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Kimberlites and Related Rocks: New Insight into Petrogenesis and Diamond Potential of Deeply-Derived Mantle Magmas

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Message from the Guest Editors

Dear Colleagues,

Kimberlites are igneous rocks that represent the deepest magmas originated from the mantle. Studies of kimberlites and their crustal and mantle xenoliths provide important information about the Earth's interior beneath ancient cratons. Kimberlites are also economically important as a major source of diamonds. Rocks allied to kimberlites, such as lamproites and lamprophyres, also provide information about deep Earth processes and may contain diamonds. Most diamondiferous kimberlites carry diamonds only from the roots of subcratonic lithospheric mantle, but some rare examples supply so-called 'superdeep' diamonds. They provide key information about the lowermost upper mantle, the mantle transition zone and even the uppermost lower mantle.

This Special Issue covers all aspects of the mineralogy, petrology and geochemistry of kimberlites and related magmatic rocks of deep-mantle origin, mantle and crustal xenoliths, and diamonds. Papers focused on any processes beneath ancient cratons and the high-temperature and high-pressure experiments related to the field of the Special Issue topic are also welcome.



