Special Issue

Nano/Micro Plastic and Emerging Plastic in the Environment: Monitoring, Analysis, and Remediation

Message from the Guest Editors

The ubiquitous presence of plastic pollution has emerged as a pressing environmental challenge. Detecting, analyzing, and quantifying microplastics/nanoplastics presents analytical challenges due to their diminutive dimensions, diverse chemical compositions, and propensity to undergo physical and chemical transformations in environmental matrices. Moreover, the dynamic nature of nanoplastic interactions with environmental components necessitates the development of novel analytical strategies. Challenges persist in elucidating the pathways through which nanoplastics infiltrate food webs, accumulate in biota, and potentially propagate adverse effects through trophic levels. Furthermore, the lack of standardized protocols and reference materials impedes progress toward a comprehensive understanding of their ecological implications.

Recommended topics of this special issue include, but are not limited to, the following:

- Characterization and detection methods
- Environmental fate and transport
- Nanoplastic behavior and fate
- Ecological impacts and risks
- Standardization and quality assurance
- Monitoring strategies and remediation technologies

Guest Editors

Dr. Serena Ducoli

Department of Mechanical and Industrial Engineering, University of Brescia, Brescia, Italy

Dr. Miguel Oliveira

Department of Biology & CESAM, University of Aveiro, 3810-193 Aveiro, Portugal

Deadline for manuscript submissions

30 January 2026



Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5 CiteScore 5.5



mdpi.com/si/202101

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

mdpi.com/journal/applsci





Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5 CiteScore 5.5



About the Journal

Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo

Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32, 20133 Milano, Italy

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), Ei Compendex, Inspec, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q2 (Engineering, Multidisciplinary) / CiteScore - Q1 (General Engineering)

