

Seminar Announcement: Colloid-facilitated Transport Modeling in Subsurface Environments

Colloid-facilitated Transport Modeling in Subsurface Environments

Colloid particles are widely distributed in the environment. There are mainly two categories of natural colloids: (i) abiotic colloids including all kinds of colloidal minerals and natural organic matters, and (ii) biocolloids including viruses, bacteria, and some of the protozoa. These colloids have recently been gaining significant attention due to their unique characteristics in environmental remediation pertaining to degradation, transformation and immobilization of contaminants in soils and aquifers. On the other hand, once mobilized by subsurface water flow, colloids may pose risks to surface water and groundwater quality as they are effective “carriers” of a variety of common contaminants found in water and soils. Therefore, understanding the transport mechanisms of the colloids and incorporation of colloidal transport processes in reactive transport models are crucial for successful applications of many remediation efforts in the subsurface. This presentation focuses on recent studies investigating the behavior of colloid-facilitated transport of heavy metals and radionuclides in natural settings. The implementation potential of the developed models for innovative in-situ nanoremediation strategies of pollutants as well as for the analysis of the impacts of engineered nanoparticles will also be presented.

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Zoom Link:

<https://zoom.us/j/6417236089?pwd=TytiMU1XdnN2SXdkUG1IbkY5UVIDUT09>

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