



## Solar-Pumped Lasers and Sustainable Laser Beams: Current and Future Development

Guest Editors:

**Dr. Bruno D. Tibúrcio**

Department of Physics-CEFITEC,  
NOVA School of Science and  
Technology, NOVA University of  
Lisbon, 2829-516 Caparica,  
Portugal

**Dr. Dawei Liang**

Department of Physics-CEFITEC,  
NOVA School of Science and  
Technology, NOVA University of  
Lisbon, 2829-516 Caparica,  
Portugal

Deadline for manuscript  
submissions:

**closed (14 May 2025)**

### Message from the Guest Editors

Laser technology is widely used in several industrial and scientific areas, such as laser material processing, the medical industry, energy production, communications and space applications.

Solar-pumped lasers, being a sustainable source of coherent optical radiation, offer the prospect of a drastic reduction in the cost for high and average laser power applications, opening pathways to environmental and economical benefits in different technological segments, such as green hydrogen production and renewable energy cycles.

The main current and future challenges of sustainable laser beams are to increase the efficiency, versatility and scalability compared with other classical, fossil-fuel-based laser beams, as a more robust and available implementation, suitable for different fields of low-carbon industry and poligeneration.





an Open Access Journal by MDPI

## Editor-in-Chief

### **Prof. Dr. Steve W. Lyon**

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

## 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.

## 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)

## Contact Us

---

*Sustainability* Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/sustainability](http://mdpi.com/journal/sustainability)  
[sustainability@mdpi.com](mailto:sustainability@mdpi.com)  
[X@Sus\\_MDPI](#)