

Special Issue

Multifunctional Coatings and Their Applications in Composite Materials and Structures: Modeling, Experiments, Preparation and Performance Evaluation

Message from the Guest Editor

Composite materials and structures are widely used in the aerospace, automotive, energy, marine, and biomedical engineering fields due to their lightweight and high-strength characteristics. Because they often operate under harsh loading conditions, including high temperature, vibration, impact, and high-speed gas corrosion, an increasing number of problems, such as excessive vibration responses, functional degradation, dynamic fatigue, and impact damage, have occurred. Multifunctional coating has increasingly played an important role in structural thermal protection and improvement in static and dynamic mechanical performance. This Special Issue cordially invites submissions of original research articles, reviews, or communications related to the design, modeling, testing, and preparation of multifunctional coatings and their applications in composite materials and structures. Contributions focusing on multifunctional integration of coatings, interface behavior analysis, thermal-vibration response, thermal-impact response, performance degradation and evaluation, and optimization analysis are particularly welcome.

Guest Editor

Dr. Hui Li

School of Mechanical Engineering and Automation, Northeastern University, Shenyang 110819, China

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Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
materials@mdpi.com

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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.

Editors-in-Chief

Prof. Dr. Maryam Tabrizian

1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada

2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

Prof. Dr. Yuguang Ma

State Key Laboratory of Luminescent Materials and Devices, South China University of Technology, Guangzhou 510640, China

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