Special Issue

Environmental Applications of Chemically Modified Clay Minerals, Volume II

Message from the Guest Editor

Clay minerals are natural materials with unique properties (large specific surface area, cation exchange capacity). For decades, most known clay mineral groups, smectites, and kaolinites have been investigated. Their usage ranges from cosmetics through paper and paints additives to environmental applications. Due to the negative layer charge, the smectites have a large specific surface area and cation exchange capacity. They are excellent natural adsorbents, but their properties can be enhanced by chemical modification to study their:

- Structural stability under extreme pH conditions (the isolation layers of toxic waste dumps and spent radioactive fuel storages - acid and alkali activation);
- Redox activity remediated contaminated waters and soils by industrial or agricultural discharges (chemical and biological redox activation of structural Fe);
- Reactivity with oversaturated saline solutions (geological clay barriers);
- Anti-inflammatory activity and other biological applications of clay minerals.

Guest Editor

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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.

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