

# Mineral-microbe interactions: Applications to the remediation of metal contaminated environments



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Microorganisms play critical roles in chemical, geological and environmental processes by promoting the transformation of organic compounds, essential nutrients, minerals, and metals. These microbially-influenced transformations are naturally occurring processes that can also be manipulated for a variety of purposes (e.g., in the remediation of polluted environments). In Appalachia, the unearthing of coal has resulted in the production of metal-laden acid mine runoff that has damaged water supplies and ecosystems. A variety of physical, chemical, and microbiological processes are being employed to remediate these contaminated water. However, processes driving the removal of extremely high concentrations of manganese (Mn) are often ineffective and poorly understood. In my talk, I will be presenting current research to understand the intimately linked biological and chemical processes that promote the remediation of Mn in acid mine drainage.

**MCI**  
*Topics in  
Museum  
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*MCI Theater*

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