

Special Issue

Mafic Magma Petrogenesis during Supercontinental Assembly versus Breakup

Message from the Guest Editor

It is well understood how plate tectonics continuously facilitate partial mantle melting through its decompression along spreading centres and its hydration above subducting plates. Continental mafic magmatism is more enigmatic and, regarding the supercontinental cycles of a secularly cooled Earth, it has been proposed that two different types of large mafic magma events form during assemblies and breakups. Such a conditioned duality not only follows totally different convergent and divergent settings, respectively, but may also link to deeper, whole-mantle, and dynamic cycles of ocean crust accretions onto the Earth's core and its heated remobilization as D" mantle plumes; as well as shallower petrogenetic triggers like the thermal blanketing by supercontinents. For this Special Issue, we invite any contribution that either specifically addresses this conditioned duality or presents a case study of any continental mafic magmatism, as long as its mantle source, petrogenesis, and emplacement may be related to a supercontinental assembly or breakup setting, or a transition between these. We hope, thereby, to shed more factual light on what may be a contentious topic.

Guest Editor

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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.

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