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Sand(stone)s Quantitative Provenance Analysis

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Message from the Guest Editors

Dear Colleagues,

A basic quantitative element of sand-sized sediments and sedimentary rocks is composition, and the parent lithologies of eroded orogenic systems rest on the petrographic analysis of terrigenous sediments' detrital modes. In fact, the development of sand(stone) petrology has provided evidence for interpreting tectonic setting models, insights into (paleo)climatic conditions of the source areas, (paleo)current patterns, facies relationships of stratigraphic units, and the overall clastic unit volumes of the basins' fill.

This Special Issue invites contributions that are concerned with the petrography of modern sand-sized sediments and ancient sandstones of the Earth record. Since sand and sandstones comprise a wide mixture of source grains, their quantitative provenance analysis is often best tackled using petrographic microscopy. Moreover, the use of sand grain petrography as a tool within the Earth sciences is also expanding. Most of these studies demonstrated that the petrographic analysis of sand grains, determined accurately with a standard petrographic microscope, assisted in the location of their possible geographical source area.







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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 coherentset of interconnected disciplines), and the sociocultural and ethical interdisciplinary approaches, will be crucial for a better understanding of Nature, and also for undertaking scientificallybased political decisions.

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