Special Issue

Preparation and Application of Pulsed Laser Deposition High-Performance Thin Films

Message from the Guest Editors

This Special Issue, "Preparation and Application of Pulsed Laser Deposition High-Performance Thin Films", highlights original research and advancements in pulsed laser deposition (PLD).
Topics of interest include modeling laser–matter interactions, thin film characterization, deposition control using plasma diagnostics, and the creation of novel materials with enhanced electrical, magnetic, optical, and sensory properties. We welcome contributions on functional materials such as complex oxides, nitrides or carbide. This Special Issue will also highlight the progress on controlling thin-film-specific properties through tailoring the multivariable dependencies that PLD allows.
We particularly encourage submissions integrating machine learning and artificial intelligence to refine and optimize the deposition process, fostering interdisciplinary approaches to PLD. By showcasing innovative methods and applications, this Special Issue aims to be a valuable resource for scientists, engineers, and practitioners in thin film technology.

Guest Editors

Dr. Stefan-Andrei Irimiciuc
National Institute for Laser, Plasma and Radiation Physics, 409 Atomistilor Street, 077125 Bucharest, Romania

Dr. Jan Lancok
Department Analyses of Functional Materials, Institute of Physics Czech Academy of Sciences, Prague, Czech Republic

Deadline for manuscript submissions

20 August 2025

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/226165

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

mdpi.com/journal/materials

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/journal/materials

MDPI

About the Journal

Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

Editor-in-Chief

Prof. Dr. Maryam Tabrizian
1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada
2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

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), PubMed, PMC, Ei Compendex, CaPlus / SciFinder, Inspec, Astrophysics Data System, and other databases.

Journal Rank:

JCR - Q2 (Metallurgy and Metallurgical Engineering) / CiteScore - Q1 (Condensed Matter Physics)