

Special Issue on  
**Sustainable Valorization of Biowaste for Value-added Products  
and Environmental Remediation 2024**

# CALL FOR PAPERS

The increase in biowaste production is becoming a major environmental issue. Biowaste is generated in substantial amounts every year around the world and is expected to increase in the coming years. Furthermore, the waste sector is responsible for about 5% of global GHG emissions. For sustainable global development, we must rethink how we can manage biowaste from a circular economy perspective. In this context, biowaste valorization represents a challenge as an alternative to landfilling. It is critical to adopt sustainable strategies for the transformation of biowaste into value-added materials, also contributing to the environmental pollution. Examples of biowastes include agricultural and forestry residues, animal waste, cattle manure, food industry, waste, industrial biowaste, and municipal solid biowaste.

Biowaste can be converted into value-added products, reducing the cost of disposal and the environmental burden while generating additional revenues. Current trends consider biowaste as an operating supply. Great efforts are being made to transform biowastes into products so that they can be used for environmental depollution. For instance, these products can be used as soil amendments or as adsorbents for mitigation of toxic metal and dye pollution from water, soil or carbon dioxide capture. In particular, the adsorption process is a suitable technique for the removal of toxic metals because there are significant advantages such as cost-effectiveness, ease of operation, versatility, efficiency, and effectiveness.

This Special Issue aims to present cutting-edge research on various aspects of biowaste valorization and the circular economy. We hope that this Special Issue provides a discussion platform for current trends and advances in the area of biowaste recycling. Submissions should also discuss the valorization of biowaste into value-added materials for environmental remediation. We also hope that this Special Issue highlights current and new research discussing the adsorption process of biowaste-derived amendments that clean up environmental contaminants. We welcome original research and review articles.

Potential topics include but are not limited to the following:

- ▶ Adsorption processes for environmental remediation (eg, competitive adsorption and air purification by adsorption);
- ▶ Kinetics and modelling of metal-ion adsorption
- ▶ Adsorption filters for environmental remediation
- ▶ Removal of heavy metals with biowaste valorization
- ▶ Removal of dye by residual biomasses
- ▶ Biowaste valorization for wastewater treatment
- ▶ Valorization of biowaste for soil remediation
- ▶ Valorization of keratin-based materials, urban biomasses, and industrial residual biomasses
- ▶ Evaluation of the removal performance of biowaste-derived materials in multicomponent systems
- ▶ Production and application of phosphate amendments;
- ▶ Value of biowaste (eg calcium-rich waste, eggshell waste, mollusc shell waste) for environmental remediation
- ▶ Recycling, reuse and recovery of waste for environmental remediation
- ▶ Production and application of biochar for environmental remediation
- ▶ Valorization options for environmental remediation

Authors can submit their manuscripts through the Manuscript Tracking System at <https://review.wiley.com/submit?specialIssue=842139>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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