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Biology Meets Mineralogy: Investigations into Biomolecule Interactions with Aluminosilicate Clay Minerals and Layered Double Hydroxides

Guest Editors:

Dr. Michael Schmidt
USDA-ARS United States Salinity Laboratory, Riverside, CA, USA

Dr. Harold S. Bernhardt
Independent Researcher, Dunedin, New Zealand

Deadline for manuscript submissions:
closed (13 October 2023)

Message from the Guest Editors

Interactions of biomolecules (e.g., nucleic acids, nucleotides, proteins, peptides, amino acids, polysaccharides, simple sugars, and organic acids) with aluminosilicate clay minerals (e.g., kaolinite, montmorillonite, illite, pyrophyllite, and allophane) and layered double hydroxides (LDHs) (e.g., green rust and hydrotalcite) collectively underlie key processes in soil biogeochemistry, industrial processing, geobiology, biotechnology, nanotechnology, and agriculture. These interactions are thus of great interest to researchers in several fields, including in the study of the origin of life. There exist many insights relating to these systems that are currently unrealized and will be the key to future progress in a wide range of disciplines.

We welcome new advancements in the area of biomolecule interactions involving these prominent mineral surfaces. This includes, but is not be limited to, experimental and computational studies of protein adsorption onto clay minerals, mineral-catalyzed nucleic acid transformation, and enhancement of reactions that might have played a role in the origin of life.

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Editor-in-Chief

Prof. Dr. Leonid Dubrovinsky
Bayerisches Geoinstitut,
University Bayreuth, D-95440
Bayreuth, Germany

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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Contact Us

Minerals Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/minerals
minerals@mdpi.com
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