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# Recent Advances in 4E (Energy, Exergy, Economic, and Environmental) Analysis of Chemical Processes for the Biofuels and Bioenergy Production

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# **Message from the Guest Editors**

This Special Issue on "Recent Advances in 4E (energy, exergy, economic, and environmental) Analysis of Chemical Processes for the Biofuels and Bioenergy Production" intends to invite the latest research that addresses the thermodynamic, techno-economic, and environmental analysis of various biofuels production processes and energy conversion systems. Topics include, but are not limited to:

- Process system engineering;
- Biofuels production;
- Waste-to-energy process;
- Biorefinery process;
- Bioproducts production combined heat and power plant;
- Bioreactor design, engineering, and control;
- Biomass energy with CO2 capture for negative emissions;
- Circular economy.











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# Message from the Editor-in-Chief

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