

Science and Technology of Thermal Barrier Coatings

Guest Editor:

Prof. Dr. Yeon-Gil Jung

School of Materials Science and Engineering, College of Mechatronics Engineering, Changwon National University, #20 Changwondaehak-ro, Uichang-gu, Changwon, Gyeongnam 641-773, Korea

Deadline for manuscript submissions:

closed (31 December 2020)

Message from the Guest Editor

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 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



Editors-in-Chief

Prof. Dr. Wei Pan

State Key Laboratory of New
Ceramics and Fine Processing,
School of Materials Science &
Engineering, Tsinghua University,
Beijing 100084, China

Dr. Emerson Coy

NanoBioMedical Centre, Adam
Mickiewicz University in Poznań,
ul. Wszechnicy Piastowskiej 3, 61-
614 Poznań, Poland

Message from the Editorial Board

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.

Author Benefits

Open Access: free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility: indexed within Scopus, SCIE (Web of Science), Inspec, CAPlus / SciFinder, and other databases.

Journal Rank: JCR - Q2 (*Materials Science, Coatings & Films*) / CiteScore - Q2 (*Surfaces and Interfaces*)

Contact Us

Coatings Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/coatings
coatings@mdpi.com
X@Coatings_MDPI