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

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## **Message from the Guest Editors**

Dear Colleagues,

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.











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# **Message from the Editor-in-Chief**

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