

## Special Issue

# Thermal Performance Improvement of Solar Air Heater

### Message from the Guest Editors

Renewable energy plays an important role in the current continuous increasing energy demand and in attempts to mitigate issues around the many emissions and greenhouse problems. Solar energy utilization is a basic weapon for facing energy problems, giving efficient, clean, and financially viable solutions. For its sustainable development, there is a need to overcome a few technical obstacles. Therefore, this Special Issue aims to encourage researchers to share recent advances in the development and application of solar air heaters using experimental and computational techniques. Both experimental and numerical studies, cross-disciplinary research and development studies are welcomed.

solar air heater  
solar dryer  
CFD analysis  
heat transfer augmentation  
thermal entry length concepts  
turbulence modeling  
vortex generators  
laminar and transitional flow  
ANN and machine learning techniques  
optimization

---

### Guest Editors

Dr. Suvanjan Bhattacharyya

Department of Mechanical Engineering, Birla Institute of Technology and Science, Pilani, Pilani Campus, Rajasthan 333 031, India

Dr. Varun Goel

Department of Mechanical Engineering, National Institute of Technology Hamirpur, Hamirpur, Himachal Pradesh 177005, India

---

### Deadline for manuscript submissions

closed (31 March 2022)



## Sustainability

---

an Open Access Journal  
by MDPI

---

Impact Factor 3.3  
CiteScore 7.7



[mdpi.com/si/81527](https://mdpi.com/si/81527)

*Sustainability*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[sustainability@mdpi.com](mailto:sustainability@mdpi.com)

[mdpi.com/journal/  
sustainability](https://mdpi.com/journal/sustainability/)





## Sustainability

---

an Open Access Journal  
by MDPI

---

Impact Factor 3.3  
CiteScore 7.7



[mdpi.com/journal/  
sustainability](https://mdpi.com/journal/sustainability)



# About the Journal

## 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. The journal publishes original research articles, reviews, conference proceedings (peer reviewed full 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.

---

## Editor-in-Chief

Prof. Dr. Steve W. Lyon

School of Environment and Natural Resources, Ohio State University,  
Columbus, OH 43210, USA

---

## 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, RePEc, CAPlus / SciFinder, and other databases.

### Journal Rank:

JCR - Q2 (Environmental Studies) / CiteScore - Q1 (Geography, Planning and Development)