MATERIALS SCIENCE AND ENGINEERING: A
Structural Materials: Properties, Microstructure and Processing

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DESCRIPTION

*Materials Science and Engineering A* provides an international medium for the publication of theoretical and experimental studies related to the **load-bearing capacity of materials** as influenced by their basic properties, processing history, microstructure and operating environment. Appropriate submissions to *Materials Science and Engineering A* should include scientific and/or engineering factors which affect the **microstructure - strength relationships** of materials and report the changes to **mechanical behavior**.

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AUDIENCE

Materials Scientists, Metallurgists, Mechanical Engineers, Ceramists

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Reporting sex- and gender-based analyses

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Keywords
The keywords for Materials Science and Engineering A are separated into four categories:

A. METHOD OF INVESTIGATION
B. MATERIAL OR CONSTITUTING PHASE(S)
C. PROCESSING METHOD
D. INVESTIGATED PHENOMENON
meth A. METHOD OF INVESTIGATION
characterization
electron microscopy
finite element analysis
first principles
fracture mechanics/fracture behaviour/fatigue
hardness
micromechanics
modelling/simulations
phase diagrams
simulations
stress/strain measurements
thermal analysis
X-ray analysis
other

mat B. MATERIAL OR CONSTITUTING PHASE(S)
aluminium alloys
amorphous materials
biomaterials
ceramics
composites
copper alloys
glass
intermetallics
iron alloys
magnesium alloys
nanocrystalline materials
nickel alloys
other materials
other metallic alloys
shape memory alloys
titanium alloys

proc C. PROCESSING METHOD
casting methods
coatings
laser methods
plasticity methods
powder methods
surface phenomena

phen D. INVESTIGATED PHENOMENON
grains and interfaces
phase transformation
plasticity