Special Issue

Photocatalytic Disinfection of Water: Mechanism and Application

Message from the Guest Editors

The development of water disinfection technology is still a scientific and technical challenge. A process included in a special class of oxidation techniques defined as advanced oxidation processes (AOPs), characterized by the production of •OH radicals. Photocatalytic disinfection has been reported to efficiently inactivate different kinds of pathogenic microorganisms as well as to remove multi-drug-resistant bacteria. Several studies have been carried out to the mechanisms acting during the process of photocatalytic disinfection and on experimental systems designed to optimize this disinfection technology. Efforts have also been devoted to the development of composite materials to be utilized in immobilized photocatalytic systems, looking for an alternative to allow continuous wastewater treatment without the need of a post-treatment catalyst separation step. The topics of this Special Issue include (but are not limited to): Recent advances in antimicrobial photocatalysts Antimicrobial photocatalytic materials New generation of antimicrobial catalysts Water treatment in coated reactors Mechanistic understanding of photocatalytic disinfection

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In the context of global changes, the sustainable management of water cycles, going from global and regional water cycles to urban, industrial and agricultural water cycles, plays a very important role on the water resources and on their relationships with food, energy, biodiversity, ecosystem functioning and human health. *Water* invites authors to provide innovative original full articles, critical reviews and timely short communications and to propose special issues devoted to new technological and scientific domains and to interdisciplinary approaches of the water cycles. We ensure a critical review process and a quick turnaround between submission and final decision.

Editor-in-Chief

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