Special Issue

Fire Safety of Composites

Message from the Guest Editor

Fibre-reinforced polymer composite materials while compete with metals for their mechanical properties, are susceptible to combustion and fire damage, resuting in loss of structutal integrity. Fire safety of these materials is a major issue these days because, depending on applications, they must pass some type of regulatory fire test. The two polymeric components of the composite, resin (organic) and fibre (inorganic and/or organic) in a fire behave differently depending upon their respective thermal stabilities. Conventionally in rigid composite structures, inorganic fibres like glass, carbon or high performance fibres such as aramids are used as reinforcing element, hence, no attempt is made to fire retard them further. Therefore the emphasis lies on the resin, either using as a fire retardant component in the polymer backbone or adding fire retardant chemicals in the resin, which depending upon the loading level, can result in reduction in the mechanical properties of the composites. This special issue of Journal of Composite Science aims to gather the recent advances in all of these areas using experimental and/or mathematically modelled approaches.

Guest Editor

Prof. Dr. Baljinder Kandola

Institute for Materials Research and Innovation, The University of Bolton, Deane Road, Bolton BL3 5AB, UK

Deadline for manuscript submissions

closed (1 November 2023)

Journal of Composites Science

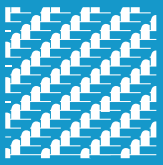
an Open Access Journal by MDPI

Impact Factor 3.7
CiteScore 5.8

mdpi.com/si/148684

Journal of Composites Science
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
jcs@mdpi.com

mdpi.com/journal/jcs



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Editor-in-Chief

Dr. Francesco Tornabene
Department of Innovation Engineering, University of Salento, 73100 Lecce, Italy

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