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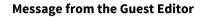
# Science and Technology of Thermal Barrier Coatings

Guest Editor:

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Deadline for manuscript submissions: closed (31 December 2020)



Dear Colleagues,

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 uncoated 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 evalutations.

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 chracterization of thermal and/or mechanical properties;
- Novel fabrication technologies of TBC;
- Novel methods for thermal durability evaluations





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Now more than ever, research is called for to produce technologies and improve knowledge 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 at the center of most contemporary research. Surface science and engineering play a key role in this regard. Refining surfaces and their modifications provides new materials, architectures and processes with a huge potential to aid most societal challenges. Coatings is a well-established, peer-reviewed, online journal that focuses on the dissemination of publications in the field of surface science and engineering. Coatings publishes original research articles that report cutting-edge results and review papers on the hottest topics.

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