## Global Impacts of Micro- and Nano-Plastic Pollution

Part of the Advances in Environmental Engineering and Green Technologies Book Series

Nisha Gaur (Gautam Buddha University, India), Eti Sharma (Gautam Buddha University, India), Tuan Anh Nguyen (Vietnam Academy of Science and Technology, VietNam), Muhammad Bilal (Gdansk University of Technology, Poland) and Niranjan Prakash Melkania

## **Description:**

The presence of micro- and nano-plastic pollution has emerged as a critical threat to environmental sustainability. As plastic materials degrade into smaller particles, less than 5 millimeters in size, they

infiltrate terrestrial ecosystems, posing a danger to both the environment and human health. Despite the ongoing efforts of scientists worldwide, the scientific community still faces significant challenges in fully grasping the complexity and degradation of these microplastics and nanoplastics, let alone finding effective solutions to curb their further spread. As the urgency to address this issue grows, there is a pressing need for a comprehensive resource that delves into the intricacies of micro- and nano-plastic pollution and offers actionable insights for mitigation.

**Global Impacts of Micro- and Nano-Plastic Pollution** meticulously tackles the multifaceted challenges posed by plastic pollution in our global ecosystems. Authored by esteemed experts in the field, this book offers a holistic analysis of micro-plastics and nano-plastics, providing readers with invaluable insights into their characterization, sources, and fate in the environment. Through comprehensive case studies and cutting-edge research, readers will gain a deeper understanding of the adverse effects of broken-down plastics pollution on soil health, plant biology, and overall ecological balance.

Designed as a definitive resource for environmental researchers, policymakers, and students, this book not only highlights the severity of the issue but also offers tangible solutions for mitigation and prevention. From exploring remediation strategies to analyzing the role of nanobiotechnology in pollution prevention, this book equips readers with the knowledge and tools needed to address this urgent environmental challenge. By fostering interdisciplinary collaboration and providing evidence-based insights, this book serves as a beacon of hope in the quest for a cleaner, more sustainable future.

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## **Topics Covered:**

- Aquatic System Contamination
- Climate Change Implications
- Detection and Monitoring Methods
- Ecological Imbalances
- Environmental Hazards
- Global Pollution Status
- Gut Microbiome Alterations
- Health Hazards

Subject: Environment & Agriculture

**Readership Level:** Advanced-Academic Level (Research Recommended)

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- Plant Stress Management
- Plastic Debris Accumulation
- Plastic Pollution Policies
- Soil Biological Alterations
- Soil Nutrient Cycling Effects

Classification: Edited Reference

**Research Suitable for:** Advanced Undergraduate Students; Graduate Students; Researchers; Academicians; Professionals; Practitioners



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