

## Special Issue

# Lead Free Piezoelectric Materials for Clean and Sustainable Energy

### Message from the Guest Editors

Piezoelectric materials can convert electric energy to mechanical energy and vice versa. These materials have found many applications in actuators, sensors, energy harvesting tools, etc. One of the key questions in the development of eco-friendly piezoelectric is how to achieve high piezoelectricity and large hysteresis-free electrostrain responses in a facile and effective manner. The thermal stability of piezoelectric properties is also a topic of concern. Considering lead toxicity, at present there is interest in developing piezoelectric materials that are biocompatible and more environmentally friendly. Over the past six decades, lead-based ceramics have gained much attention due to their excellent piezoelectric properties and high Curie temperatures. Their giant piezoelectric responses are due to the existence of a morphotropic phase boundary (MPB). The scientific community is interested in understanding the mechanism responsible for such large piezo responses, which remains unclear despite more than six decades of investigation.

---

### Guest Editors

Dr. Shailendra Rajput

Dr. Xinghao Hu

Dr. Sabyasachi Parida

Dr. Abhishek Sharma

---

### Deadline for manuscript submissions

closed (30 November 2022)



## Clean Technologies

---

an Open Access Journal  
by MDPI

---

Impact Factor 4.0  
CiteScore 6.1



[mdpi.com/si/124163](https://mdpi.com/si/124163)

*Clean Technologies*  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[cleantechnol@mdpi.com](mailto:cleantechnol@mdpi.com)

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





# Clean Technologies

an Open Access Journal  
by MDPI

Impact Factor 4.0  
CiteScore 6.1



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



## About the Journal

### Message from the Editor-in-Chief

*Clean Technologies* (ISSN 2571-8797) is an international, open access journal of novel scientific research on technology development aimed at reducing the environmental impact of human activities. *Clean Technologies* publishes reviews, regular research papers, communications and short notes which show a significant advance in the development of sustainable technology that reduces energy consumption, environmental pollution and/or the use of water and nonrenewable resources. Our aim is to encourage scientists to publish their experimental and theoretical research in detail as open access, serving a trustable base of advance for the scientific community.

---

### Editor-in-Chief

Prof. Dr. Patricia Luis Alconero  
Materials & Process Engineering, UCLouvain, Place Sainte Barbe 2,  
1348 Louvain-la-Neuve, Belgium

---

### Author Benefits

#### High Visibility:

indexed within Scopus, ESCI (Web of Science), Inspec, AGRIS, RePEc, and other databases.

#### Journal Rank:

JCR - Q2 (Engineering, Environmental) / CiteScore - Q1 (Environmental Science (miscellaneous))

#### Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 30 days after submission; acceptance to publication is undertaken in 6.4 days (median values for papers published in this journal in the first half of 2024).