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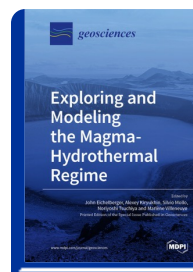
Exploring and Modeling the Magma-Hydrothermal Regime

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This Special Issue comprises 12 papers from authors in 10 countries with new insights on the close coupling between magma as an energy and fluid source with hydrothermal systems for the primary control of magmatic behavior. Data and interpretation are provided on the rise of magma through a hydrothermal system, the relative timing of magmatic and hydrothermal events, the temporal evolution of supercritical aqueous fluids associated with ore formation, the magmatic and meteoric contributions of water to the systems, the big picture for the highly active Krafla Caldera, Iceland, as well as the implications of results from drilling at Krafla concerning the magma–hydrothermal boundary. Some of the more provocative concepts are that magma can intrude a hydrothermal system silently, that coplanar and coeval seismic events signal “magma fracking” beneath active volcanoes, that intrusive accumulations may far outlast volcanism, that arid climate favors formation of large magma chambers, and that even relatively dry rhyolite magma can rapidly convect and so lack a crystallizing mush roof. A shared theme is that hydrothermal and magmatic reservoirs need to be treated as a single system.



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