Special Issue

Redox Reactivity of Iron Minerals in the Geosphere, 2nd Edition

Message from the Guest Editors

Iron is a highly abundant element in the lithosphere, and Fe oxides, Fe-bearing phyllosilicate minerals, Fe sulfides, and other Fe-bearing minerals are common constituents of soils and sediments. As such, redox-active Fe-bearing minerals are key players in electron transfer reactions involved in the biogeochemical cycling of elements and the transformation of organic and inorganic contaminants in both natural and engineered redox dynamic environments. We invite contributions relating to, but not limited to, laboratory and field studies of the transformations of Fe-bearing minerals via abiotic and microbially-driven redox reactions; the coupling of redox reactions of Fe-bearing minerals with the biogeochemical cycling of critical elements (e.g., N, P, and S); and the impacts of Fe redox reactions on contaminant transformation, fate, and transport in aquatic and terrestrial environments. We especially encourage multidisciplinary studies that use cutting-edge approaches such as advanced imaging and spectroscopic techniques, isotopic analysis, and omics-based molecular microbiology.

Guest Editors

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Deadline for manuscript submissions

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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.

Editor-in-Chief

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