

Special Issue

Plasma Electrolytic Oxidation: Technologies and Applications

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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About the Journal

Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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