

Volume 574

15 October 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

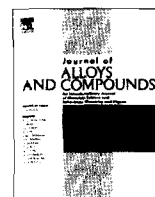
C. KOCH

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.®

Removal of metallic impurities from Ti binary alloy scraps using hydrogen plasma arc melting J.-M. Oh, B.-K. Lee, C.-Y. Suh and J.-W. Lim (Daejeon, Republic of Korea)	1
Supercritical fluid chemical deposition of Pd nanoparticles on magnesium–scandium alloy for hydrogen storage S. Couillaud, M. Kirikova (Pessac, France), W. Zaïdi, J.-P. Bonnet (Amiens, France), S. Marre, C. Aymonier (Pessac, France), J. Zhang, F. Cuevas, M. Latroche (Thiais, France), L. Aymard (Amiens, France) and J.-L. Bobet (Pessac, France)	6
Structural and optical properties of fullerene-like amorphous carbon with embedded dual-metal nanoparticles Z.W. Xiong, F. Jiang and X.R. Chen (Chengdu, China)	13
Evaluation of glass-forming ability for Al-based amorphous alloys based on superheated liquid fragility and thermodynamics X. Hu, J. Guo, G. Fan and T. Feng (Shandong, China)	18
White-light long persistent and photo-stimulated luminescence in $\text{CaSnSiO}_5:\text{Dy}^{3+}$ X. Xu, Q. He (Kunming, PR China) and L. Yan (Columbia, USA)	22
Evolution pathways for the formation of Nano- $\text{Cu}_2\text{ZnSnSe}_4$ absorber materials via elemental sources and isophorondiamine chelation P.Y. Lee, S.C. Shei and S.J. Chang (Tainan, Taiwan)	27
Experimental investigation of phase equilibria in the Co–Si–Zr ternary system C.P. Wang, G.M. Tao, W.W. Xu, S.Y. Yang, C.C. Zhao (Xiamen, PR China), H.P. Xiong (Beijing, PR China) and X.J. Liu (Xiamen, PR China) ..	33
Pressure rate controlled unified constitutive equations based on microstructure evolution for warm hydroforming L. Lang, P. Du, B. Liu, G. Cai and K. Liu (Beijing, China)	41
Self-assembled synthesis of $\text{TiO}_2/\text{TiB}_2$ nanowall and its photocatalytic properties F. Huang, A. Yan (Xuzhou, China), Z. Fu (Wuhan, China), S. Yin (Xuzhou, China), F. Zhang (Wuhan, China) and Y. Qiang (Xuzhou, China)	49
Preparation and photoluminescence of some europium (III) ternary complexes with β -diketone and nitrogen heterocyclic ligands D. Wang, Y. Pi, C. Zheng, L. Fan, Y. Hu and X. Wei (Huangshi, PR China)	54
The effect of the temperature on the electrochemical properties of the hydrogen storage alloy for nickel–metal hydride accumulators C. Khaldi, S. Boussami (Tunis, Tunisia), M. Tliha (Tunis, Tunisia), (Al-Qunfudah, Saudi Arabia), S. Azizi (Tunis, Tunisia), N. Fenineche, O. El-Kedim (Belfort Cedex, France), H. Mathlouthi and J. Lamloumi (Tunis, Tunisia)	59
Effects of oxygen vacancy on the electrical and magnetic properties of anatase $\text{Fe}_{0.05}\text{Ti}_{0.95}\text{O}_{2-\delta}$ films Q.H. Li, L. Wei, Y.R. Xie, F. Jiang, T. Zhou, G.X. Hu (Jinan, PR China), J. Jiao (Portland, USA), Y.X. Chen, G.L. Liu, S.S. Yan and L.M. Mei (Jinan, PR China)	67
Structural evolution and magnetic properties of nanocrystalline 50 Permalloy powders prepared by mechanical alloying Kh. Gheisari, Sh. Shahriari (Ahvaz, Iran) and S. Javadpour (Shiraz, Iran)	71
Effect of solution contents on the evolution of microstructure and photoluminescence of laser-annealed rutile TiO_2 thin films C.K. Chung, K.P. Chuang, S.Y. Cheng, S.L. Lin and K.Y. Hsie (Tainan, Taiwan, ROC)	83
Effects of Mn-doping on the properties of $(\text{Ba}_{0.92}\text{Ca}_{0.08})(\text{Ti}_{0.95}\text{Zr}_{0.05})\text{O}_3$ lead-free ceramics X.-P. Jiang, L. Li, C. Chen, X.-J. Wang and X.-H. Li (Jingdezhen, China)	88
Precipitation evolution in Al–Er–Zr alloys during aging at elevated temperature S.P. Wen, K.Y. Gao, H. Huang, W. Wang and Z.R. Nie (Beijing, People's Republic of China)	92
Creep behaviour of eutectic SnBi alloy and its constituent phases using nanoindentation technique L. Shen, P. Lu, S. Wang and Z. Chen (Singapore, Singapore)	98
Preparation and characterization of electrodeposited ZnO and ZnO:Co nanorod films for heterojunction diode applications Y. Caglar, A. Arslan, S. Ilcan, E. Hür, S. Aksoy and M. Caglar (Eskisehir, Turkey)	104
Structure, thermodynamic behavior and static magnetic properties of Al addition FeCoNbCuB alloy ribbons X. Wang, L. Zhang, L. Deng, J. Xie and D. Liang (Chengdu, People's Republic of China)	112
Modeling of stress relaxation process, case study: Shape setting heat treatment of a Ni rich-NiTi alloy M.S. Shakeri (Karaj, Iran) and H. Aghajani (Tabriz, Iran)	119

Structural parameters, band-gap bowings and phase diagrams of zinc-blende $\text{Sc}_{1-x}\text{In}_x\text{P}$ ternary alloys: A FP-LAPW study W. López-Pérez, N. Simon-Olivera, J. Molina-Coronell, A. González-García and R. González-Hernández (Barranquilla, Colombia)	124
Synthesis and size dependent exchange bias effect in $\text{CoCr}_2\text{O}_4/\text{Cr}_2\text{O}_3$ nanogranular systems Z. Tian, S. Huang, S. Yuan and J. Wang (Wuhan, PR China)	131
Sustainable preparation of $\text{Li}(\text{FeM})\text{PO}_4/\text{C}$ from converter sludge and its electrochemical performance as a cathode material for lithium ion batteries Z.-F. Zhang, Z.-J. Wu, S.-H. Su, Z.-F. Gao, L.-S. Li and X.-R. Wu (Maanshan, China)	136
Morphology and photoluminescence properties of $\text{YBO}_3:\text{Eu}^{3+}(5\%)$ tuned by B^{3+} source, stirring speed, pH value and post-annealing D. Zou, Y.Q. Ma, S.B. Qian, G.H. Zheng, Z.X. Dai, G. Li and M.Z. Wu (Hefei, People's Republic of China)	142
Effects of substrate temperature on the growth orientation and optical properties of $\text{ZnO}:\text{Fe}$ films synthesized via magnetron sputtering X. Zhang, S. Ma, F. Li, F. Yang, J. Liu and Q. Zhao (Gansu, China)	149
A core-shell LiFePO_4/C nanocomposite prepared via a sol-gel method assisted by citric acid G. Xie, H.-J. Zhu, X.-M. Liu and H. Yang (Jiangsu, PR China)	155
Large scale synthesis of PbS tipped ZnS nanorods heterostructures by long-pulse-width laser ablation in liquid F. Tian (Tianjin, People's Republic of China), J. An (Luoyang, People's Republic of China), H. Cao and S. Guo (Tianjin, People's Republic of China)	161
Effects of minor Ca addition on as-cast microstructure and mechanical properties of $\text{Mg}-4\text{Y}-1.2\text{Mn}-1\text{Zn}$ (wt.%) magnesium alloy M. Yang, C. Duan, H. Li, T. Guo and J. Zhang (Chongqing, China)	165
Characterisation of precipitates in a $\text{Mg}-7\text{Gd}-5\text{Y}-1\text{Nd}-0.5\text{Zr}$ alloy aged to peak-ageing plateau T. Li, Z. Du, K. Zhang, X. Li, J. Yuan, Y. Li, M. Ma, G. Shi, X. Fu and X. Han (Beijing, China)	174
Porous Ni-Co bimetal oxides nanosheets and catalytic properties for CO oxidation Y. Gou, X. Liang and B. Chen (Beijing, People's Republic of China)	181
Magnetic and transport properties of Mn-rich $\text{Ni}_{35}\text{Mn}_{50}\text{In}_{15}$ alloy S. Dwevedi (Mumbai, India)	188
Annealing induced compositional changes in $\text{SmCo}_5/\text{Fe}/\text{SmCo}_5$ exchange spring trilayers and its impact on magnetic properties P. Saravanan (Taipei, Taiwan), (Hyderabad, India), J.-H. Hsu (Taipei, Taiwan), G.L.N. Reddy, S. Kumar and S.V. Kamat (Hyderabad, India)	191
Synthesis, characterization and understanding of the mechanisms of electroplating of nanocrystalline-amorphous nickel-tungsten alloys using <i>in situ</i> electrochemical impedance spectroscopy M. Ahmadi and M.J.-F. Guinel (San Juan, USA)	196
Performance enhancement of Sn-Co alloys for lithium-ion battery by electrochemical dissolution treatment C. Tan, G. Qi, Y. Li, J. Guo, X. Wang (Jinan, China), D. Kong, H. Wang (Qufu, China) and S. Zhang (Jinan, China)	206
Preparation and electric-field response of novel tetragonal barium titanate R.-j. Li (Xi'an, PR China), W.-x. Wei (Xiamen, PR China), J.-I. Hai, L.-x. Gao, Z.-w. Gao and Y.-y. Fan (Xi'an, PR China)	212
Hydrothermal fabrication of $\text{Ni}_3\text{S}_2/\text{TiO}_2$ nanotube composite films on Ni anode and application in photoassisted water electrolysis H. He, A. Chen, H. Lv, H. Dong, M. Chang and C. Li (Shanghai, PR China)	217
One-pot synthesis of a composite of monodispersed CuO nanospheres on carbon nanotubes as anode material for lithium-ion batteries S.M. Abbas, S.T. Hussain, S. Ali (Islamabad, Pakistan), F. Abbas (Peshawar, Pakistan), N. Ahmad (Mansehra, Pakistan), N. Ali (Lahore, Pakistan) and Y. Khan (Islamabad, Pakistan)	221
Facile synthesis of TiO_2 hierarchical microspheres assembled by ultrathin nanosheets for dye-sensitized solar cells F. Xu, X. Zhang, Y. Wu, D. Wu, Z. Gao and K. Jiang (Henan, PR China)	227
Structure, magnetic and transport properties in $\text{Ca}_3\text{Co}_{4-x}\text{Sb}_x\text{O}_9$ ceramics Y. Huang, B. Zhao, R. Ang, S. Lin, W. Song and Y. Sun (Hefei, People's Republic of China)	233
Controllable photoluminescent-magnetic dual-encoded wurtzite $\text{ZnS}:\text{Cu}^{2+}\text{Mn}^{2+}$ nanowires modulated by Cu^{2+} and Mn^{2+} ions J. Yang (Siping, Changchun, PR China), B. Wang, J. Cao, (Siping, PR China) D. Han, B. Feng (Siping, Changchun, PR China), M. Wei, L. Fan (Siping, PR China), C. Kou (Jilin, PR China), Q. Liu and T. Wang (Siping, PR China)	240
Laser-induced metal organic decomposition for $\text{Ce}_{0.9}\text{Zr}_{0.1}\text{O}_{2-y}$ epitaxial thin film growth A. Queraltó, Á. Pérez del Pino, S. Ricart, X. Obradors and T. Puig (Bellaterra, Spain)	246
Optical properties correlated with morphology and structure of TEAH modified ZnO nanoparticles via precipitation method M. Popa, A. Mesaros, R.A. Mereu, R. Suciú (Cluj-Napoca, Romania), B.S. Vasile (Bucharest, Romania), M.S. Gabor, L. Ciontea and T. Petrisor (Cluj-Napoca, Romania)	255
The effect of ball milling on the mechanical properties of TiN consolidated by pulsed current activated sintering W. Kim, K.-M. Roh, J.-W. Lim (Daejeon, Republic of Korea), H.-S. Oh and I.-J. Shon (Jeonju, Republic of Korea)	260
Phase diagram of $\text{CdO}-\text{V}_2\text{O}_5-\text{In}_2\text{O}_3$ system M. Bosacka (Szczecin, Poland)	266
Colloidal CZTS nanoparticles and films: Preparation and characterization M. Zhou, Y. Gong, J. Xu, G. Fang, Q. Xu and J. Dong (Ningbo, China)	272
Optimal parameters for synthesizing single phase spinel-type Co_2SnO_4 by sol-gel technique: Structure determination and microstructure evolution J.A. Aguilar-Martínez, M.A. Esneider-Alcala, M.B. Hernández (Nuevo León, Mexico), M.I. Pech Canul (Ramos Arizpe Coah, Mexico) and S. Shaji (Nuevo León, Mexico)	278

TEM study of real precipitation behavior of an Mg–0.5at%Ce age-hardened alloy K. Saito and H. Kaneki (Akita, Japan)	283
Structural and impedance spectroscopy properties of $\text{Pr}_{0.6}\text{Sr}_{0.4}\text{Mn}_{1-x}\text{Ti}_x\text{O}_{3\pm\delta}$ perovskites S. Khadhraoui, A. Triki, S. Hcini, S. Zemni and M. Oumezzine (Tunisia)	290
Isothermal precipitation behavior of κ -carbide in the Fe–9Mn–6Al–0.15C lightweight steel with a multiphase microstructure J. Jeong, C.-Y. Lee, I.-J. Park and Y.-K. Lee (Seoul, Republic of Korea)	299
New self-activated eulytite-type compounds of $\text{M}_7\text{Zr}(\text{PO}_4)_6$ (M=Ca, Sr, Ba) L. Qin (Suzhou, China), D. Wei (Busan, Republic of Korea), Y. Huang (Suzhou, China), S.I. Kim, Y.M. Yu and H.J. Seo (Busan, Republic of Korea)	305
Surfactant-assisted synthesis and luminescent properties of $\text{Gd}_2\text{O}_3:\text{Eu}^{3+}$ core-shell microspheres J. Huang, Y. Song, G. Wang, Y. Sheng, K. Zheng, H. Li, H. Zhang, Q. Huo, X. Xu and H. Zou (Changchun, PR China)	310
Disorder controlled electrical transport properties of $\text{NdCo}_{1-x}\text{NiO}_3$ V. Kumar, R. Kumar (Hamirpur, India), D.K. Shukla (Hamburg, Germany) and R. Kumar (Hamirpur, India)	316
Dielectric, ferroelectric and field induced strain properties of Nb-modified Pb-free $0.99\text{Bi}_{0.5}(\text{Na}_{0.82}\text{K}_{0.18})_{0.5}\text{TiO}_3-0.01\text{LiSbO}_3$ ceramics A. Hussain (Gyeongnam, Republic of Korea), A. Zaman, Y. Iqbal (Peshawar, Pakistan) and M.H. Kim (Gyeongnam, Republic of Korea)	320
Electrospun Co–Sn alloy/carbon nanofibers composite anode for lithium ion batteries B.-O. Jang, S.-H. Park and W.-J. Lee (Gwangju, Republic of Korea)	325
Effect of Ti co-doping on photoluminescence characteristics of $\text{Eu}:\text{BaAl}_2\text{O}_4$ H. Ryu (Daejeon, Republic of Korea) and K.S. Bartwal (Indore, India)	331
Enhanced low field magnetoresistance in $\text{Sr}_2\text{Fe}_{1-x}\text{Ag}_x\text{MoO}_6$ double perovskite system R.P. Aloysius (New Delhi, Trivandrum, India), M. Dhankhar and R.K. Kotnala (New Delhi, India)	335
PEG-200-assisted hydrothermal method for the controlled-synthesis of highly dispersed hollow Fe_3O_4 nanoparticles G. Gao, P. Qiu, Q. Qian, N. Zhou, K. Wang, H. Song, H. Fu and D. Cui (Shanghai, China)	340
Influence of temperature and frequency on the AC conductivity and dielectric properties for $\text{Ge}_{15}\text{Se}_{60}\text{Bi}_{25}$ amorphous films H.E. Atyia, N.A. Hegab, M.A. Affi and M.I. Ismail (Cairo, Egypt)	345
Preparation and crystallization of glass–ceramics derived from iron-rich copper slag Z. Yang, Q. Lin, J. Xia, Y. He, G. Liao and Y. Ke (Hubei, China)	354
Microstructures and textures of a Cu–Ni–Si alloy processed by high-pressure torsion A.Y. Khereddine, F. Hadj Larbi, H. Azzeddine (Alger, Algeria), T. Baudin, F. Brisset, A.-L. Helbert (Orsay Cedex, France), M.-H. Mathon (Gif-sur-Yvette, France), M. Kawasaki (Seoul, Republic of Korea), (Los Angeles, USA), D. Bradai (Alger, Algeria) and T.G. Langdon (Los Angeles, USA), (Southampton, UK)	361
First principles screening of B2 stabilizers in CuPd-based hydrogen separation membranes: (1) Substitution for Pd M.C. Gao (Albany, USA), L. Ouyang (Nashville, USA) and Ö.N. Doğan (Albany, USA)	368
Study of effects on $\text{LiNi}_{0.8}\text{Co}_{0.15}\text{Al}_{0.05}\text{O}_2$ cathode by $\text{LiNi}_{1/3}\text{Co}_{1/3}\text{Mn}_{1/3}\text{O}_2$ coating for lithium ion batteries K. Du, J. Huang, Y. Cao, Z. Peng and G. Hu (Changsha, PR China)	377
Novel magnetically separable AgCl/iron oxide composites with enhanced photocatalytic activity driven by visible light Y. Zhang, Y. Zhang and J. Tan (Wuhan, PR China)	383
Effect of halides addition on the ligand field of chromium in alkali borate glasses M.A. Hassan (Cairo, Egypt)	391
Optical absorption properties of $\text{Na}_x\text{Si}_{136}$ clathrate studied by diffuse reflection spectroscopy R. Himeno, T. Kume, F. Ohashi, T. Ban and S. Nonomura (Gifu, Japan)	398
Photovoltaic property of sputtered BiFeO_3 thin films H.W. Chang (Taichung, Taiwan), F.T. Yuan (Taipei, Taiwan), Y.C. Yu, P.C. Chen, C.R. Wang (Taichung, Taiwan), C.S. Tu and S.U. Jen (Taipei, Taiwan)	402
Effects of hydrogen on the hot deformation behaviour of Ti–6Al–4V alloy: Experimental and constitutive model studies J. Zhao (Australia), H. Ding (Shenyang, PR China), W. Zhao (Hunan, PR China) and Z. Jiang (Australia)	407
Platinum silicide formation on $\text{Si}_{1-y}\text{C}_y$ epitaxial layers K.-R. Lee, I.-P. Lin, H.-T. Chang and S.-W. Lee (Jhong-Li, Taiwan, ROC)	415
Electrodeposition of Sn-doped hollow $\alpha\text{-Fe}_2\text{O}_3$ nanostructures for photoelectrochemical water splitting J. Cai, S. Li, Z. Li, J. Wang, Y. Ren and G. Qin (Shenyang, China)	421
Tailoring of textured transparent conductive $\text{SnO}_2:\text{F}$ thin films Q. Gao (Hangzhou, China), H. Jiang, C. Li, Y. Ma (Hainan, China), X. Li, Z. Ren, Y. Liu, C. Song and G. Han (Hangzhou, China)	427
Synthesis and densification of W–Cu, W–Cu–Ag and W–Ag composite powders via a chemical precipitation method G. Taghavi Pourian Azar, H.R. Rezaie, B. Gohari and H. Razavizadeh (Tehran, Iran)	432
Oxidation mechanism of Fe–16Cr alloy as SOFC interconnect in dry/wet air Z.-Y. Chen, L.-J. Wang, F.-S. Li and K.-C. Chou (Beijing, PR China)	437
Hydrogen isotherms for annealed, un-activated LaNi_5 (273–333 K) S. Luo, T.B. Flanagan (Burlington, United States) and R.C. Bowman Jr. (Franklin, United States)	443
Growth behaviors of intermetallic compounds at Sn–3Ag–0.5Cu/Cu interface during isothermal and non-isothermal aging J. Shen, M. Zhao, P. He and Y. Pu (Chongqing, China)	451
Influence of symmetry on Sm magnetism studied on SmIr_2Si_2 polymorphs M. Vališka, J. Pospíšil, J. Prokleška, M. Diviš, A. Rudajevová, I. Turek and V. Sechovský (Praha, Czech Republic)	459

High magnetostriction of the polycrystalline alloy $(\text{Fe}_{0.8}\text{Al}_{0.2})_{97}\text{B}_3$ C. Bormio-Nunes, M.B. Dias (Estrada Municipal do Campinho, Brazil) and L. Ghivelder (Rio de Janeiro, Brazil)	467
Mechanochemical synthesis of fine $\text{R}_2\text{Fe}_{14}\text{BH}_x$ and $\text{R}_2\text{Fe}_{14}\text{B}$ powders with $\text{R}=\text{Nd}$ or Nd-Dy A.M. Gabay, X.C. Hu and G.C. Hadjipanayis (Newark, USA)	472
Synthesis and characterization of Fe–Pt based multishell magnetic nanoparticles O. Pana, C. Leostean, M.L. Soran, M. Stefan, S. Macavei, S. Gutoiu, V. Pop (Cluj-Napoca, Romania) and O. Chauvet (Nantes Cedex, France)	477
Newly found phase transition and mechanical stability of AuAl_2 : A first-principles study S. Cui (Shanghai, Liaocheng, PR China), D.-Q. Wei (Shanghai, PR China), Q. Zhang, Z. Gong (Beijing, PR China) and H. Hu (Liaocheng, PR China).	486
Aging and Cu concentration effects on Sn–9Zn–xCu/Au couples Y.-w. Yen (Taipei, Taiwan), W.-k. Liou (Taipei, Taoyuan County, Taiwan), W.-c. Chen and C.-w. Chiu (Taipei, Taiwan)	490
The impact of three new quaternary sulfides on the current predictive tools for structure and composition of diamond-like materials C.D. Brunetta, J.A. Brant, K.A. Rosmus, K.M. Henline, E. Karey, J.H. MacNeil and J.A. Aitken (Pittsburgh, USA)	495
Application of response surface methodology (RSM) for optimization of the sintering process of preparation calcia partially stabilized zirconia (CaO-PSZ) using natural baddeleyite J. Li, J. Peng, S. Guo and L. Zhang (Yunnan, USA).	504
Influence of mean grain size with ultrasonic velocity on microhardness of $\text{B}_4\text{C-Fe-Ni}$ composite V. Özkan (Muş, Turkey), İ.H. Sarpün, A. Erol and A. Yönetken (Afyonkarahisar, Turkey).	512
Structural, electronic, elastic and vibrational properties of BiAlO_3 : A first principles study U. Koroglu, S. Cabuk (Adana, Turkey) and E. Deligoz (Aksaray, Turkey).	520
Effects of Cu interlayer on the wettability of aluminum on carbon Y.J. Ko, J. Yoon, J. Lee (Seoul, Republic of Korea) and J.H. Han (Daejeon, Republic of Korea)	526
Effect of vanadium addition on the creep resistance of 18Cr9Ni3CuNbN austenitic stainless heat resistant steel D.-B. Park, M.-Y. Huh, W.-S. Jung, J.-Y. Suh, J.-H. Shim and S.-C. Lee (Seoul, Republic of Korea)	532
Grain boundary magnetism and conductivity in polycrystalline $\text{Ti}_{1-x}\text{Mn}_x\text{N}$ films by reactive sputtering X.C. Wang, M.Y. Yin and W.B. Mi (Tianjin, PR China)	539
Heterogeneous duplex structured Ti–Sn–Mo alloys with high strength and large plastic deformability E.M. Park, C.H. Lee, J.M. Park, J.H. Han, G.A. Song, J.T. Kim, S.H. Hong, J.Y. Park, Y. Seo, N.S. Lee and K.B. Kim (Seoul, Republic of Korea).	546
Crystal structure and magnetic properties of $\text{Ce}_2\text{Fe}_{14-x}\text{Co}_x\text{B}$ alloys E.J. Skoug, M.S. Meyer, F.E. Pinkerton (Warren, United States), M.M. Tessema (Plymouth, United States), D. Haddad (Southfield, United States) and J.F. Herbst (Warren, United States).	552
Non-isothermal nanocrystallization kinetics study on $(\text{Fe}_{0.8}\text{Ni}_{0.15}\text{Mo}_{0.05})_{78}\text{Si}_8\text{B}_{14}$ ($\text{M}=\text{Nb, Ta, W}$) amorphous alloys Y. Zhang, B. Yan, Y. Yang (Shanghai, China) and Y. Wang (Shanghai, China), (Auckland, New Zealand)	556
Synthesis and formation process of $\text{SrSO}_4:\text{Sm}^{3+}$ phosphors with hierarchical structures and its electron trapping luminescence properties J. Sun, G. Sun, B. Xue and D. Cui (Beijing, China)	560
Improving microstructural and mechanical response of new AZ41 and AZ51 magnesium alloys through simultaneous addition of nano-sized Al_2O_3 particulates and Ca M.E. Alam, A.M.S. Hamouda (Doha, Qatar), Q.B. Nguyen and M. Gupta (Singapore, Singapore)	565
First-principle investigations on the structural dynamics of Ti_2GaN Z.J. Yang (Hangzhou, China), J. Li (Haikou, China), R.F. Linghu (Guiyang, China), X.L. Cheng and X.D. Yang (Chengdu, China).	573
Energy band structure calculations of $\text{Ga}_x\text{In}_{1-x}\text{P}$ alloys under the influence of temperature and pressure A.R. Degheidy, S.A.A. Elwakil and E.B. Elkenany (Mansoura, Egypt)	580
Dielectric properties of PZT–epoxy composite thick films V. Pascariu (Iasi, Romania), (Genoa, Italy), L. Padurariu, O. Avadanei and L. Mitoseriu (Iasi, Romania)	591
Near-infrared luminescence enhancing by co-doping Bi^{3+} in $\text{YVO}_4:\text{Nd}^{3+}$ Q.-L. Xiao, J.-X. Meng and J.-R. Qiu (Guangzhou, China)	600
$\text{CaCu}_3\text{Ti}_4\text{O}_{12}$ thin films with non-linear resistivity deposited by RF-sputtering C.R. Foschini (Bauru, Brazil), R. Tararam (Araraquara, Brazil), A.Z. Simões (Guaratinguetá, Brazil), M. Cilense, E. Longo and J.A. Varela (Araraquara, Brazil).	604
Development of lead free pulse electrodeposited tin based composite solder coating reinforced with ex situ cerium oxide nanoparticles A. Sharma, S. Bhattacharya, S. Das (Kharagpur, India), H.-J. Fecht (Ulm, Germany) and K. Das (Kharagpur, India).	609
Corrigendum to “Method of the correlative optimization of heat capacities of isostructural compounds” [J. Alloys Comp. 552 (2013) 248–254] V.P. Vassiliev (Moscow, Russia), W.P. Gong (Guangdong, PR China), A.F. Taldrik (Moscow, Russia) and S.A. Kulinich (Osaka, Japan)	617
Keywords.	I