

Eawag Seminar Invitation

Extracellular Production of Reactive Oxygen Species by Aquatic Microorganisms

Speaker **Prof. Bettina Völker,**
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When **September 29, 11.00 – 12.00 a.m.**

Where **Forum Chriesbach, room C20, Eawag Dübendorf**

Abstract The reactive oxygen species (ROS) superoxide (O_2^-) and hydrogen peroxide (H_2O_2) play important roles in the aquatic chemistry of metals and interact with aquatic biota. It has traditionally been assumed that photochemical oxidation of chromophoric dissolved organic matter is the main source of these ROS in natural waters; however, it has recently become clear that biological production can also be an important source.

In this talk, I will present recent field and culture studies demonstrating the widespread importance of biological ROS production and exploring factors that control production rates, such as light availability and cell numbers. I will also discuss the relationship between O_2^- and H_2O_2 production rates and what this tells us about possible mechanisms of H_2O_2 and O_2^- production and destruction.