



# 2<sup>nd</sup> International Conference on Novel Materials and Technologies for Energy and Environment

## Applications (NMTE<sup>2</sup>A) on 17-18 February, 2024

Department of Chemical Engineering, BITS-Pilani, Hyderabad Campus



### CALL FOR PAPERS

#### Special Issue Title: Advances in Renewable and Sustainable Energy Technologies

The transition to renewable and sustainable energy sources is a global imperative in the fight against environmental degradation and climate change. The depleting fossil fuel reserves and rising fuel consumption to meet the energy demands not only pose a threat to energy security but also have a direct influence on fuel prices. Additionally, the emissions from conventional energy resources contribute significantly to environmental deterioration and raise grave health concerns. Greenhouse gases generated by these energy resources aggravate global warming, while NO<sub>x</sub> and particulate matter emissions are linked to respiratory ailments. To address these pressing issues, researchers are actively investigating alternative energy sources that offer renewability, sustainability, and cleaner emissions, such as biofuels, hydrogen, and advanced battery technologies.

Therefore, the primary objective of this special issue on “Advances in Renewable and Sustainable Energy Technologies” is to showcase cutting-edge research that advances the field of renewable and sustainable energy. By bringing together researchers, scientists, and experts, we aim to facilitate discussions, share knowledge, and accelerate the adoption of sustainable energy solutions. ESPR will serve as a valuable platform for disseminating knowledge and

advancing the global pursuit of renewable and sustainable energy solutions. The topics covered in this special issue align with ESPR’s focus on environmental science and pollution research and address pressing issues related to renewable energy and sustainability.

We invite contributions from experts and encourage researchers to submit their original research, reviews, and case studies to this special issue on a wide range of topics within the realm of renewable and sustainable energy technologies, including, but not limited to:

#### **Petroleum Refinery & Petrochemicals:**

Cleaner and sustainable practices within the petroleum & petrochemical industries, with emphasis on emissions reduction and resource optimisation.

#### **Biotechnology:**

Biotechnological approaches to renewable energy production, such as bio fuels, bio gas, and microbial fuel cells.

#### **Catalysis:**

Conversion of renewable feedstock into energy via catalytic processes.

#### **Hydrogen Generation and Storage:**

Production, storage, and utilization of green hydrogen as a clean and versatile energy carrier, including materials and systems for efficient hydrogen storage and transport.

#### **Carbon Capture, Utilization & Sequestration (CCUS):**

Technologies to mitigate greenhouse gas emissions from various sources and their environmental impact.

**Submission Opens  
01 April, 2024**

#### **Waste to Energy:**

Methods for converting wet and solid waste materials into energy sources, reducing waste generation and environmental pollution.

#### **Nanotechnology:**

Enhancing the efficiency and the performance of renewable energy technologies.

#### **Process Intensification and Artificial Intelligence:**

Optimizing energy systems while minimizing the environmental impact.

#### **Energy and Sustainability:**

Lifecycle analysis and circular economy.

This special issue aims to contribute to the growing knowledge of renewable and sustainable energy technologies, fostering collaboration among the researchers, scientists, and policy makers. By addressing key subtopics, we aspire to accelerate the transition towards a more sustainable energy landscape.

The papers will be considered for possible publication in the Conference Special issue : Advances in Renewable and Sustainable Energy Technologies of the reputed Springer Journal, Environmental Science and Pollution Research (ESPR) with Impact Factor: 5.8.

### Manuscript Submission Information

The journal’s submission platform is available to receive submissions to this Special Issue. Please refer to the Guide for Authors to prepare your manuscript and select the article type of “VSI: NMTE2A”; when submitting your manuscript online.

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