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Plasma Electrolytic Oxidation: Technologies and Applications

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Deadline for manuscript submissions:
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Message from the Guest Editors

Dear colleagues,

This Special Issue is devoted to the technological features of the plasma electrolytic oxidation process and the use of coatings based on its various applications. The latest developments in ceramic-like metal oxide deposition will be collected in this Special Issue. The papers presented in this Special Issue will cover multiple research areas that elucidate the chemical, electro-, and plasma-chemical bases of layer formation mechanisms, which include the substrate–electrolyte interface before discharge initiation, as well as various types and stages of the plasma-electrolyte discharge phenomenon.

In addition, the effect of electrolyte compositions and electrical parameters within the PEO process on the microstructure, phase, chemical composition, corrosion, and abrasive properties of the formed coating will be explored.

The Special Issue will also address the problems of the optimization and application of the resulting coatings in medical technology, aviation, automotive, environmental technology, and other industries.

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Message from the Editor-in-Chief

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