

Session: Biofilm ecology and ecotoxicology

How important are aquatic biofilms to assess ecotoxicological effects?

Ahmed Tlili

Eawag, Swiss Federal Institute of Aquatic Science and Technology, Dübendorf, Switzerland

Aquatic biofilms, a consortium of auto- and heterotrophic organisms embedded in an extracellular polymer matrix, are involved in critical ecosystem functions and form the basis of the food web in fresh waters. Organisms composing these biofilms are very sensitive to chemicals, justifying their use as indicators of toxicant exposure. Therefore, this talk will focus on the relevance of using aquatic biofilms as an interface to assess effects of toxicants on biological communities. Several case studies will be discussed to illustrate the theoretical background of this topic and provide mechanistic insights on how chemicals affect the structure and functions of microorganisms within the community and how the community responds.