

Microbial Life in Extreme Environments: Linking Geological and Microbiological Processes

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The last decade has seen extraordinary growth of Geomicrobiology, the interdisciplinary field between Geology and Microbiology. Microorganisms have been studied in numerous extreme environments on Earth, ranging from crystalline rocks from the deep subsurface, hypersaline lakes, to dry deserts and deep-ocean hydrothermal vent systems. This talk reviews several active research frontiers in Geomicrobiology that demonstrate the importance of linking geological and microbiological processes in such studies: deep continental subsurface microbiology, microbial ecology in saline lakes, microbial formation of dolomite, geomicrobiology in dry deserts, fossil DNA and its use in paleo-environmental reconstruction, and microbial weathering of oceanic crust.

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