

JOURNAL OF ALLOYS AND COMPOUNDS

An Interdisciplinary Journal of Materials Science and Solid-State Chemistry and Physics

AUTHOR INFORMATION PACK

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DESCRIPTION

The Journal of Alloys and Compounds is intended to serve as an international medium for the publication of work on **solid materials** comprising **compounds** as well as **alloys**. Its great strength lies in the diversity of discipline which it encompasses, drawing together results from **materials science**, 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. In much of the work published in the journal, synthetic and structural studies are combined with investigations of chemical and physical properties of alloys and compounds, contributing to the development of areas of current scientific interest. Papers submitted for publication should contain new experimental or theoretical results. The Journal of Alloys and Compounds provides a unique international forum where materials scientists, chemists and physicists can present their results both to workers in their own fields and to others active in related areas.

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Example: '.... as demonstrated [3,6]. Barnaby and Jones [8] obtained a different result'

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.

Reference to a book:

[2] W. Strunk Jr., E.B. White, The Elements of Style, fourth ed., Longman, New York, 2000. Reference to a chapter in an edited book:

[3] 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:

[4] Cancer Research UK, Cancer statistics reports for the UK. http://www.cancerresearchuk.org/ aboutcancer/statistics/cancerstatsreport/, 2003 (accessed 13.03.03).

Journal abbreviations source

Journal names should be abbreviated according to the List of Title Word Abbreviations.

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Keywords

The keywords for the Journal of Alloys and Compounds are separated into four categories:

A. Types of Material

actinide alloys and compounds amorphous materials ceramics clusters coating materials composite materials data storage materials disordered systems electrode materials energy storage materials ferroelectrics fuel cells fullerenes half metals heterojunctions high-temperature alloys high-Tc superconductors hydrogen absorbing materials inorganic materials insulators intermetallics interstitial alloys liquid crystals magnetic films and multilayers magnetically ordered materials metal hydrides metallic glasses metal matrix composites metals and allovs nanostructured materials nitride materials nuclear reactor materials optical materials oxide materials permanent magnets phosphers polymers, elastomers, and plastics quantum wells quasicrystals rare earth alloys and compounds semiconductors spin glasses superconductors

surfaces and interfaces

thin films

transition metal alloys and compounds thermoelectic materials

B. Preparation and Processing

amorphisation chemical synthesis crystal growth gas-solid reactions laser processing liquid-solid reactions precipitation powder metallurgy mechanical alloying mechanochemical processing nanofabrications rapid-solidification, quenching sintering sol-gel processes solid state reactionsa vapor deposition

C. Phenomena

atomic scale structure acoustic properties anisotropy anharmonicity catalysis composition fluctuations crystal structure corrosion crystal and ligand fields crystal binding and equation of state cyclotron resonance dielectric response diffusion dislocations and disclinations domain structure elasticity electrical transport electrochemical reactions electromotive force, EMF electron-electron interactions electron-phonon interactions electronic band structure electronic properties enthalpy entropy exchange and superexchange fractional quantum Hall effect flux pinning and creep galvanomagnetic effects grain boundaries heat capacity heat conduction heavy fermions hyperfine interactions ionic conduction impurities in semiconductors kondo effect kinetics

magentisation

magnetocaloric magnetoresistance

magnetostriction

magneto-volume effects

mechanical properties

microstructure

noise

optical properties

order-disorder effects

oxidation

phase diagrams

phase transitions

phonons

photoconductivity and photovoltaics

piezoelectricity, electrostrition

preferential site ordering

point defects

quantum Hall effect

quantum localization

radiation effects

recombination and trapping

shape memory

spin dynamics

spin-orbit effects

thermal expansion

thermodynamic properties

thermoelectric

thermochemistry

tunnelling

vacancy formation

valence fluctuations

D. Experimental and Theoretical Methods

atomic force microscopy, AFM

atom, molecule, and ion impact

calorimetry

computer simulations

elastic light scattering

electrochemical impedance spectroscopy

electron emission spectroscopies

electron energy loss spectroscopy

electron paramagnetic resonance

EXAFS, NEXAFS, SEXAFS

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

nonlinear optics

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 thermal analysis thermodynamic modeling time-resolved optical spectroscopies transmission electron microscopy, TEM X-ray diffraction X-ray and gamma-ray spectroscopies Ultrasonics

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