

Special Issue

From Fragment to Fallout: Innovative Approaches to Analysis and Removal of Microplastics and Nanoplastics

Message from the Guest Editor

Microplastic and nanoplastic pollution are at the forefront of global environmental and policy discussions, especially as international negotiations for a legally binding plastics treaty unfold in Geneva. These pollutants are now widespread across marine, freshwater, terrestrial, and atmospheric systems, posing significant risks to ecosystems and human health. This issue also invites studies addressing the fate and behavior of chemical additives—such as plasticizers, flame retardants, UV stabilizers, and antimicrobial agents—which are often released from or associated with plastic debris. These additives can increase toxicity and persistence, complicating removal and regulatory assessment. Multidisciplinary approaches that combine materials science, environmental chemistry, toxicology, and engineering are encouraged to address this global challenge holistically. This Special Issue aims to provide a platform for innovative research that supports evidence-based policy and next-generation plastic mitigation technologies.

Guest Editor

Dr. Leisha M. A. Martin

Department of Life Sciences, Texas A&M University-Corpus Christi, TX, USA

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

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Message from the Editorial Board

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

Editors-in-Chief

Prof. Dr. Maryam Tabrizian

1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada
2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

Prof. Dr. Yuguang Ma

State Key Laboratory of Luminescent Materials and Devices, South China University of Technology, Guangzhou 510640, China

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