Special Issue

Advanced Catalytic Materials for Oxidation and Reduction Processes in Environmental Systems

Message from the Guest Editor

Dear colleagues, We invite researchers from diverse fields to contribute original research articles and reviews addressing the latest developments in **advanced catalytic systems** for oxidation and reduction reactions, with a focus on green chemistry approaches and enhanced catalytic performance. **Topics of Interest**

- **Novel catalytic materials**: Development and optimization of metal-based, carbon-based, and hybrid catalysts for oxidation and reduction reactions.
- **Environmental applications**: Removal of persistent organic pollutants, nitrogen species (nitrates, nitrites, ammonia), and heavy metals from water and wastewater.
- **Photocatalysis and electrocatalysis**: Innovations in semiconductor materials, nanostructured catalysts, and hybrid catalytic processes.
- **Mechanistic insights and modeling**: Understanding catalytic pathways, kinetic studies, and computational approaches for improving catalyst efficiency.
- **Sustainable catalyst design**: Use of waste-derived precursors, green synthesis methods, and catalyst reusability studies.
- **Integration of catalytic processes**: Combination of catalytic oxidation/reduction with adsorption, membrane technologies, or biological treatments.

Guest Editor

Dr. Fernanda Miranda Zoppas

Instituto de Investigaciones en Catálisis y Petroquímica, INCAPE (UNL-CONICET), Facultad de Ingeniería Química, Santiago del Estero 2829, Santa Fe 3000, Argentina

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Processes
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
processes@mdpi.com

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About the Journal

Message from the Editor-in-Chief

You are invited to contribute either a research article or a comprehensive review for consideration and publication in *Processes* (ISSN 2227-9717). *Processes* is published in open access format – research articles, reviews, and other content are released on the internet immediately after acceptance. The scientific community and the general public have unlimited, free access to the content. As an open access journal, *Processes* is supported by the authors and their institutes through the payment of article processing charges (APCs) for accepted papers. We would be pleased to welcome you as one of our authors.

Editor-in-Chief

Prof. Dr. Giancarlo Cravotto
Department of Drug Science and Technology, University of Turin, Via P. Giuria 9, 10125 Turin, Italy

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