Special Issue

Advances in Laser Technology and Its Application in Environmental Analysis

Message from the Guest Editors

The growth of human activities is translated into rising environmental pollution levels, becoming a global issue for human health. Therefore, developing advanced techniques to monitor and analyze environmental pollutants is highly needed. In this regard, laser-based techniques have become a useful and reliable tool to analyze pollutants in any environmental matrix. Laserinduced plasma spectroscopy (the LIBS technique) allows for identifying and quantifying pollutants in an environmental sample. This Special Issue deals with research on developed advances within the field of laser technology to investigate environmental pollution levels, involving applying novel approaches, quantifying emergent compounds (microplastics), comparison with conventional techniques, a combination of laser-based methodologies, artificial intelligence techniques, and alternative data processing. Keywords

- laser-based techniques
- environmental sciences
- air quality
- emergent compounds

Guest Editors

Prof. Dr. Jorge Cáceres

Laser Chemistry Research Group, Department of Analytical Chemistry, Faculty of Chemistry, Complutense University of Madrid, Plaza de Ciencias 1, 28040 Madrid, Spain

Dr. David Galán Madruga

National Reference Laboratory of Air Quality, National Centre for Environmental Health (CNSA), Carlos III Health Institute (ISCIII), Ctra. Majadahonda a Pozuelo, 28222 Madrid, Spain

Deadline for manuscript submissions

closed (20 May 2025)



Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5 CiteScore 5.5



mdpi.com/si/200645

Applied Sciences
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
applisci@mdpi.com

mdpi.com/journal/applsci





Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5 CiteScore 5.5



About the Journal

Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multidimensional network.

Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo

Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32, 20133 Milano, Italy

Author Benefits

Open Access:

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

High Visibility:

indexed within Scopus, SCIE (Web of Science), Ei Compendex, Inspec, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q2 (Engineering, Multidisciplinary) / CiteScore - Q1 (General Engineering)

