Special Issue

Adsorption Properties and Environmental Applications of Clay Minerals

Message from the Guest Editors

Clay minerals play a fundamental role in many environmental processes, particularly in controlling the movement of various ions and molecules in soils, waters, and barriers of waste storage facilities. Several applications are facilitated by clay minerals, via either their direct use or after modification. The mineralogical, chemical, and geotechnical characterization of the clay materials studied and applied needs to be carried out to learn which controlling processes determine the uptake of contaminants by clay materials. To predict the changes in the studied environmental systems over time, it is necessary to search for an adequate mathematical description of the individual-identified sub-processes. Knowledge of these sub-models and their interconnectedness in global transport models helps to predict the flow of contaminants in the vicinity of contamination sources. Papers addressing (i) wastewater treatment technologies using clay materials, (ii) theoretical aspects of the capture of significant contaminants on the surface of clay minerals, and (iii) the modeling of contaminant transport in such an environment, of which clay minerals are a significant part, are welcome.

Guest Editors

Dr. Dušan Vopálka

Department of Nuclear Chemistry, Faculty of Nuclear Sciences and Physical Engineering, Czech Technical University in Prague, Břehová 7, 115 19 Prague, Czech Republic

Dr. Bin Mu

Key Laboratory of Clay Mineral Applied Research of Gansu Province, Center of Eco-Materials and Green Chemistry, Lanzhou Institute of Chemical Physics, Chinese Academy of Sciences, Lanzhou 730000, 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, Germany

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