

Title: Future Trends in Photocatalysis for Environmental Applications

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Technological innovation in the treatment of contaminated liquid and gaseous streams is expected to be a key factor in securing a clean and sustainable environment. Innovative treatment concepts encompassing a small footprint and environmental impact has stimulated the scientific and industrial community.

This special thematic issue of Journal of Hazardous Materials collects scientific studies concerning novel materials, processes and concepts which have been applied to solve realistic environmental problems, including real environmental matrices, contaminated groundwater, surface water, wastewater and contaminated air. The elimination of residues of contaminants of emerging concern remaining in the effluents of conventional wastewater treatment processes is discussed in many studies in this special issue. Examples include: i) novel photocatalysts with high visible light activity for water depollution and CO₂ photoreduction; ii) catalytic nanosorbents (e.g., Metal Organic Frameworks-MOFs) for sorption and oxidation of contaminants; iii) strategies to operate iron based advanced oxidation/reduction reactions at mild pH; iv) water disinfection and removal of organic and inorganic contaminants, iv) novel designs and models of photocatalytic reactors, and v) sono- and photoelectrocatalytic systems for the removal of contaminants of emerging concern.

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antibióticos y bacterias resistentes en aguas residuales hospitalarias empleando tecnologías avanzadas de oxidación”, Project No. 111577757323 (Convocatoria No. 777-2017). Sixto Malato wishes to thank the Spanish Ministry of Economy and Competitiveness for funding under the ECOSAFEFARMING Project (International Joint Programming Actions, reference: PCIN-2017-005) and 2016 Water and FACCE JPIs Joint Call. Dionysios D. Dionysiou also acknowledges support from the University of Cincinnati through a UNESCO co-Chair Professor position on “Water Access and Sustainability” and the Herman Schneider Professorship in the College of Engineering and Applied Sciences.



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He is author of 1 book and co-author of 18 books as well as >50 chapters in others. He has also co-authored more than 250 publications in indexed international journals, 36 articles in technical journals and more than 350 contributions to different International Congress and Symposiums and 5 patents. He has participated in >90 Workshops and Conferences on Water Treatment and participated as speaker in >60 specialized courses and masters on Advanced Water Treatment. He has directed 15 PhD Thesis. >17000 cites, *h*-index: 75.

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