

771  
J80/2013



ELSEVIER

Volume 568

15 August 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

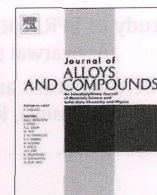
H.G. PAN

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.<sup>®</sup> Full text available on ScienceDirect.<sup>®</sup>

|  |     |
|--|-----|
| Anomalous dielectric constant of half-doped manganite $\text{La}_{0.5}\text{Ca}_{0.5}\text{MnO}_3$<br>X.-S. Cao (Changzhou, People's Republic of China), G.-F. Ji (Changzhou, Shanghai, People's Republic of China), B.-c. Luo (Xi'an, People's Republic of China) and F. Li (Changzhou, People's Republic of China) . . . . .                       | 1   |
| Cation distribution and magnetic properties of $\text{LiMnZn}$ ferrites<br>M. Arana, V. Galván (Córdoba, Argentina), S.E. Jacobo (Buenos Aires, Argentina) and P.G. Bercoff (Córdoba, Argentina) . . . . .   | 5   |
| Microwave dielectric properties and crystal structures of $0.7\text{CaTiO}_3\text{--}0.3[\text{La}_x\text{Nd}_{1-x}]\text{AlO}_3$ ceramics<br>F. Liang, M. Ni, W. Lu and G. Fan (Wuhan, PR China) . . . . .  | 11  |
| Ab initio study of elasticity, piezoelectricity, and nonlinear optical performance in monoclinic $\text{NaAsSe}_2$<br>Z. Ma, K. Wu, R. Sa, Q. Li and Y. Zhang (Fuzhou, PR China) . . . . .   | 16  |
| Formation of long-period stacking ordered structures in $\text{Mg}_{88}\text{M}_5\text{Y}_7$ ( $\text{M}=\text{Ti, Ni}$ and $\text{Pb}$ ) casting alloys<br>Q.-Q. Jin (Shenyang, People's Republic of China), C.-F. Fang (Dalian, People's Republic of China) and S.-B. Mi (Shenyang, People's Republic of China) . . . . .                          | 21  |
| Reduced graphene oxide–cuprous oxide composite via facial deposition for photocatalytic dye-degradation<br>M. Wang (Lianyungang, China), (NSW, Australia), J. Huang, Z. Tong (Lianyungang, China), W. Li and J. Chen (NSW, Australia) . . . . .  | 26  |
| Evolution of low fluorine solution in decomposition and crystallization for $\text{YBa}_2\text{Cu}_3\text{O}_y$ film growth<br>L.H. Jin, Y.F. Lu, J.Q. Feng, S.N. Zhang, Z.M. Yu, Y. Wang and C.S. Li (Xi'an, PR China) . . . . .  | 36  |
| Microstructure and mechanical properties of rheo-diecast hypereutectic $\text{Al--Si}$ alloy with 2%Fe assisted with ultrasonic vibration process<br>C. Lin, S. Wu, S. Lü, P. An and L. Wan (Wuhan, PR China) . . . . .  | 42  |
| Growth and luminescence properties of undoped strontium iodide crystals<br>J. Chen, S. Wang, Y. Du and L. Chen (Shanghai, China) . . . . .   | 49  |
| Combustion synthesis as a novel approach in preparation of polycrystalline $\text{Y}_2\text{Cu}_2\text{O}_5$<br>Z. Gebrel, J. Blanusa, V. Spasojevic, V. Kusigerski, A. Mrakovic, A. Alqat and M. Perovic (Belgrade, Serbia) . . . . .   | 55  |
| Synthesis, crystal structure, spectrum properties, and electronic structure of a new three-borate $\text{Ba}_4\text{Na}_2\text{Zn}_4(\text{B}_3\text{O}_6)_2(\text{B}_{12}\text{O}_{24})$ with two isolated types of blocks: $3[3\Delta]$ and $3[2\Delta+1\text{T}]$<br>X. Chen, Y. Chen, C. Sun, X. Chang and W. Xiao (Beijing, PR China) . . . . . | 60  |
| Effect of nitrogen content on microstructures and mechanical properties of $\text{Ti}(\text{C, N})$ -based cermets<br>Z. Shi (Yichang, PR China), D. Zhang (Tianjin, PR China), S. Chen and T. Wang (Yichang, PR China) . . . . .  | 68  |
| Mechanical properties of $(\text{W,Ti})\text{C}$ and $(\text{W,Ti})\text{C--NiAl}_3$ cermet consolidated by the high-frequency induction-heating method<br>W. Kim, C.-Y. Suh, K.-M. Roh, S.-W. Cho (Daejeon, Republic of Korea), K.-I. Na and I.-J. Shon (Jeonju, Republic of Korea) . . . . .   | 73  |
| Highly improved with hydrogen storage capacity and fast kinetics in $\text{Mg}$ -based nanocomposites by CNTs<br>B.-H. Chen, C.-H. Kuo, J.-R. Ku, P.-S. Yan, C.-J. Huang, M.-S. Jeng and F.-H. Tsau (Tainan City, Taiwan) . . . . .  | 78  |
| Synthesis, characterization and enhanced photocatalytic performance of $\text{Ag}_2\text{S}$ -coupled $\text{ZnO/ZnS}$ core/shell nanorods<br>S. Liu, X. Wang, W. Zhao, K. Wang, H. Sang (Tianjin, PR China) and Z. He (Newark, USA) . . . . .   | 84  |
| Crystallization kinetics and effect of thermal annealing on optical constants in $\text{a-Ge}_{25}\text{Se}_{75-x}\text{Te}_x$ glasses<br>F.A. Al-Agel (Jeddah, Saudi Arabia) . . . . .  | 92  |
| Searching the conditions for a <i>table-like</i> shape of the magnetic entropy in magneto-caloric materials<br>P. Álvarez (Leioa, Oviedo, Spain), P. Gorria (Oviedo, Spain), J.L. Sánchez Llamazares (San Luis Potosí, Mexico) and J.A. Blanco (Oviedo, Spain) . . . . .   | 98  |
| Nanostructured zirconium titanate fibers prepared by particulate sol–gel and cellulose templating techniques<br>P. Rouhani (USA), E. Salahinejad (USA), (Shiraz, Iran), R. Kaul, D. Vashaee and L. Tayebi (USA) . . . . .  | 102 |

|  |     |
|--|-----|
| Solid-state reactions during mechanical milling of Fe–Al under nitrogen atmosphere<br>Y. Jiraskova, J. Bursik (Brno, Czech Republic), J. Cizek (Praha, Czech Republic) and D. Jancik (Olomouc, Czech Republic) .....   | 106 |
| Study of EPR, optical properties and dc conductivity of VO <sup>2+</sup> ion doped TiO <sub>2</sub> ·R <sub>2</sub> O·B <sub>2</sub> O <sub>3</sub> (R=Li and K) glasses<br>A. Agarwal (Hisar, India), S. Khasa (Haryana, India), V.P. Seth (Bahadurgarh, India) and M. Arora (New Delhi, India) ..... | 112 |
| Microstructure and thermoelectric properties of Ca <sub>0.9</sub> Yb <sub>0.1</sub> MnO <sub>3</sub> /Pd nanocomposite prepared by electroless plating<br>A. Kosuga, K. Tsuchiya and M. Matsuzawa (Osaka, Japan) .....   | 118 |
| Keywords .....   | I   |