

# Special Issue

## Advances in Plasma Electrolytic Oxidation (PEO) for Surface Engineering

### Message from the Guest Editor

This Special Issue aims to bring together recent advances in the science, technology, and applications of plasma electrolytic oxidation for surface engineering. Contributions are invited that address both the fundamental understanding of plasma–electrolyte–substrate interactions and the practical development of novel coating architectures with targeted properties. Specific topics of interest include, but are not limited to, the following:

- Mechanisms of coating formation, plasma discharge behavior, and in situ characterization methods.
- Tailoring microstructure, phase composition, and properties through process design and electrolyte formulation.
- Advances in low-voltage PEO processes for improved efficiency and novel applications.
- Advanced characterization of coating performance under extreme environments (corrosion, wear, thermal, or fatigue).
- Multifunctional and nanostructured PEO coatings for biomedical, energy, and environmental applications.
- Integration of PEO with other surface engineering or additive manufacturing techniques.
- Scale-up, industrial implementation, and sustainability of PEO technologies.

---

### Guest Editor

Prof. Dr. Chang-Hwan Choi

Department of Mechanical Engineering, Stevens Institute of Technology, Hoboken, NJ, USA

---

### Deadline for manuscript submissions

30 September 2026



## Coatings

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.8  
CiteScore 6.1



[mdpi.com/si/257103](https://mdpi.com/si/257103)

*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 6.1



[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)