Special Issue

Characterization and Monitoring of Metal-CFRP-Hybrid Structures

Message from the Guest Editor

Cost-efficient lightweight design, e.g., for automotive applications, is becoming increasingly important in light of legislative and environmental restrictions. As a consequence of recent developments in lightweight design, structures composed of different materials have become of high interest for structural applications. Combining a variety of advantageous material properties, metal–carbon fiber-reinforced polymer (CFRP) hybrid structures represent one particular class. Future challenges for industrial applications include design guidelines, interfacial phenomena (e.g., adhesion and corrosion), cost-efficient manufacturing processes, appropriate technologies for damage inspection and condition monitoring over the complete product lifecycle, and a deeper understanding of the damage mechanisms, especially at the metal–CFRP interface.

Guest Editor

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Metallic materials play a vital role in the economic life of modern societies; contributions are sought on fresh developments that enhance our understanding of the fundamental aspects related to the relationships between processing, properties and microstructure – disciplines in the metallurgical field ranging from processing, mechanical behavior, phase transitions and microstructural evolution, nanostructures, as well as unique metallic properties – inspire general and scholarly interest among the scientific community.

Editor-in-Chief

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