

Special Issue

Clay Minerals and CO₂ Capture, Utilization and Storage

Message from the Guest Editor

CO₂ capture, utilization and storage (CCUS) technology has been regarded as the most effective way to reduce industrial CO₂ emissions, mitigate the greenhouse effect and realize strategic goals of carbon neutrality. Geologic clay minerals are excellent cost-effective candidates for environmental materials with a large specific surface area, remarkable adsorption capability, low cost, high mechanical properties and chemical stability. Efficient and economical technologies focusing on clay minerals in CO₂ capture, utilization and storage are eagerly desired. This Special Issue aims to present the most updated advances in clay minerals in CO₂ capture, utilization and storage technologies, which are involved in the novel synthesis route of clay-based adsorbents and catalysts, clay mineral-derived materials for CCUS, efficient and economical CO₂ mineralization and storage processes and the application prospect of clay minerals in CCUS processes.

Guest Editor

Dr. Xiaoyu Li

School of Materials Science and Engineering, Chang'an University, Xi'an 710064, China

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

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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

Prof. Dr. Leonid Dubrovinsky

Bayerisches Geoinstitut, University Bayreuth, D-95440 Bayreuth,
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