

Special Issue

Crystal Structures and Phase Transitions of Minerals at Extreme Conditions

Message from the Guest Editor

Earth's internal composition and structure is heavily influenced by the varied stability of crystalline phases at the extreme pressures and temperatures found in the planet's interior. For example, many important rheological and seismological boundaries can be explained in terms of phase transitions occurring in volumetrically abundant minerals. In this Special Issue of *Minerals*, we invite contributions examining the crystallography, crystal chemistry, hydration behavior, phase stability, and phase transition behavior of mineral phases under the extreme conditions of Earth's deep crust, mantle, and core. Both experimental and computational studies that shed light on the behavior of important crystal structures at high P–T conditions are welcome, especially those that examine changes in symmetry, bonding, order–disorder relations, or general structure as a function of pressure and temperature.

Guest Editor

Dr. Daniel Hummer

School of Earth Systems and Sustainability, Southern Illinois University Carbondale, 1259 Lincoln Drive, Carbondale, IL 62901, USA

Deadline for manuscript submissions

closed (31 July 2023)



Minerals

an Open Access Journal
by MDPI

Impact Factor 2.2
CiteScore 4.4



mdpi.com/si/136410

Minerals
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
minerals@mdpi.com

[mdpi.com/journal/
minerals](https://mdpi.com/journal/minerals)





Minerals

an Open Access Journal
by MDPI

Impact Factor 2.2
CiteScore 4.4



[mdpi.com/journal/
minerals](https://mdpi.com/journal/minerals)



About the Journal

Message from the Editor-in-Chief

Minerals welcomes submissions that report basic and applied research in mineralogy. Research areas of traditional interest are mineral deposits, mining, mineral processing and environmental mineralogy. The journal footprint also includes novel uses of elemental and isotopic analyses of minerals for petrology, geochronology and thermochronology, thermobarometry, ore genesis and sedimentary provenance. Contributions are encouraged in emerging research areas such as applications of quantitative mineralogy to the oil and gas, manufacturing, forensic science, climate change, geohazard and health sectors.

Editor-in-Chief

Prof. Dr. Leonid Dubrovinsky

Bayerisches Geoinstitut, University Bayreuth, D-95440 Bayreuth,
Germany

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), GEOBASE, GeoRef, CaPlus / SciFinder, Inspec, Astrophysics Data System, AGRIS, and other databases.

Journal Rank:

JCR - Q2 (Mining and Mineral Processing) / CiteScore - Q1 (Geology)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 17.7 days after submission; acceptance to publication is undertaken in 2.6 days (median values for papers published in this journal in the second half of 2025).