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

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Materials Scientists, Metallurgists, Mechanical Engineers, Ceramists

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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
classification
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