



## Plasma Electrolytic Oxidation (PEO) Coatings

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submissions:  
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### Message from the Guest Editors

Dear Colleagues,

Plasma electrolytic oxidation (PEO), also known as micro-arc oxidation (MAO), functionalizes surfaces, improving the mechanical, thermal, and corrosion performance of metallic substrates, along with other tailored properties. The aim of this Special Issue is to present the state-of-the-art of PEO for Al, Mg, Ti, Zr alloys and steels, through a combination of short communications, original research papers and review papers from leading research groups around the world.

In particular, the topics of interest include, but are not limited to:

- Fundamental understanding of PEO process: mechanistic study and modeling of coating growth;
- Properties and performance of PEO coatings: corrosion, mechanical, catalytic and/or electric evaluation;
- Hybrid PEO coatings;
- Functionalization of PEO coatings;
- Active protection based on PEO;
- Bio-applications of PEO coatings;
- Advanced PEO processes.

Dr. Marta Mohedano

Dr. Beatriz Mingo

*Guest Editors*





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## 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.

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