

Special Issue

Emerging Trends in Laser-Induced Breakdown Spectroscopy: From Plasma Stability to Smart Technology

Message from the Guest Editors

This Special Issue of Spectroscopy Journal will explore recent advances in LIBS, particularly focusing on the dual aspects of fundamental plasma behavior and applied analytical enhancement. The integration of LIBS with complementary spectroscopic techniques (e.g., Raman, absorption spectroscopy)—so-called hyphenated approaches—will also be discussed as a pathway to improved elemental and molecular analysis.

Furthermore, this issue will highlight the transformative role of data science, especially chemometrics and machine learning, in interpreting complex LIBS spectra and enhancing detection limits, classification performance, and calibration models. Contributions addressing industrial-scale LIBS applications, such as material sorting, metallurgy, and process control, are also welcomed. By drawing together fundamental studies and applied innovations, this issue aims to provide a comprehensive view of the state of the art in LIBS and its future directions in both academic and applied research settings. The study of these and other related topics are the goal of this special issue, [...] For further reading, please follow the [link](#) to the Special Issue Website.

Guest Editors

Dr. Wenhao Zhang

Laser Institute, Qilu University of Technology, Shandong Academy of Sciences, Jinan 250014, China

Dr. Syed Zaheer Ud Din

Qilu University of Technology (Shandong Academy of Sciences), Jinan, China

Deadline for manuscript submissions

30 April 2026



Spectroscopy Journal

an Open Access Journal
by MDPI



mdpi.com/si/251324

Spectroscopy Journal
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
spectroscopy@mdpi.com

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





Spectroscopy Journal

an Open Access Journal
by MDPI



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



About the Journal

Message from the Editor-in-Chief

Editor-in-Chief

Prof. Dr. Clemens Burda
Department of Chemistry, Case Western Reserve University, Millis
Science Center, 10900 Euclid Ave., Cleveland, OH 44106, USA

Author Benefits

Open Access:

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

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 19.4 days after submission; acceptance to publication is undertaken in 5.8 days (median values for papers published in this journal in the first half of 2025).

Recognition of Reviewers:

APC discount vouchers, optional signed peer review, and reviewer names published annually in the journal.