



Advancements in Processing and Properties of Ceramic Matrix Composites

Guest Editors:

Dr. David J. Mitchell

Materials Science and
Technology Division, Oak Ridge
National Laboratory, Oak Ridge,
TN, USA

Dr. Jayanta S. Kapat

Department of Mechanical and
Aerospace Engineering,
University of Central Florida,
Orlando, FL, USA

Deadline for manuscript
submissions:

closed (31 August 2024)

Message from the Guest Editors

Ceramic materials are critical in many applications involving high temperatures and extreme environments. Ceramic materials do not melt, and many compositions have excellent stability against corrosion at high temperatures in various aggressive environments. However, ceramic materials tend to fail catastrophically when stressed in tension, limiting their potential use in harsh-environment structural applications, such as turbine engines for power generation and aircraft propulsion, industrial manufacturing processes, spacecraft thermal protection systems, as well as nuclear fission and fusion power generation.

The focus of this Special Issue is to capture the results of various investigations into the processing and properties of advanced CMCs. Research areas may include (but are not limited to) innovations in identifying novel compositions, reinforcing phase configurations, and advanced manufacturing techniques, as well as modeling and simulation of processing, structures and properties of advanced ceramic composite materials. Original research and review articles are welcome.

