



Redox Reactivity of Iron Minerals in the Geosphere

Guest Editors:

Dr. Edward J. O'Loughlin

Biogeochemical Processes
Group, Biosciences Division,
Argonne National Laboratory,
Building 203, Room E-137, 9700
South Cass Avenue, Argonne, IL
60439, USA

Prof. Dr. Man Jae Kwon

Department of Earth and
Environmental Sciences, Korea
University, 145 Anam-ro,
Seongbuk-gu, Seoul 02841, Korea

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Message from the Guest Editors

Iron is a highly abundant element in the lithosphere, and Fe oxides, Fe-bearing clay minerals, and Fe sulfides 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 on, but not limited to, laboratory and field studies of the transformations of Fe-bearing minerals by 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 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.

Dr. Edward J. O'Loughlin

Prof. Dr. Man Jae Kwon

Guest Editors





Editor-in-Chief

Prof. Dr. Leonid Dubrovinsky

Bayerisches Geoinstitut,
University Bayreuth, D-95440
Bayreuth, Germany

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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Minerals Editorial Office
MDPI, St. Alban-Anlage 66
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