

Special Issue

Fe-Bearing Carbonates in the Deep Earth

Message from the Guest Editors

Carbonate minerals are considered to be the major source of carbon influx inside the deep Earth. They can be found as inclusions in natural diamonds coming from the deep mantle. Recent experimental investigations demonstrate their ability to transform into highly polymerized tetracarbonate structures at pressures and temperatures of the lowermost mantle. In particular, the study of Fe-carbonates at extreme conditions has attracted considerable interest in the last decade.

Multiple valence states and magnetism, such as the electronic spin pairing of iron 3d electrons, result in a rich physics and chemistry of Fe-carbonates at extreme conditions. We cordially invite you to contribute to this Special Issue, which will cover topics such as: - (Redox)-reactions in multi-phase systems containing Fe-carbonates; - Vibrational properties of Fe-carbonates at extreme conditions; - Fe-carbonate melts of chemical and physical properties at extreme conditions, i.e., structure, density, and viscosity; - Stability of Fe-bearing carbonates at high pressure and temperature, decomposition, and phase transformation; - Synthesis of Fe-carbonates at extreme conditions.

Guest Editors

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About the Journal

Message from the Editor-in-Chief

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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