



Clean Hydrogen for Decarbonizing Energy Sector

Guest Editors:

Dr. Prakashbhai R. Bhoi

Mechanical Engineering
Department, Georgia Southern
University, Statesboro, GA 30461,
USA

Dr. Hayri Sezer

Mechanical Engineering
Department, Georgia Southern
University, Statesboro, GA 30461,
USA

Dr. Shijin P. Kozhumal

Department of Fire Protection
and Paramedicine Sciences,
Eastern Kentucky University,
Richmond, KY 40475, USA

Deadline for manuscript
submissions:

closed (31 December 2022)

Message from the Guest Editors

Climate change is one of the critical challenges of the 21st Century. Combustion of fossil fuels are the main source of greenhouse gases (GHGs). At present, hydrogen is produced primarily from catalytic steam methane reforming (SRM) and coal gasification processes. Both of these processes lead to GHG emissions. Zero-carbon hydrogen is observed as a promising fuel to decarbonize energy, transportation, industry, and agricultural sectors which account for more than 80% of the global GHG emissions. To meet the rising demands of global hydrogen economy, the emphasis has been on producing carbon-neutral or carbon-negative hydrogen at a low cost.

The overall focus of this Special Issue is zero-carbon and low-cost hydrogen production for decarbonizing energy, transportation, power, and agricultural sectors. The scope mainly includes hydrogen production through gasification of biomass and waste resources, electrochemical water splitting, and microbial fermentation of biomass.





an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Marc A. Rosen

Faculty of Engineering and
Applied Science, University of
Ontario Institute of Technology,
Oshawa, ON L1G 0C5, Canada

Message from the Editor-in-Chief

I encourage you to contribute a research or comprehensive review article for consideration for publication in *Sustainability*, an international Open Access journal which provides an advanced forum for research findings in areas related to sustainability and sustainable development. *Sustainability* publishes original research articles, review articles and communications. I am confident you will find the journal contributes to enhancing understanding of sustainability and fostering initiatives and applications of sustainability-based measures and activities.

Author Benefits

Open Access: free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility: indexed within Scopus, SCIE and SSCI (Web of Science), GEOBASE, GeoRef, Inspec, AGRIS, RePEc, CAPlus / SciFinder, and other databases.

Journal Rank: JCR - Q2 (*Environmental Studies*) / CiteScore - Q1 (Geography, Planning and Development)

Contact Us

Sustainability Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/sustainability
sustainability@mdpi.com
[X@Sus_MDPI](https://twitter.com/Sus_MDPI)