

Special Issue

Science and Technology of Thermal Barrier Coatings

Message from the Guest Editor

The operation of numerous gas turbines for aerospace and power generation relies on thermal barrier coatings (TBC), which are applied on the hot components. These coatings enable the hot components to be purposeful in harsh environments beyond the operational limit of the un-coated component materials, ultimately improving energy efficiency and durability. Therefore, this Special Issue of *Coatings*, "Science and Technology of Thermal Barrier Coatings", is devoted to research and review articles on TBC materials studies for optimizing properties, the development of the fabrication process, characterizations, and thermal durability evaluations. This Special Issue will provide a forum for original research, critical reviews, and perspectives in the area of thermal barrier coatings and its applications from both academia and industry. In particular, topics of interest include but are not limited to the following:

- Novel ceramic top coat and metallic bond coat materials;
- The characterization of thermal and/or mechanical properties;
- Novel fabrication technologies of TBC;
- Novel methods for thermal durability evaluations

Guest Editor

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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.

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