Special Issue

Crystal Structures and Phase Transitions of Minerals at Extreme Conditions, 2nd Edition

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

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Deadline for manuscript submissions

closed (15 February 2025)

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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.

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manuscripts are peer-reviewed and a first decision is provided to authors approximately 18.2 days after submission; acceptance to publication is undertaken in 2.6 days (median values for papers published in this journal in the first half of 2025).

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