DESCRIPTION

The aim of Composites Part B: Engineering is to provide a balance between mechanics and materials science aspects, basic and applied research, and high technology and high volume (low cost) composite development.

The Journal aims to provide a forum for the prompt publication of original research on all areas of composites and nano-engineered materials, with emphasis being placed on evaluation and modelling of engineering details and concepts. Basic research papers are welcomed as well as proposals for review articles. Authors are encouraged to discuss the issues relative to application in the short or long-term in various areas, such as aerospace, automotive and other surface transportation, infrastructure, ship-building, off-shore piping, and recreational products.

Current topics of interest to readers include durability, functionally gradient materials, interfaces, interlaminar fracture, joints and adhesion, smart composites, textile composites, thermoplastics, wave propagation, and non-destructive testing.

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INTRODUCTION

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List of keywords
The keywords for Composites Parts A and B are separated into five categories:

A. Material
- Aramid fibre
- Carbon fibre
- Carbon-carbon composites (CCCs)
- Ceramic fibre
- Ceramic-matrix composites (CMCs)
- Discontinuous reinforcement
- Fabrics/textiles
- Fibres
- Foams
- Glass fibres
- Glasses
- Honeycomb
- Hybrid
- Intermetallics
- Lamina/ply
- Laminates
- Layered structures
- Metal-matrix composites (MMCs)
- Moulding compounds
- Nano-structures
- Particle-reinforcement
- Plates
- Polymer (textile) fibre
- Polymer-matrix composites (PMCs)
- Preform
- Prepreg
- Recycling
- Resins
- Smart materials
- Strand
- Tape
- Thermoplastic resin
- Theromosetting resin
- Thin films
- Tow
- 3-Dimensional reinforcement
- Wood
- Yarn

B. Property
Adhesion
Anisotropy
Buckling
Chemical properties
Corrosion
Creep
Cure behaviour
Damage tolerance
Debonding
Defects
Delamination
Directional orientation
Elasticity
Electrical properties
Embrittlement
Environmental degradation
Fatigue
Fibre/matrix bond
Fracture
Fracture toughness
Fragmentation
Hardness
High-temperature properties
Impact behaviour
Interface/interphase
Internal friction/damping
Magnetic properties
Mechanical properties
Microstructures
Optical properties/techniques
Physical properties
Plastic deformation
Porosity
Residual/internal stress
Rheological properties
Strength
Stress concentrations
Stress relaxation
Stress transfer
Surface properties
Thermal properties
Thermomechanical
Transverse cracking
Vibration
Wear
Wettability

C. Analysis

Analytical modelling
Computational modelling
Damage mechanics
Finite element analysis (FEA)
Laminate mechanics
Micro-mechanics
Numerical analysis
Statistical properties/methods

D. Testing
Acoustic emission
Chemical analysis
Electron microscopy
Fractography
Mechanical testing
Non-destructive testing
Optical microscopy
Physical methods of analysis
Process monitoring
Radiography
Surface analysis
Thermal analysis
Ultrasonics

E. Manufacturing / Processing

Assembly
Autoclave
Automation
Braiding
Casting
Chemical vapour deposition (CVD)
Compression moulding
Consolidation
Cure
Cutting
Extrusion
Fibre conversion processes
Filament winding
Forging
Forming
Heat treatment
Injection moulding
Isostatic processing
Joints/joining
Knitting
Lay-up (manual/automated)
Liquid metal infiltration
Machining
Melt-spinning
Moulding compounds
Powder processing
Preform
Prepreg
Pultrusion
Recycling
Resin film infiltration (RFI)
Resin flow
Resin transfer moulding (RTM)
Sintering
Slip casting
Stitching
Surface treatments
Tape
Thermal analysis
Thermoplastic resin
Thermosetting resin
Tooling
Tow
Weaving