



## Water and Carbon Cycles in Terrestrial Ecosystems: Probing Molecular Connections

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The global carbon cycle is heavily dependent on the fate of carbon in soils. Carbohydrates, which include small compounds (sugars) as well as complex biopolymers (cellulose, starch), are intimately involved in the cycling of water and nutrient fluxes in environmental matrices (soils sediments). This presentation will highlight two main research efforts, which have led to novel insights into the role of carbohydrates in the trapping of water within mineral nanopores and in the conversion of carbohydrates in microbial cellular respiration to carbon dioxide.

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