

Optical characterization of DOM in a temperate forest ecosystems by fluorescence

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Better understanding of the dynamics of dissolved organic matter (DOM) in forest ecosystems is quite important to understand the ecosystem functions of the forests as well as the availability of DOM supplied from forest to the ecosystems downwards. Recently optical characterization of DOM becomes popular in ocean and freshwater ecosystems because of its easiness of operation. However the optical information of the DOM is still limited in terrestrial, especially forest ecosystems and we applied the optical characterization to the DOM collected from precipitation, throughfall, soil solutions, groundwater and streamwater to trace the fate of DOM along with the waterpath running through a forest ecosystems. We found that the quality of DOM is rather stable with quite variable concentration of dissolved organic carbon (DOC). We will discuss the production and consumption processes of DOM in a forest ecosystems based of DOC concentrations and optical information.