Special Issue

Mineralogical, Petrophysical and Hydromechanical Properties of Reservoirs and Caprocks, 2nd Edition

Message from the Guest Editors

Clays and clay-based materials serve as reservoirs and caprocks for energy resources, storage and waste stream sequestration. The mineralogical, petrophysical and geomechanical characteristics are the information required for understanding unconventional origins, accumulation and evolution in different geological settings. The purpose of this Special Issue is to provide a cutting-edge insight to the multiscale mineralogical, petrophysical and geomechanical properties of shales or mudrocks, during coupled thermal, hydrologic, mechanical, chemical or biological processes in natural or anthrogenic activities. We seek original research that explores the storage potential and evolution of material properties of shale or mudrocks during hydrogen injection, energy-waste containment and sequestration, gas hydrate formation, and geothermal infiltration. Submitted studies are expected to highlight the potential of shale and other clay-based materials to store and transport these fluids. Work that explores the role of mineral distribution within shales in determining material response to CO2, H2, and other fluids of interest are encouraged.

Guest Editors

Dr. Yong Li

Dr. Yingfang Zhou

Dr. Zhenhua Jing

Dr. Junjian Wang

Deadline for manuscript submissions

30 November 2025

Minerals

an Open Access Journal by MDPI

Impact Factor 2.2
CiteScore 4.4

mdpi.com/si/208897

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

mdpi.com/journal/minerals

Minerals

an Open Access Journal by MDPI

Impact Factor 2.2
CiteScore 4.4

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), 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 18.2 days after submission; acceptance to publication is undertaken in 2.6 days (median values for papers published in this journal in the first half of 2025).

MDPI