

Clay Interactions with Contaminants and Radionuclides: From Molecular Mechanisms to Environmental Fate

Organizers:

Jeffrey G. Catalano, Washington University in St. Louis, USA,
Nikolla P. Qafoku, Pacific Northwest National Laboratory, USA

This session seeks to explore the interactions of toxic and radioactive contaminants with clay minerals and related phases. Clay minerals are important sorbents of a range of established and emerging inorganic and organic contaminants, including heavy metals, radionuclides, and antibiotics. Association of soil organic matter with clay minerals may modify these interactions. Clays may also serve to promote the degradation or immobilization of contaminants through redox processes. Contributions that address any of these interactions at the molecular to field-scale are encouraged. Studies that explore related phases, such as oxide minerals, or biogeochemical processes that modify clay properties and their interactions with contaminants are also welcome. Contributions to this session will be organized under the following subtopics: (1) Heavy metals and clays; (2) Radionuclides and clays; (3) Organic contaminants and clays.