

## Topical Collection

# Hard Protective Coatings on Tools and Machine Elements

### Message from the Collection Editor

In the scientific literature and at conferences, we observe many interesting examples of increasing the durability of various types of tools (e.g. cutting tools, forming tools, casting molds), as well as improving the functionality and durability of various machine components, e.g. in the machinery, automotive and aviation industries. Towards this goal, we are assembling a Special Issue of Coatings: “Hard Protective Coatings on Tools and Machine Elements” to encourage researchers to exchange their experiences and to provide them with a platform to publish their novel studies. The theme of this Special Issue “Hard Protective Coatings on Tools and Machine Elements” broadly includes (but is not limited to):

- novel anti-wear resistant coatings for machining difficult-to-cut materials (*g. Inconel; titanium alloys, aluminium alloys and others*);
- protective coatings and hybrid layers for hot forging dies;
- protective coatings for pressure casting moulds;
- high wear resistance and low friction coatings in machine elements applications;
- protective coatings with high temperature resistance in machine elements applications

---

### Collection Editor

Prof. Dr. Smolik Jerzy

Surface Engineering Centre, Łukasiewicz Research Network—Institute for Sustainable Technologies, 26-600 Radom, Poland

---



## Coatings

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.8  
CiteScore 5.4



[mdpi.com/si/57585](https://mdpi.com/si/57585)

*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)