



Properties of Melt and Minerals at High Pressures and High Temperatures

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Deadline for manuscript
submissions:

closed (24 January 2020)

Message from the Guest Editor

Dear Colleagues,

High pressure, high temperature mineralogy has long played an essential role in our understanding of planetary interiors. As developments in high-pressure, high-temperature methods continue to emerge, we continue to broaden our insights on how the properties of minerals vary with depth from crust to mantle to core. Along with comparable advances made to analytical methods, we have reached levels of accuracy and precision in the determination of properties at extreme conditions that allow for a much sharper comprehension of Earth's and other planetary interiors. Silicate melts are critical components in nearly every igneous process, particularly at conditions of high pressure. During Earth's period of accretion silicate melts served as transport media leading to its chemical differentiation and formation of the core, mantle and crust. Like many minerals, the physical properties of silicate melts can be very sensitive to pressure, especially at conditions favoring the transformation of tetrahedral cations to pentahedral and octahedral species.

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Guest Editor





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Message from the Editor-in-Chief

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Journal Rank: JCR - Q2 (*Mining & Mineral Processing*) / CiteScore - Q2 (*Geology*)

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