



Future Perspectives on Carbon Fibers and Their Composites

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Message from the Guest Editor

Dear Colleagues,

Lightweight materials are essential for all types of mobility and engineering constructions. During use, they significantly enable the reduction of CO₂ emissions. However, the use of carbon fibers as reinforcement materials requires intense energy for their generation. This Special Issue will, therefore, focus especially on future raw materials, technologies, and markets contributing to overall significant CO₂ reductions.

The present Special Issue, focuses on alternative, renewable raw materials as precursor materials for carbon fiber processing. The latest scientific directions prescribe the use of alternative raw materials, i.e., lignin/cellulose compositions. Energy efficient process technologies such as low pressure stabilization for the conversion to carbon fibers. Additionally, the use of hydrogen as a future energy source for electric cars and energy generation, as well as for storage potential in aviation and cars, requires the application of carbon fibers with unique properties in composites. Furthermore, the reinforcement of concrete finally demonstrates the unique potential for a reduction of CO₂ by replacing steel already in use.





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Message from the Editor-in-Chief

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