



## Fire Safety of Structural Composites

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### Message from the Guest Editor

Fibre-reinforced polymer composite materials, while competing with metals for their mechanical properties, are susceptible to combustion and fire damage, resulting in loss of structural integrity. The fire safety of these materials is a major issue and, depending on applications, polymer composites must pass some type of regulatory fire test. The two polymeric components of the composites, resin (organic) and fibre (inorganic and/or organic), behave differently in a fire, depending on their respective thermal stabilities. Conventionally, in rigid composite structures, inorganic fibres like glass, carbon or high-performance fibres such as aramids are used as a reinforcing element, hence, no attempt is made to fire-retard them further. Therefore, fire safety relies on the resin and is based on the addition of a fire retardant component in the polymer backbone or of fire retardant chemicals. This Special Issue of the *Journal of Composite Science* aims to gather papers on the recent advances in composites' fire safety, based on experimental and/or mathematically modelled approaches.

