Invitation

Wednesday
9 March 2016
2:00-3:00 pm

The Cyprus International Institute for Environmental and Public Health invites you to an open lecture on:

Tackling the issue of antibiotic-related microcontaminants under the wastewater reuse framework

Cyprus International Institute for Environmental and Public Health
Building, 1st floor,
95 Eirinis str, Lemesos

Speaker:

Popi Karaolia
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CYPRUS INTERNATIONAL INSTITUTE
FOR ENVIRONMENTAL AND PUBLIC HEALTH

Abstract
Water reuse is a top priority area in the European Innovation Partnership on Water, and maximization of water reuse is a crucial objective in the achievement of a sustainable wastewater reuse framework. In order to make wastewater reuse a safe and widely applied practice, potential risks towards human health and environmental matrices must be managed. One such risk arises from the increase in antibiotic resistance, one of the biggest challenges to global public health today, from contact of conventionally treated wastewater with environmental compartments, potentially contributing to global dissemination of antibiotic-resistant bacteria and their associated antibiotic resistance genes (ARB & ARG), making the fight against bacterial infections more difficult. Advanced oxidation processes (AOPs) make use of powerful oxidative means such as the hydroxyl radical (HO·), which have the potential to non-selectively degrade organic microcontaminants such as antibiotic residues, ARB & ARG in wastewater matrices with the use of solar light as a sustainable source of process energy. Among these processes is the homogeneous solar Fenton oxidation and the heterogeneous TiO2 photocatalysis which make use of produced HO· for organic microcontaminant degradation. In addition, the monitoring and screening of the abovementioned antibiotic-related microcontaminants in treated wastewater effluents are of great importance.

Brief CV
Popi Karaolia received her degree in Biology from the University of Nottingham, UK in 2006. She also completed a Master's degree in Environmental Management at the University of Nottingham in 2007 and a Masters in Environmental Health at the Cyprus University of Technology in association with the University of Harvard in 2011. She has previously worked as a microbiological laboratory technician in the private sector and has gained work experience as a trainee in DG Health and Consumers in the European Commission.

Since January 2012 she is a full-time PhD candidate at Nireas International Water Research Center at the University of Cyprus, and her research focuses on the removal of antibiotics, antibiotic-resistant bacteria and antibiotic resistance genes in urban treated wastewater effluents by alternative biological treatment processes and advanced oxidation processes (AOPs).