

## Special Issue

# Laser Additive Manufacturing of Coatings: Microstructure, Properties, and Applications

### Message from the Guest Editors

Compared to electroplating and thermal spraying, laser additive manufacturing of coatings offers significant advantages including high bonding strength, low dilution rates, narrow heat-affected zones, dense microstructures, and high processing flexibility. As an advanced digital and flexible surface engineering and remanufacturing technology, laser additive manufacturing is playing an increasingly important role in high-end equipment manufacturing.

- Development of novel material systems, including high-entropy alloy (HEA) coatings, amorphous/metal glass coatings, composite coatings, functionally graded coatings, and biomedical coatings.
- Ultra-high-speed laser cladding (EHLA) and multi-energy field-assisted laser cladding.
- Process monitoring and intelligent control, including in situ monitoring, AI-based adaptive real-time control, etc.
- Fundamental theoretical studies and simulations, such as melt pool dynamics, rapid solidification theory, and stress evolution and deformation control.

---

### Guest Editors

Dr. Wenbin Gao

Dr. Taotao Li

Dr. Shengbin Zhao

---

### Deadline for manuscript submissions

25 October 2026



## Coatings

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.8  
CiteScore 5.4



[mdpi.com/si/253181](https://mdpi.com/si/253181)

*Coatings*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[coatings@mdpi.com](mailto:coatings@mdpi.com)

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





# Coatings

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.8  
CiteScore 5.4



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



## About the Journal

### Message from the Editorial Board

Now more than ever, research is asked to deliver knowledge and technologies to solve the major challenges faced by our society. The development of new materials and devices for (without the ambition to be exhaustive) energy, health and food technology, together with the need for establishing processes that reduce the impact on critical resources and the environment, is indeed in the spotlight of most contemporary research. Surface science and engineering play a key role in this regard, with an incredible potential in delivering new and deep scientific understanding and technical solutions essential to solve most of the major societal challenges.

Coatings is a well-established, peerreviewed, online journal dedicated to the vibrant field of surface science and engineering. Coatings publishes original research articles that report cutting-edge results and review papers that make the point on the hottest research topics.

---

### Editors-in-Chief

Prof. Dr. Wei Pan

State Key Laboratory of New Ceramics and Fine Processing, School of Materials Science & Engineering, Tsinghua University, Beijing 100084, China

Dr. Emerson Coy

NanoBioMedical Centre, Adam Mickiewicz University in Poznań, ul. Wszechnicy Piastowskiej 3, 61-614 Poznań, Poland

---

### 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, CAPlus / SciFinder, and other databases.

#### Journal Rank:

JCR - Q2 (Physics, Applied) / CiteScore - Q2 (Surfaces, Coatings and Films)