

Special Issue

LA-ICP-MS Geochronology: From Petrology to Provenance and Sedimentation

Message from the Guest Editors

This Special Issue of *Geosciences* is focused on LA-ICP-MS U-Th-Pb geochronology. This technique allows for the dating of micro-volumes of U- and Th-bearing minerals (i.e., zircon, monazite, xenotime, allanite, apatite, rutile, titanite, baddeleyite, and also calcite), which are common in metamorphic, magmatic, and sedimentary rocks. The minerals are usually analyzed as separates or directly in thin sections, thus, preserving the textural information of the obtained isotopic ratios. LA-ICP-MS is widely used for dating metamorphic reactions and P-T segments, as well as magmatic events, and usually the in situ geochronological data are combined with chemical (major and trace elements), isotopic (e.g., O and Hf isotopes of zircon) and microstructural (EBSD) data. The aim of this Special Issue is to gather new applications and review articles applying in situ U-Th-Pb dating by LA-ICP-MS dealing with basement geology, magmatic petrology and sedimentary studies.

Guest Editors

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Message from the Editor-in-Chief

Understanding the Earth's origin and its bio-geological evolution, the multiple implications of the geosciences (as a coherent set of interconnected disciplines), and the sociocultural and ethical interdisciplinary approaches, will be crucial for a better understanding of Nature, and also for undertaking scientifically based political decisions.

We are committed to drive *Geosciences* to a position in which it is recognized for its high-quality, cutting-edge research and scientific influence, and strongly encourage and invite your participation and manuscripts.

Editor-in-Chief

Prof. Dr. John C. Eichelberger

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