Special Issue

Multi-Method (Geo-) Thermochronology and Trace Elements Tracing Magmatism, Mineralization and Tectonic Evolution

Message from the Guest Editors

With the rapid development of analytical techniques, especially the in situ Lu-Hf, Rb-Sr, U-Pb, fission-track and (U-Th)/He dating of garnet, zircon, apatite and other accessory minerals, several important geological issues have been successfully resolved or re-determined in the past decade. Among these, the precise temporal evolution and duration of magmatism and mineralized processes, as well as the uplift and exhumation history of mineral deposits and basins within orogenic belts and cratons, can assist the exploration of mineral and petroleum resources. Moreover, in situ mineral-scale trace element concentrations could also be simultaneously determined using LA-ICP-MS in situ accessory mineral dating; this would provide new perspectives on the formation and evolution of major geological objects via integrating with corresponding ages. Although previous studies have focused on most scientific issues of magmatism, mineralization and tectonic evolution in different geological objects, several aspects of these investigations have not previously shown agreement.

Guest Editors

Dr. Fan Yang

Dr. Cun Zhang

Dr. Jian Chang

Deadline for manuscript submissions

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

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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

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