



Volume 156, 2013 ISSN 0038-1098

Published 1 February 2013

solid state communications

a condensed matter science journal

Contains Fast-Track Communications

Celebrating 50 years!

Submit On-line: www.elsevier.com/locate/ssc

CONTENTS

Fast-Track Communications

T. Tian, X.F. Wang and W. Li

Communications

A. Fathalian, R. Moradian and M. Shahrokhi

P. Ding, X.H. Pan, Z.Z. Ye, J.Y. Huang, H.H. Zhang, W. Chen and C.Y. Zhu

P.K. Yadav, R.K. Gupta, M.H. Modi and S. Kumar

R. Gammag and C. Villagonzalo

C. Xu, D. He, C. Liu, H. Wang, L. Zhang, P. Wang and S. Yin

Z. Gao and S. Kang

K. Dhanalaksmi and A. Chatterjee

F. Schoofs, M. Egilmez, T. Fix, J.L. MacManus-Driscoll and M.G. Blamire

D. Chu, A. Younis, T. Teck Tan and S. Li

J. Wang, D. Shang, H. Mao, J. Yu, Q. Zhao, P. Yang and H. Xing

C.-S. Hsu, E.S. Kannan, J.-C. Portal, C.-T. Liang, C.F. Huang and S.-D. Lin

C.M. Lee, R.C.H. Lee, W.Y. Ruan, M.Y. Chou and A. Vyas

D.X. Li, S. Nimori and D. Aoki

M. Shamshi Hassan and O.-B. Yang

A. González-García, W. López-Pérez and R. González-Hernández

69 Ab initio calculations on elastic properties in $L1_2$ structure Al_3X and X_3Al -type ($X=$ transition or main group metal) intermetallic compounds

1 Optical properties of BeO nanotubes: Ab initio study

8 Realization of p-type non-polar a-plane ZnO films via doping of Na acceptor

12 Role of radiative decay of valence plasmons in transmission spectra of Si, SiN_x and PET membranes

16 Two-dimensional electron gas tilt-induced Landau level crossings

21 High pressure and high temperature study the phase transitions of $BiNbO_4$ 25 First-principles investigation of the elastic, electronic, and thermodynamic properties of a nitrogen-doped $(Ti_{0.75}W_{0.25})C$ solid solution31 Energy spectrum and the thermal Mandel Q -parameter of a quadratically coupled phonon-photon polariton35 Tuning the two-dimensional carrier density at $LaAlO_3/SrTiO_3$ interfaces via rare earth doping38 Resistive switching behaviors in electrodeposited $BaTiOF_4$ nanorod layers

41 Bonding to antibonding transition for hole ground states in coupled InAs quantum wires

45 Probing the coexistence of semiclassical transport and localization in a two-dimensional electron gas using microwave radiation

49 Magnetic-field dependence of low-lying spectra in bilayer graphene-based magnetic dots and rings

54 Magnetic entropy change and relative cooling power of $Gd_3Ni_6Al_2$ and $Tb_3Ni_6Al_2$ compounds59 Enhanced performance of nanocrystalline Cu-doped $Pr_{0.6}Sr_{0.4}FeO_3$ as cathode for solid oxide fuel cell64 First-principles LDA+ U study of magnetism in $Cu_xIn_{1-x}N$

contents continued on inside back cover



0038-1098(201303)156:c;1-Q

Available online at www.sciencedirect.com**SciVerse ScienceDirect**

Indexed/abstracted in: *Curr. Cont. Res. Alert, Cam. Sci. Abstr., Curr. Cont./Phy. Chem. & Earth Sci., Eng. Ind., INSPEC Data., PASCAL-CNRS Data., Curr. Cont. Sci. Cit. Ind., Curr. Cont. SCISEARCH Data., SSSA/CISA/ISMEC, Chemical Abstracts Service, MSCI*
Also covered in the abstract and citation database *SciVerse Scopus®*
Full text available on *SciVerse ScienceDirect®*

contents continued from outside back cover

- X.-M. Zhang and N. Fukata 76 Fabrication of holey silicon structures with inner radial *p-n* junction for solar cells
- J. Gyanchandani and S.K. Sikka 80 Electronic basis of the hcp, omega and bcc phases in group IVB elements under pressure or on alloying
- Y.H. Kim, P.H. Hor, X.L. Dong, F. Zhou and Z.X. Zhao 85 In-plane and out-of-plane plasma resonances in optimally doped $\text{La}_{1.84}\text{Sr}_{0.16}\text{CuO}_4$