Biogeochemical transformations mediated by subsurface microbial communities

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The terrestrial subsurface is a major reservoir of carbon compounds and life. Microbial processess in such regions have the potential to significantly impact many of earth's biogeochemical cycles as well as the form and distribution of contaminants. New genome-resolve metagenomic approaches applied to a variety of subsurface systems are providing new insights into the diveristy and metabolic potential of microbial communties that reside there. The findings indicate the operation of processes that are not necessarily evident from geochemical data, suggest the widespread importance of symbiotic associations and are reshaping our view of the structure of the tree of life.