

# CURRICULUM VITAE

## Hess, Kai-Uwe, Dr. rer. nat. Dipl. Min.

Date of birth 26.01.1965, male  
Office Address Mineralogy, Petrology and Geochemistry  
Department of Earth and Environmental Sciences  
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Actual position Staff Research Scientist



## Academic Qualifications

Doctorate 1993-1996 „Zur Temperaturabhängigkeit der Viskosität von haplogranitischen Schmelzen“ / Universität Bayreuth / Prof. Dr. D.B. Dingwell, Germany

Diploma 1985-1993 „Herstellung und Charakterisierung von Preforms aus Safimax-Fasern“ / Johann Wolfgang Goethe-Universität / Prof. Dr. H. Krumm, Germany

## Career

Since 2025 Guest Professor / International Research Center for Geological and Planetary Sciences, Hangzhou International Innovation Institute of Beihang University, China

Since 2003 Staff Research Scientist, Department of Earth & Environmental Sciences, Ludwig-Maximilians-Universität München, Germany

2000-2003 Senior Research Scientist, Dronco AG, Wunsiedel, Germany

1999-2000 Technical consultant, Wunsiedel, Germany

1998-1999 Post-doc, Bavarian Research Institute of Experimental Geochemistry and Geophysics, Bayreuth, Germany

1997-1998 Research Scientist, Leurop Diamantwerkzeuge GmbH, Marktredwitz, Germany

## Funding

- DFG Grants: HE4565/6 (2016-2022), HE4565/2 (2009-2011), HE4565/1 (2005-2009)
- Project leader: "New materials", B21092; "Production", 02PD2212;" ProInno", KU0293101KJJ1

## Services to the Community

- Since 2015 guest editor of Chemical Geology Special Issues "Silicate melt workshop"
- Reviewer for American Mineralogist, Bull. Volc., Chemical Geology, CTMP, EPSL, JVGR and more
- Member of the task group AVT-250 "Gas Turbine Engine Environmental Particulate Foreign Object Damage" of NATO
- Past Representative of LMU at German Scientific Earth Probing Consortium (GESEP)
- Past Chair of C1.8 at German Institute for Standardisation (DIN)

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## Publications and Patents

- Web of Science bibliometric indices (27/03/2025):
- h-index 42, 142 documents and a sum of 5194 citations; 5 patents
- ORCID: 0000-0003-1860-8543, Scopus Author ID: 7201815747; ResearcherID: C-8211-2009



## Research Interests & Teaching

- High-temperature, high-pressure research on geomaterials
- Thermal analysis of silicate glasses and melts
- X-ray and Neutron Computed Tomography

## Selected publications

- **Ultramafic Melt Viscosity: A Model**, EPSL, 2024, DOI: [10.31223/X5640N](https://doi.org/10.31223/X5640N)
- **Glass transition temperatures and crystallization kinetics of a synthetic, anhydrous, amorphous calcium-magnesium carbonate**, Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2023, DOI: [10.1098/rsta.2022.0356](https://doi.org/10.1098/rsta.2022.0356)
- **A redox effect on the viscosity of molten pyrolite**, Chemical Geology, 2023, DOI: [10.1016/J.CHEMGEO.2023.121816](https://doi.org/10.1016/J.CHEMGEO.2023.121816)
- **The glass transition and the non-Arrhenian viscosity of carbonate melts**, American Mineralogist, 2022, DOI: [10.2138/am-2021-7752](https://doi.org/10.2138/am-2021-7752)
- **The kinetics of the glass transition of silicate glass measured by fast scanning calorimetry**, Thermochimica Acta, 2019, DOI: [10.1016/j.tca.2019.01.001](https://doi.org/10.1016/j.tca.2019.01.001)