

Special Issue

Agro-Industrial Waste Valorization: Advances in Functional Materials and Circular Technologies

Message from the Guest Editors

The growing volume of agro-industrial waste worldwide poses both an environmental challenge and a significant opportunity for sustainable development. This Special Issue focuses on innovative valorization strategies for agricultural and agro-industrial residues, emphasizing their conversion into high-value functional materials and sustainable products. We welcome original research, reviews, and case studies on the development, characterization, and applications of novel agro-waste-derived materials, including biopolymers, biocomposites, biochar, and activated carbons. Contributions exploring advanced circular economy technologies, including green extraction, bioconversion, enzymatic treatments, and integrated biorefineries, are highly encouraged. This Special Issue will compile cutting-edge research that advances sustainable circular bioeconomies through valorizing agro-industrial waste. Topics include innovative extraction methods, bio-based material development, sustainable packaging design, bioenergy production, life cycle and techno-economic assessments, circular supply chain integration, and industrial-scale case studies demonstrating sustainability impacts.

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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.

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