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Recent Advances in Biorefinery Approaches for Sustainable Development

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Deadline for manuscript submissions:
closed (10 January 2024)

Message from the Guest Editors

Biorefinery is a sustainable process that converts biomass into energy and bio-based products. In order to advance sustainable development, biorefinery approaches must include economic and environment aspects. Techno-economic and environmental analysis tools have been used to assess the sustainability of different biorefinery processes. Recent developments in artificial intelligence and machine learning techniques have provided new opportunities for biorefinery approaches to parameter optimization and enabled biofuel production prediction. The comprehensive analysis of biorefineries is similar to the life cycle assessment, which is a tool helping to ensure the sustainability of biorefineries. Sustainable biorefinery approaches contibute to establishing a stronger bioeconomy.

This Special Issue covers the following areas:

- Application of AI and ML in biorefinery;
- System analysis and biorefiner;
- Biorefinery with carbon capture;
- Life cycle assessment;
- Policy analysis of biorefinery;
- Advancements in biorefinery;
- Low-carbon biorefinery and related areas.

We invite you to contribute articles or comprehensive reviews to this Special Issue.

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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. The journal publishes original research articles, reviews, conference proceedings (peer reviewed full 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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