

Special Issue

Advances in the Thermochemistry of Natural and Synthetic Minerals

Message from the Guest Editor

Thermochemistry as a part of physical chemistry studies the energy changes associated with materials chemical transformations under the temperature influence and related energy states and transitions. The thermochemistry of minerals, natural and synthetic, plays a large role in modern material science. Mineral formation and change studies, by their crystal-chemical and microstructural properties, are of fundamental importance for advanced mineral systems investigations. Studies on mineral thermochemistry are carried out by measuring their physical properties as a function of temperature or time by varying the speed of heating or cooling in adjustable gaseous media.

This Special Issue aims to cover the latest research on minerals thermochemistry, including solid-phase synthesis, thermal decomposition, phase transitions, and thermal phenomena. The obtained new knowledge about minerals thermochemistry will enable a detailed study of their crystal chemistry, microstructure, calorimetry, heat capacity, thermal conductivity, thermal decomposition mechanism, and potential applications.

Guest Editor

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Deadline for manuscript submissions

closed (10 September 2021)



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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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Rapid Publication:

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).