

Special Issue

Utilization of Organic Solid Waste for Materials and Energy Sustainability

Message from the Guest Editors

Organic solid waste generation has become a critical global challenge due to rapid urbanization, industrialization, and population growth. Their improper disposal not only poses severe environmental and health risks but also results in the loss of valuable resources. By means of thermochemical and biochemical approaches, organic solid waste can be converted into various resources, thereby reducing environmental impact and promoting the sustainability of materials and energy. However, the structure of carbon materials derived from organic solid waste still needs to be regulated for efficient energy storage, catalysis, and environmental adsorption. The pyrolysis of organic solid waste to liquid and gas still suffers from significant limitations in terms of conversion activity, stability, and selectivity. The fermentation of organic solid waste is a complicated process owing to the impurities of solid waste, the fermentation mechanism, and continuous efficiency. This Special Issue focuses on the emerging frontiers of technologies and methodologies for the utilization of organic solid waste, to establish an innovative framework for "materials-energy synergistic sustainability".

Guest Editors

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Editor-in-Chief

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