microscale (“flank method”)
- Determination of $\text{Fe}^{2+}/\text{Fe}^{3+}$ with the flank method in synthetic minerals (garnet, pyroxene) and extending the application to natural minerals for oxygen fugacity calculation
- Quantitative analysis of light elements (B, N, O) with the electron microprobe
- Contract research for the development and quality control of industrial materials with partners from industry
- Cooperation with partners from other universities

Teaching

Basic and advanced lectures in

- Geomaterials
- Microanalysis with EPMA, SEM, and XRF
- Polarizing microscopy (universal stage)
- Flank method held at
 - the Australian National University, Canberra, Sept. 2006,
 - Goethe Universität Frankfurt, 2011, 2013
 - Peking University, Beijing, Dec. 2015