Special Issue

Composite Materials for Hydrogen Storage

Message from the Guest Editors

Hydrogen is crucial for the global shift to sustainable energy, especially in decarbonizing sectors like transportation and industry. However, safe and efficient storage, particularly in liquid and high-pressure forms, remains a challenge. This Special Issue, *Composite Materials for Hydrogen Storage*, explores innovations in composites that address these issues. We focus on lightweight, high-performance composites such as fiber-reinforced polymers, graphene-reinforced metal matrix composites, and hybrid materials for extreme conditions. Topics include improving hydrogen compatibility, reducing embrittlement, and minimizing permeability for long-term durability. Sustainable solutions, such as recycled materials and energy-efficient manufacturing, will be featured, along with computational modeling and advanced testing to optimize performance. Applications in hydrogen-powered aviation, space exploration, and fuel-cell vehicles will also be discussed. This Special Issue bridges academic research and industrial application, advancing hydrogen storage. We invite contributions from researchers and industry experts to help shape the future of hydrogen storage.

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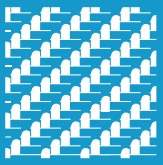

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Editor-in-Chief

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