Special Issue

Sustainable Bio- and Energy Polymers and Materials: Synthesis and Environmental Applications

Message from the Guest Editor

This Special Issue brings together cutting-edge research addressing current challenges and advancements in sustainable polymer science and energy materials.

- Biomass conversion technologies, particularly pyrolysis and co-pyrolysis of biomass and plastic waste, to recover valuable chemicals and fuels.
- Heterogeneous and homogeneous polymerization processes for olefins that explore novel catalyst systems aimed at enhancing efficiency and selectivity.
- Depolymerization of olefins into light olefins, offering pathways for plastic recycling and circular material use.
- Synthesis of biodegradable and sustainable polymers to mitigate the environmental issues caused by plastic materials, supporting the global transition toward eco-friendly alternatives.
- Development of polymer-based composite materials is explored for advanced battery systems and environmental applications, including pollutant capture and water purification.

Guest Editor

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