

## Special Issue

# Promoting Sustainable and Innovative Waste Management in the 4th Industrial Revolution (4IR) Era

### Message from the Guest Editors

Since 2015, the United Nations (UN) Member States have adopted a set of 17 Sustainable Development Goals (SDGs) that have become a reference agenda for addressing a variety of global challenges. The emergence of the 4th Industrial Revolution revolutionizes the way we address the solid waste problem by improving environmental protection using innovative solutions. In recent years, novel technologies such as artificial intelligence, machine learning, deep learning, and digitization have been developed as intelligence supports to transform the problem of solid waste management into zero-waste by applying a resource recovery paradigm towards a circular economy (CE). The benefits of such smart technologies should be based on the nexus of sustainability and cost-effectiveness to minimize potential harmful impacts to the environment and maximize benefits. To complement the body of knowledge, we welcome contributions that include solid waste management, water treatment, and air pollution control that particularly apply (but are not limited to) the following technologies: artificial intelligence, machine learning, deep learning, cloud computing, or digitization.

---

### Guest Editors

Dr. Tonni Agustiono Kurniawan

Dr. Ram Avtar

Dr. Deepak Singh

---

### Deadline for manuscript submissions

closed (31 December 2022)



Sustainability

---

an Open Access Journal  
by MDPI

---

Impact Factor 3.3  
CiteScore 6.8



[mdpi.com/si/71965](https://mdpi.com/si/71965)

*Sustainability*

MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[sustainability@mdpi.com](mailto:sustainability@mdpi.com)

[mdpi.com/journal/  
sustainability](https://mdpi.com/journal/sustainability)





## Sustainability

---

an Open Access Journal  
by MDPI

---

Impact Factor 3.3  
CiteScore 6.8



[mdpi.com/journal/  
sustainability](https://mdpi.com/journal/sustainability)



## About the Journal

### Message from the Editor-in-Chief

I encourage you to contribute a research or comprehensive review article for consideration for publication in *Sustainability*, an international Open Access journal which provides an advanced forum for research findings in areas related to sustainability and sustainable development. *Sustainability* publishes original research articles, review articles and communications. I am confident you will find the journal contributes to enhancing understanding of sustainability and fostering initiatives and applications of sustainability-based measures and activities.

---

### Editor-in-Chief

Prof. Dr. Marc A. Rosen

Faculty of Engineering and Applied Science, University of Ontario  
Institute of Technology, Oshawa, ON L1G 0C5, Canada

---

### Author Benefits

#### Open Access:

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

#### High Visibility:

indexed within Scopus, SCIE and SSCI (Web of Science), GEOBASE, GeoRef, Inspec, AGRIS, RePEc, CAPIus / SciFinder, and other databases.

#### Journal Rank:

JCR - Q2 (Environmental Studies) / CiteScore - Q1  
(Geography, Planning and Development)