

Special Issue

Redox Reactivity of Iron Minerals in the Geosphere

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.

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

Deadline for manuscript submissions

closed (31 July 2021)



Minerals

an Open Access Journal
by MDPI

Impact Factor 2.2
CiteScore 4.4



mdpi.com/si/46844

Minerals
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
minerals@mdpi.com

[mdpi.com/journal/
minerals](https://mdpi.com/journal/minerals)





Minerals

an Open Access Journal
by MDPI

Impact Factor 2.2
CiteScore 4.4



[mdpi.com/journal/
minerals](https://mdpi.com/journal/minerals)



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

Prof. Dr. Leonid Dubrovinsky

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

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), GEOBASE, GeoRef, CaPlus / SciFinder, Inspec, Astrophysics Data System, AGRIS, and other databases.

Journal Rank:

JCR - Q2 (Mining and Mineral Processing) / CiteScore - Q1 (Geology)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 17.7 days after submission; acceptance to publication is undertaken in 2.6 days (median values for papers published in this journal in the second half of 2025).