



### TABLE OF CONTENTS

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●	<b>Description</b>	<b>p.1</b>
●	<b>Audience</b>	<b>p.1</b>
●	<b>Impact Factor</b>	<b>p.1</b>
●	<b>Abstracting and Indexing</b>	<b>p.2</b>
●	<b>Editorial Board</b>	<b>p.2</b>
●	<b>Guide for Authors</b>	<b>p.4</b>



ISSN: 0266-3538

### DESCRIPTION

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*Composites Science and Technology* publishes refereed original articles on the fundamental and applied science of **engineering composites**. The focus of this journal is on **polymeric matrix** composites with **reinforcements/fillers** ranging from nano- to macro-scale. *CSTE* encourages manuscripts reporting unique, innovative contributions to the physics, chemistry, materials science and applied mechanics aspects of **advanced composites**.

Besides traditional fiber reinforced composites, novel composites with significant potential for engineering applications are encouraged. These may include, but are not limited to, nanocomposites, biomedical composites, green/eco composites, energy composites, and composites mimicking natural materials. Manuscripts dealing with multi-scale and multi-functional issues and performance as well as interdisciplinary approaches to the study of new generation composite materials are welcome. Analytical work should be validated. Publication of manuscripts reporting routine processing, synthesis and property characterization are not a priority of *CSTE*.

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### AUDIENCE

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Materials Scientists, Stress Analysts, Aeronautical, Structural and Mechanical Engineers.

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### INTRODUCTION

*Composites Science and Technology* publishes refereed original articles on the fundamental and applied science of engineering composites. The focus of this journal is on polymeric matrix composites with reinforcements/fillers ranging from nano- to macro-scale. *CSTE* encourages manuscripts reporting unique, innovative contributions to the physics, chemistry, materials science and applied mechanics aspects of advanced composites.

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#### *Electronic artwork*

##### *General points*

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**List:** Number the references (numbers in square brackets) in the list in the order in which they appear in the text.

#### *Examples:*

Reference to a journal publication:

[1] J. van der Geer, J.A.J. Hanraads, R.A. Lupton, The art of writing a scientific article, *J. Sci. Commun.* 163 (2010) 51–59. <https://doi.org/10.1016/j.Sc.2010.00372>.

Reference to a journal publication with an article number:

[2] J. van der Geer, J.A.J. Hanraads, R.A. Lupton, 2018. The art of writing a scientific article. *Heliyon.* 19, e00205. <https://doi.org/10.1016/j.heliyon.2018.e00205>.

Reference to a book:

[3] W. Strunk Jr., E.B. White, *The Elements of Style*, fourth ed., Longman, New York, 2000.

Reference to a chapter in an edited book:

[4] G.R. Mettam, L.B. Adams, How to prepare an electronic version of your article, in: B.S. Jones, R.Z. Smith (Eds.), *Introduction to the Electronic Age*, E-Publishing Inc., New York, 2009, pp. 281–304.

Reference to a website:

[5] Cancer Research UK, Cancer statistics reports for the UK. <http://www.cancerresearchuk.org/aboutcancer/statistics/cancerstatsreport/>, 2003 (accessed 13 March 2003).

Reference to a dataset:

[dataset] [6] M. Oguro, S. Imahiro, S. Saito, T. Nakashizuka, Mortality data for Japanese oak wilt disease and surrounding forest compositions, *Mendeley Data*, v1, 2015. <https://doi.org/10.17632/xwj98nb39r.1>.

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*List of keywords*

#### **A. Material:**

Adhesive joints  
Alloys  
Amorphous materials  
Aramid fibre  
Carbon fibres  
Carbon nanotubes  
Coating  
Coupling agents  
Fabrics/textiles  
Fibres  
Flexible composites  
Functional composites  
Glass fibres  
Glasses  
Hybrid composites  
Intermetallics  
Laminate  
Layered structures  
Metal-matrix composites (MMCs)  
Metals  
Nanoclays  
Nano composites  
Nano particles  
Oxides  
Particle-reinforced composites  
Polymer-matrix composites (PMCs)  
Polymers  
Pre-ceramic polymer  
Recycling  
Sandwich  
Structural composites  
Short-fibre composites  
Smart materials  
Textile composites  
Wood

## **B. Property:**

Corrosion  
Creep  
Curing  
Debonding  
Defects  
Delamination  
Durability  
Electrical properties  
Embrittlement  
Environmental Degradation  
Fatigue  
Fibre/matrix bond  
Fracture  
Fracture toughness  
Fragmentation  
Friction/wear  
High-temperature properties  
Hygrothermal effect  
Impact behaviour  
Interface  
Interfacial strength  
Interphase  
Magnetic properties  
Matrix cracking  
Mechanical properties  
Non-linear behaviour  
Plastic deformation  
Porosity/Voids  
Strength  
Stress/strain curves  
Surface treatments  
Synergism  
Thermal properties  
Thermomechanical properties  
Transport properties  
Vibration

## **C. Analysis:**

Anelasticity  
Anisotropy  
Buckling  
Complex moduli  
Computational mechanics  
Crack  
Damage mechanics  
Damage tolerance  
Deformation  
Elastic properties  
Failure criterion  
Fibre bridging  
Finite element analysis (FEA)  
Laminate theory  
Modelling  
Multiscale modeling  
Notch  
Plate theory

- Probabilistic methods
- Residual stress
- Sandwich structures
- Shell theory
- Statistics
- Stress concentrations
- Stress relaxation
- Stress transfer
- Transverse cracking

#### **D. Testing:**

- Acoustic emission
- Atomic force microscopy (AFM)
- Differential scanning calorimetry (DSC)
- Dynamic mechanical thermal analysis (DMTA)
- Electron energy loss spectroscopy (EELS)
- Electron microprobe analysis
- Fractography
- Hardness testing
- Infrared (IR) spectroscopy
- Life prediction
- Moire techniques
- Non-destructive testing
- Optical microscopy
- Photoelectron spectroscopy (XPS)
- Raman spectroscopy
- Rheology
- Scanning electron microscopy (SEM)
- Scanning/transmission electron microscopy (STEM)
- Secondary ion mass spectrometry (SIMS)
- Thermogravimetric analysis (TGA)
- Transmission electron microscopy (TEM)
- Ultrasonics
- X-ray diffraction (XRD)
- X-ray fluorescence (XRF)

#### **E. Processing:**

- Annealing
- Braiding
- Casting
- Chemical vapour deposition (CVD)
- Chemical vapour infiltration (CVI)
- Directional solidification
- Electro-spinning
- Extrusion
- Filament winding
- Heat treatment
- Injection moulding
- Ion implantation
- Ion plating
- Isostatic pressing
- Knitting
- Liquid metal infiltration (LMI)
- Melt-spinning
- Microwave processing
- Physical vapour deposition
- Plasma deposition
- Plasma spraying

Powder processing  
Pultrusion  
Resin transfer moulding (RTM)  
Sintering  
Slip casting  
Sol-gel methods  
Welding/joining

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