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Advanced Joining Technology of Metal-Polymer Hybrids

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Message from the Guest Editors

This Special Issue aims to shed light on cutting-edge advancements in the realm of joining metal components with polymers or composites. The fusion of metals and polymers has garnered considerable attention across industries due to the unique advantages it offers, such as lightweight structures, enhanced mechanical properties, and superior corrosion resistance. This Special Issue will serve as a platform to explore novel techniques, delve into research history, and discuss evolving challenges in this ever-expanding field.

The integration of metal and polymer materials dates back to early attempts at enhancing structural performance and diversifying material properties. Over the years, researchers have pioneered numerous joining techniques, from traditional methods like adhesive bonding, mechanical fastening, and welding to modern innovations such as laser-assisted joining, friction stir welding, and 3D printing. These developments have enabled the creation of hybrid structures that find applications in automotive, aerospace, healthcare, and other areas.



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Message from the Editorial Board

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 metallurgical field the 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.

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