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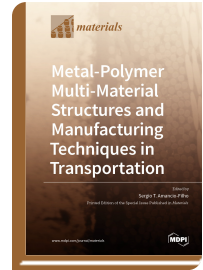
Special Issue Reprint

Metal-Polymer Multi-Material Structures and Manufacturing Techniques in Transportation

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The reduction of greenhouse gas emissions—particularly from fossil fuel-powered vehicles and airplanes by means of weight savings and leaner fuel consumption, helps to restrain environmental impacts. In general, for a variety of industries, and specifically in the case of transport, where both weight savings and increased energy efficiency are pursued, the use of metal–polymer multi-material structures has been growing at an increasing and particularly fast pace in recent years. Several manufacturing techniques have been, or are being, developed, with the aim of being used for producing dissimilar materials in cost-efficient manners. This book presents recent developments in the state of the art of advanced additive manufacturing and the joining of metal–polymer multi-material structures in transportation. This publication mainly focuses on the correlations between microstructure, manufacturing process (i.e., AddJoining, adhesive bonding, friction riveting, friction-based staking and friction spot joining) properties, and the mechanical performance of metal–polymer multi-material structures.



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