Special Issue

Going Carbon Neutral and Carbon Negative through Thermochemical Conversion of Biomass

Message from the Guest Editors

A viable alternative to fossil fuels is represented by biomass, which is an abundant and dispatchable source of renewable energy. Moreover, this energy source enables a net-zero carbon balance, since the amount of carbon dioxide produced during the combustion process is virtually entirely used for oxygen production during photosynthesis. Additionally, capturing CO2 during the production of energy or energy vectors from biomasses enables carbon removal because the carbon dioxide that is absorbed during growth is not re-released but, instead, captured and removed from the natural carbon cycle. For this Special Issue, we invite papers that consider the various aspects of converting biomass waste by means of pyrolysis and gasification into valuable products, with special attention to experimental and simulation works that investigate new processes and technologies at relatively high technological readiness levels (industrial and pilot scales) as well as the pretreatment and upgrading processes realized to enhance the productivity and efficiency of thermochemical conversion.

Guest Editors

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Deadline for manuscript submissions

closed (31 August 2024)

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Message from the Editor-in-Chief

Energies is an international, open access journal in energy engineering and research. The journal publishes original papers, review articles, technical notes, and letters. Authors are encouraged to submit manuscripts which bridge the gaps between research, development and implementation. The journal provides a forum for information on research, innovation, and demonstration in the areas of energy conversion and conservation, the optimal use of energy resources, optimization of energy processes, mitigation of environmental pollutants, and sustainable energy systems.

Editor-in-Chief

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