

Volume 560

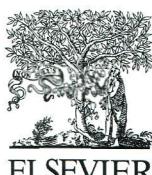
25 May 2013
ISSN 0925-8388

Journal of ALLOYS AND COMPOUNDS

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

EDITOR-IN-CHIEF
L. SCHULTZ

EDITORS
K.H.J. BUSCHOW
J. CHAN
D.G. ESKIN
H. FAN
J.-M. GRENECHE
V.G. HARRIS
H. KLEINKE
C. KOCH
H.G. PAN
V. PECHARSKY
H. SAKAGUCHI
H. ZUR LOYE



Contents

Abstracting Services Abstracted/indexed in: Cambridge Scientific Abstracts, Ceramics Abstracts, Chemical Abstracts, Current Contents, Engineering Index, FIZ Karlsruhe, Metals Abstracts, PASCAL/CNRS, Physics Abstracts, Physikalische Berichte, Research Alert, Science Citation Index. Also covered in the abstract and citation database SCOPUS.[®] Full text available on ScienceDirect.[®]

Preparation and photoelectrochemical properties of TiO ₂ hollow spheres embedded TiO ₂ /CdS photoanodes for quantum-dot-sensitized solar cells H. Hu, H. Shen, C. Cui, D. Liang, P. Li, S. Xu and W. Tang (China).....	1
RF noise suppressor using FeCoNiB soft magnetic thin films on the microstrip line J. Qiu (China).....	6
Controlled synthesis of YF ₃ nanocrystals with multiple morphologies in ethylene glycol C. Li, Y. Mei, J. Xie, W. Dai, G. Du and Z. Li (PR China).....	10
Sonochemical synthesis of β-Co(OH) ₂ hexagonal nanoplates and their electrochemical capacitive behaviors X. Liu, B. Qu, F. Zhu, L. Gong, L. Su and L. Zhu (PR China)	15
Enhanced photocatalytic activity of C, F-codoped TiO ₂ loaded with AgCl H. Yan, S.T. Kochuveedu, L.N. Quan, S.S. Lee and D.H. Kim (Republic of Korea).	20
Spark plasma sintering of Mo–W powders prepared by mechanical alloying R. Ohser-Wiedemann, U. Martin, A. Müller and G. Schreiber (Germany).....	27
Synergetic effects in electrochemical properties of ZrV _x Ni _{4.5-x} ($x=0.0, 0.1, 0.2, 0.3, 0.4$, and 0.5) metal hydride alloys K. Young, M. Young (USA), S. Chang (Taiwan, ROC) and B. Huang (USA).....	33
Bio-inspired synthesis of TiO ₂ hollow nanospheres in agarose gels Y. Wang, D. Yang, Y. Shi and Z. Jiang (China)	42
Optimization on mechanical properties of Fe _{7-x} Cr _x C ₃ carbides by first-principles investigation P. Zhang, Y. Zhou, J. Yang, D. Li (China), X. Ren (UK), Y. Yang and Q. Yang (China)	49
Characterization of low speed shear test reliability of Sn–1.0Ag–XCe/ENEPIG solder joint Q.V. Bui and S.B. Jung (Republic of Korea).	54
Evolution of crystallographic grain orientation and anisotropic properties of (K _{0.5} Na _{0.5})NbO ₃ ceramics using BaTiO ₃ templates by reactive templated grain growth D. Lv and R. Zuo (PR China)	62
Local atomic structure of lanthanide complexes in cubic ordered mesoporous silica T.S. Martins, L.C. Cides da Silva, J.R. Matos and M.C.A. Fantini (Brazil)	67
Effect of partial Ho-substitution on the magnetic and magnetocaloric properties of polycrystalline DyCo ₂ -based solid solutions J. Ćwik (Poland), N. Kolchugina (Russia) and K. Nenkov (Germany).	72
Microstructure, magnetic and electrical properties of the composite magnets of Nd–Fe–B powders coated with silica layer L. Zheng, W. Li, M. Zhu, L. Ye and W. Bi (China)	80
The mechanism clarification of Ni–Mn–Fe–Ga alloys with excellent and stable functional properties S.Y. Yang (China), Y. Liu (Singapore), C.P. Wang, Z. Shi and X.J. Liu (China)	84
Synthesis and characterization of Ni–Co/SiC nanocomposite coatings using sediment co-deposition technique B. Bakhit and A. Akbari (Iran).	92
Synthesis of tungsten trioxide nanoparticles by microwave plasma in liquid and analysis of physical properties Y. Hattori, S. Nomura, S. Mukasa, H. Toyota, T. Inoue and T. Kasahara (Japan)	105
Impact of homogenization on particles in the Al–Mg–Mn alloy AA 5454 – Experiment and simulation O. Engler, Z. Liu and K. Kuhnke (Germany)	111
Electronic structure of the heavy-fermion superconductor Ce ₂ Ni ₃ Ge ₅ and its reference Ce ₂ Ni ₃ Si ₅ compound by <i>ab initio</i> calculations M.J. Winiarski and M. Samsel-CzeKała (Poland)	123
Isothermal heat treatments of an Al–4.8mass%Cu alloy under high magnetic fields Y. Yuan, Q. Wang (China), K. Iwai (Japan), D. Li, T. Liu and J. He (China)	127

Synthesis of $\text{Bi}_2\text{O}_3/\text{Cu}_2\text{O}$ nanoflowers by hydrothermal method and its photocatalytic activity enhancement under simulated sunlight A.M. Abdulkarem, A.A. Aref, A. Abdulhabeeb, Y.-F. Li and Y. Yu (PR China)	132
Biointerfacing fabrication, mechanical and electrical characterizations of NbC nanowire arrays from the bamboo substrate J. Du (PR China), Y. Yang, Z. Fan (USA), Y. Xia, X. Cheng, Y. Gan, H. Hang (PR China), L. Dong, X. Li (USA), W. Zhang and X. Tao (PR China)	142
Opto-electrical characterization of transparent conducting sand dune shaped indium doped ZnO nanostructures V. Shelke, M.P. Bhole and D.S. Patil (India)	147
A facile template-free synthesis of $\alpha\text{-MnO}_2$ nanorods for supercapacitor Z. Song, W. Liu, M. Zhao, Y. Zhang, G. Liu, C. Yu and J. Qiu (China)	151
Photoluminescence and wetting behavior of ZnO nanoparticles/nanorods array synthesized by thermal evaporation Q. Li, Y. Chen, L. Luo, L. Wang, Y. Yu (PR China) and L. Zhai (USA)	156
Microstructure and mechanical properties of rapidly solidified/powder metallurgy $\text{Mg}-6\text{Zn}$ and $\text{Mg}-6\text{Zn}-5\text{Ca}$ at room and elevated temperatures T. Zhou, M. Yang, Z. Zhou, J. Hu and Z. Chen (China)	161
The magnetoelectric properties of $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3/\text{BaTiO}_3$ bilayers with various orientations T. Li, F. Zhang, H. Fang, K. Li and F. Yu (China)	167
Structure and mechanical properties of multi-element $(\text{AlCrMnMoNiZr})_{\text{x}}$ coatings by reactive magnetron sputtering B. Ren, Z. Shen and Z. Liu (PR China)	171
FePtCu-C granular film for perpendicular magnetic recording media L. Zhang, W.W. Zhong, S.S. Yu, S.X. Xue, Y.P. Liu, Z.G. Li and W.P. Chen (People's Republic of China)	177
Sol-gel derived nanostructure undoped and cobalt doped ZnO : Structural, optical and electrical studies Y. Caglar (Turkey)	181
Influence of mechanical milling on the physical properties of $\text{SmCo}_5/\text{Fe}_{65}\text{Co}_{35}$ type hard/soft magnetic nanocomposite E. Dorolte, A.V. Trifu (Romania), O. Isnard (France), I. Chicinas, F. Tolea, M. Valeanu and V. Pop (Romania)	189
Synthesis and magnetic properties of the ternary germanide TbScGe S. Tencé, O. Isnard, E. Gaudin and B. Chevalier (France)	195
Controlling the spectroscopic parameters of Er^{3+} -doped sodium silicate glass by tuning the Er_2O_3 and Na_2O concentrations E.O. Serqueira, R.F. de Morais and N.O. Dantas (Brazil)	200
A facile PVP-assisted hydrothermal fabrication of $\text{Fe}_2\text{O}_3/\text{Graphene}$ composite as high performance anode material for lithium ion batteries W. Xiao, Z. Wang, H. Guo, Y. Zhang, Q. Zhang and L. Gan (PR China)	208
Electronic structure and vibrational properties in cobalt-based full-Heusler compounds: A first principle study of Co_2MnX ($\text{X}=\text{Si, Ge, Al, Ga}$) A. Candan, G. Uğur (Turkey), Z. Charifi, H. Baaziz (Algeria) and M.R. Ellialtıoğlu (Turkey)	215
Keywords	III