DE GRUYTER

MATERIALS AND TECHNOLOGIES FOR LOW-CARBON BIOMASS PROCESSING AND UPGRADING

GUEST EDITORS

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DESCRIPTION

Technological changes are affecting the ability to process natural predicts. In the era of climate protection, reducing pollution and energy consumption is one of the challenges of the modern world. In recent years, ecological, economic and technological aspects have contributed to the introduction of new solutions for processing biomass.

Research work responds to the challenges of new technologies and sustainable economic development. Numerous studies deal with energy issues. Countering ecological threats, there is a tendency to seek solutions to improve the use of natural products of plant origin. Processing technologies make it possible to reduce energy demand and increase the share of renewable sources in the overall balance of usable materials. Therefore, it is important to identify pathways for material and technological development based on plant biomass. Environmental impact is exerted through the implementation of innovative technological solutions. The process of biomass production and processing using innovative environmentally friendly technologies improves the possibility of using renewable green energy sources or green technologies.

A research direction that allows the development of a low-carbon economy and the safe operation of society is expected. Topics include, but are not limited to:

- development of green technologies, use of renewable materials such as wood, wood plastics, biomass, including elements related to environmental protection and energy production;
- updated reviews of research using numerical analysis methods related to the extraction or rational use of biomass and positive environmental impacts;
- materials research in the field of wood and wood plastics, with potentially possible ways to reduce energy consumption ih;
- opportunities for the use of post-consumer wood, including wood composite materials;
- use of modern solutions related to the introduction of environmentally friendly materials, but also energy-saving technologies for processing lignocellulosic materials.

Authors' contributions to research with the application of mathematical programming tools used for analysis and evaluation of case studies will also be welcomed. All articles will be reviewed in detail in accordance with the Journal's quality standards. Articles must contain original research, and illustrations should refer to actual case studies for which data should be provided (either in the article or as supplementary material) to ensure that the results can be verified. Articles should contribute novel and noteworthy research to the relevant literature.

Keywords:

- technology for processing of biomass including energy directions,
- biomass as a usable material,
- energy-efficient technologies for processing wood and other lignocellulosic materials,
- energy-efficient technologies for the curing of wood products,
- economic and technological aspects of harvesting and use of biomass,
- normative regulations in the processing of wood and wood-based materials,
- Legal, economic and technological aspects of biomass utilization,
- sustainability of wood production and use of recycled raw material.

PUBLICATION SCHEDULE / HOW TO SUBMIT

Open for submissions: 1st June 2023
Paper submission deadline: 30th November 2023

When entering your submission please choose the option type of an article: "**Materials and technologies for low-carbon biomass processing"** Submissions for the special issue are now open. In case of any technical problems, please contact the Managing Editor of ***Reviews on Advanced Materials Science***:
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