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Call for Manuscripts: Special Issue on Clean and Green Bio-energy

The JAEI Editorial Board is excited to announce a special issue on "**Clean and Green Bio-energy**". We welcome submissions from interested authors and encourage them to contact the Special Issue Editors in advance. Submission of manuscripts for this special issue will be facilitated through the journal's online submission system. To ensure a smooth submission process, please refer to the submission checklist and formatting requirements available at: https://pub.isae.in/index.php/jae/submission-guidelines. Authors can submit their manuscripts using the following link: https://pub.isae.in/index.php/jae/login?source=%2Findex.php%2Fjae%2Fsubmission or by choosing the "Make a submission" option at https://pub.isae.in/index.php/jae/index . It is important to note that there are no page charges for publication in this journal. First-time authors should register for a login, while existing users can use their current login details. Once logged in, authors should select the Special Issue "**Clean and Green Bio-energy**" option for submission. If you encounter any difficulties during the submission process, please do not hesitate to contact the **Guest Editor** & **Co-Guest Editor** for assistance.

Aims and scope

The special issue on "**Clean and Green Bio-energy**" would likely to focus on showcasing cutting-edge research and innovative technologies related to biomass utilization for clean and green energy production. Clean and green bio-energy, derived from sustainable biomass resources, stands as a critical pillar in the global transition towards a low-carbon future. This issue will explore environmentally friendly and sustainable methods of generating energy from biomass, with a focus on minimizing pollution and maximizing the efficient use of resources throughout the energy generation process. It will address energy challenges in global growing energy demands and promoting energy security through the utilization of locally available biomass and green resources. The issue will offer valuable insights into the potential of bio-energy to address climate change, enhance energy security, and promote sustainable development, while also acknowledging the challenges and opportunities that lie ahead.

Focus of the special issue

- **Sustainable Biomass Sourcing and Production:**
    - Sustainable feedstock cultivation and management (e.g., dedicated energy crops, agricultural residues, forestry waste, algae).
    - Life cycle assessment (LCA) of biomass production, considering environmental and social impacts.
    - Technological advancements in biomass pre-processing and handling.
    - Certification and standardization for sustainable biomass supply chains.
- **Biomass conversion technologies:** Coverage of different thermochemical and biochemical conversion technologies for biomass to energy, such as:
    - **Combustion:** Direct burning of biomass for heat and power generation.
    - **Gasification:** Conversion of biomass into combustible gases for various applications.

    - **Pyrolysis:** Thermal decomposition of biomass in the absence of oxygen to produce bio-oil, biochar, and gases.
    - **Anaerobic digestion:** Biological breakdown of biomass in the absence of oxygen to produce biogas.
    - **Bioethanol and biodiesel production:** Fermentation and transesterification processes for producing liquid biofuels from biomass.
    - **Mechanical conversion:** Briquetting and pelleting of under-utilized biomass
- **Energy applications:** Focus on various energy applications of biomass, including:
    - **Power generation:** Biomass-based power plants and distributed generation systems.
    - **Heating and cooling:** Biomass boilers, furnaces, and combined heat and power (CHP) systems.
    - **Transportation fuels:** Bioethanol, biodiesel, and other advanced biofuels.
    - Integration of bio-energy with other renewable energy sources (e.g., solar, wind).
    - Decentralized bio-energy systems and microgrids.
- **Environmental and economic aspects:** Assessment of the environmental benefits and impacts of biomass energy, including greenhouse gas emission reduction, waste management, and resource conservation. Analysis of the economic viability and feasibility of biomass energy projects, considering factors such as feedstock availability, technology costs, and market prices.
- **Policy and regulatory framework:** Discussion of policies, regulations, and incentives related to biomass energy development and deployment in India.

Overall, the special issue would aim to provide a comprehensive overview of the latest advancements and challenges in the field of clean and green bio-energy, contributing to the development of a sustainable and environmentally friendly energy sector.

IMPORTANT DATES:

Manuscript Due	: Aug 2025
Reviews and Revisions Due	: Jul – Sep 2025
Publication Date	: Oct – Nov 2025

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