

## Special Issue

# Smart 3D Printing for a Circular Economy and Sustainable Manufacturing

### Message from the Guest Editors

I am pleased to have this opportunity to invite you to submit your work to this Special Issue, which seeks to explore how smart 3D printing technologies can make manufacturing more sustainable and promote circular economy principles. Additive manufacturing offers unique opportunities to reduce material loss, minimize energy use, and enable product life extension through repair, remanufacturing, and recycling. By integrating smart materials, digital technologies, and novel design principles, 3D printing can make more resource-efficient and sustainable production systems possible.

We welcome original research, reviews, and case studies on the following themes:

- Sustainable and biodegradable materials for 3D printing;
- Design for additive manufacturing with circularity in mind;
- Process optimization for energy saving and waste reduction;
- Facilitating smart manufacturing using sensors, IoT, and digital twins;
- Life cycle analysis and techno-economic analysis of additively manufactured products;
- Applications in automotive, aerospace, and consumer industries;
- Approaches for recycling, reuse, and remanufacturing in additive manufacturing.

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### Guest Editors

Dr. Ibrahim Deiab

Dr. Shafahat Ali

Dr. Salman Pervaiz

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### Deadline for manuscript submissions

15 August 2026



## Sustainability

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## 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.

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### Editor-in-Chief

Prof. Dr. Steve W. Lyon  
School of Environment and Natural Resources, Ohio State University,  
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