

**“Cyanobacterial metabolites with negative effects on water quality; cyanotoxins and taste & odor compounds”****Triantafyllos Kaloudis**

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Wednesday, 14th April 2021, 17:00-18:00

Join Zoom Meeting: <https://ucy.zoom.us/j/96339605315?pwd=QjN0MlcxTXlTYWFFRmZ1UVRBTkRFZz09>

Meeting ID: 963 3960 5315

Passcode: 201970

Summary

Cyanobacteria are ancient photosynthetic microorganisms that are widespread in the biosphere; they are naturally present in almost every aquatic and terrestrial habitat, especially in freshwater and marine environments. Cyanobacteria are the only prokaryotes performing oxygenic photosynthesis and were responsible for the Great Oxidation Event (2.4 billion years ago), i.e. the rise of oxygen in the earth's atmosphere, that enabled the subsequent development of multicellular life forms. They also play a key role in food webs as primary producers. They have a great metabolic potential, producing a plethora of metabolites. Unfortunately, some of the metabolites they produce are toxic to humans and animals. These toxins (cyanotoxins) have various chemical structures and modes of bioactivity. They can be lethal to humans and animals, especially via exposure through drinking water. In addition, cyanobacteria release a range of (semi)volatile compounds in water that have very intense odors, thus making drinking water unpalatable by consumers. The seminar focuses on the presence, detection, effects, and management of cyanotoxins and taste & odor (T&O) compounds, particularly on recent advances and prospects for exciting research in this field.

Short Bio

Triantafyllos Kaloudis is a Chemist at the Organic Micropollutants Laboratory of EYDAP SA and Research Associate at INN-NCSR Demokritos. After completing his Chemistry degree studies in the University of Athens, he received a scholarship from NCSR Demokritos to carry out research on radiolytic treatment of organic pollutants in water, for which he received a PhD from UoA. In 2000 he was hired by EYDAP SA with the mission to develop and expand the company's Laboratory of Organic Micropollutants (LOM), while as Research Associate in NCSR Demokritos he aims to amalgamate research with water quality control practices. His main research interests are environmental chemistry, emerging pollutants in water, mass-spectrometric techniques for detection and characterization of organic pollutants and advanced oxidation processes for water treatment. Among others, he is focusing on the presence and effects of cyanobacterial metabolites in water, such as cyanotoxins and T&O compounds. He has been chair of the CYANOCOST COST Action on toxic cyanobacteria and cyanotoxins (www.cyanocost.net) and currently he chairs the WaterTOP COST Action on T&O compounds in water (www.watertopnet.eu).

