



Phase Relations, Redox and Melting Reactions in Carbonate-bearing Systems in the Earth's Mantle

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Message from the Guest Editors

Dear Colleagues,

The study of carbonates under various P - T - X - fO_2 conditions provides insights into both the deep carbon cycle and the transport of atmospheric CO_2 to the Earth's mantle. Carbonates are one of the important classes of minerals lowering the solidus temperatures of mantle rocks, which, in turn, influences the generation of deeply seated magmas. Carbonates may have a substantial role in mantle processes relevant to partial melting, metasomatism, and diamond formation. Recent findings of alkali and alkaline earth carbonates in mantle minerals and xenoliths including superdeep diamonds call for further study of the carbonate-bearing systems in a wider range of compositions, pressures and redox conditions. Accordingly, we invite researchers to contribute to this Special Issue on "Phase Relations, Redox and Melting Reactions in Carbonated Systems in the Earth's Mantle".





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Message from the Editor-in-Chief

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