



## Editorial

## Emerging advanced oxidation processes for the elimination of micro-pollutants



Following the commitment of the Chemical Engineering Journal to the publication of high quality research articles on important and contemporary topics in the field of environmental monitoring and protection technologies, this special issue contains a selection of 32 papers dealing with the application of advanced oxidation processes (AOPs) for the removal of pollutants and pathogens from environmentally relevant samples. AOPs constitute a family of processes that rely on the involvement of reactive oxygen species, mainly but not exclusively hydroxyl radicals, that can destroy a wide array of organic and inorganic pollutants, as well as inactivate pathogens in several matrices including surface, drinking and ground water, municipal and industrial wastewaters, soil and air. This special issue is a collection of papers reporting timely fundamental and applied research on the environmental applications of AOPs.

The articles included in this special issue entitled "Emerging Advanced Oxidation Processes for the Elimination of Micro-Pollutants" covers, among others, topics related to the degradation of pharmaceuticals, endocrine disruptors, toxins, agrochemicals and surface active substances in aqueous media using methods such as heterogeneous photocatalysis, catalytic ozonation, wet peroxide oxidation, electrochemical oxidation, Fenton and Fenton-like reactions, reactions based on the sulfate radical, as well as various hybrid combinations of the above. Emphasis is given on the synthesis, characterization and testing of new catalytic and photocatalytic materials, as well as on mechanistic and kinetic studies to gain insights into the investigated processes. Other topics include polluted soil remediation, NO<sub>x</sub> and VOCs removal, disinfection, process modelling and intensification, as well as photoelectrocatalytic water splitting and CO<sub>2</sub> reduction.

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