



## Recent Advances in Metal, Ceramic, and Metal-Ceramic Composite Films/Coatings

Guest Editor:

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Deadline for manuscript submissions:

**closed (31 January 2022)**

### Message from the Guest Editor

Dear Colleagues,

The application of metal, ceramic, or metal–ceramic composite coatings is currently considered as the one of the most effective methods to tailor surface properties of materials to specific requirements for conventional and advanced technological applications. Metal coatings are successfully used in photovoltaics, optical, energy conversion, and sensing devices. Ceramic coatings create a barrier on the substrate that separates the material from the corrosive environment, thus enhancing its corrosion resistance. Additionally, the coatings provide better abrasion resistance that makes them extremely robust and ensures a longer life for the coated surface.

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

- The effect of thin coatings on mechanical properties of bulk materials;
- New directions in design and production of hard coatings;
- Thermal barrier coating (TBC) to prevent heat loss;
- Smart and self-healing coatings for corrosion protection;
- Super-hydrophobic and self-cleaning coatings;
- High refractive index (HRI) coatings;
- Plasmonic and antireflecting coatings;
- Single and multilayer films;
- Coating methods and technologies





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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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