

Understanding the environmental impacts of advanced wastewater treatment methods for removal of emerging pollutants

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Emerging pollutants, such as pharmaceutical and personal care products (PPCPs), are of increasing interest because of their eco-toxicological properties and environmental impacts. Wastewater treatment plants are the main pathway for their release into freshwaters due to the inefficiency of conventional treatment installations in removing many of these contaminants from effluents. Therefore, different advanced effluent treatment techniques have been proposed for their treatment. However, it is not known at present how effective these treatment methods are and whether they cause other environmental impacts which may outweigh the benefits of the treatment. This talk will discuss the environmental impact of a range of advanced treatment techniques aimed at removing PPCPs in an attempt to understand better their overall environmental impacts and any trade-offs between the reduction in freshwater eco-toxicity and other impacts generated by the treatment, such as greenhouse gas emissions and related climate change.