Special Issue

Geochemical Controls on the Generation and Transformation of Carbon in Rocks

Message from the Guest Editors

Carbon-bearing rocks, such as carbonaceous shale, coal, carbonate and graphite-bearing metasedimentary rocks, play a pivotal role in the Earth's geochemical cycles, which influence various processes; these include the deep carbon cycle, surface weathering, biomineralization, and climate change. These rocks form in a wide range of geological settings, from the high-pressure, high-temperature conditions in the Earth's mantle to the low-temperature, near-surface environments in sedimentary basins. It is crucial to understand the geochemical factors that control the generation and transformation of carbon in these rocks in order to determine the complex interactions between the lithosphere, hydrosphere, atmosphere, and biosphere; this would have significant implications for the search of potential life and habitable environments on early Earth and beyond. This Special Issue aims to compile recent research on the formation, stability, and transformation of carbon in rocks under various geochemical conditions.

Guest Editors

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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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