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DESCRIPTION

General Perspective

- The Journal of Alloys and Compounds is an international peer-reviewed medium for the publication of work on materials comprising compounds as well as alloys. Its great strength lies in the diversity of disciplines which it encompasses, drawing together results from materials science, physical metallurgy, solid-state chemistry and physics. The interdisciplinary nature of the journal is evident in many subject areas. Experimental and theoretical approaches to materials problems require an active interplay between a variety of traditional and novel scientific disciplines.

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amorphisation  
chemical synthesis  
crystal growth  
gas-solid reactions  
laser processing  
liquid-solid reactions  
precipitation  
powder metallurgy  
mechanical alloying  
mechanochemical processing  
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sintering  
slow-gel processes  
solid state reactions  
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C. Phenomena
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acoustic properties  
anisotropy  
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catalysis  
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electron-electron interactions  
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electronic band structure  
electronic properties  
enthalpy
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flux pinning and creep
galvanomagnetic effects
grain boundaries
heat capacity
heat conduction
heavy fermions
hyperfine interactions
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kondo effect
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magnetocaloric
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magneto-volume effects
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noise
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order-disorder effects
oxidation
phase diagrams
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phonons
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radiation effects
recombination and trapping
shape memory
spin dynamics
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thermal expansion
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thermoelectric
thermochemistry
tunnelling
vacancy formation
valence fluctuations

D. Experimental and Theoretical Methods
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calorimetry
computer simulations
elastic light scattering
electrochemical impedance spectroscopy
electron emission spectrosopies
electron energy loss spectroscopy
electron paramagnetic resonance
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high-pressure
high magnetic fields
inelastic light scattering
inelastic neutron scattering
light absorption and reflection
luminescence
magnetic measurements
Mössbauer spectroscopy
metallography
molecular dynamics simulations
muon spectroscopies
neutron diffraction
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nuclear resonances
optical spectroscopy
perturbed angular correlations, PAC
photoelectron spectroscopies
positron spectroscopies
Rutherford backscattering, RBS
scanning electron microscopy, SEM
scanning tunnelling microscopy, STM
strain, high pressure
surface electron diffraction (LEED, RHEED)
synchrotron radiation
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