

Volume 93 Numbers 22–24 August 2013

ISSN 1478-6435

PM
P 57/S

Philosophical Magazine

First published in 1798

Structure and Properties of Condensed Matter



Taylor & Francis
Taylor & Francis Group

Philosophical Magazine

Volume 93 August 2013 Numbers 22–24

Contents

	Page
Issue 22	
Part A: Materials Science	
Accommodation mechanisms for grain boundary sliding as inferred from texture evolution during superplastic deformation <i>H. Watanabe, K. Kurimoto, T. Uesugi, Y. Takigawa and K. Higashi</i>	2913
Is the configurational entropic model able to predict the final equilibrium state reached by Se glasses after very long ageing durations? <i>J. Grenet, E. Bouhagourd, A. Esposito, A. Saiter and J.M. Saiter</i>	2932
Thermal ratchetting of polycrystalline metals with inhomogeneous thermal properties <i>A.R.S. Ponter and A.C.F. Cocks</i>	2947
Elastic mechanical grain interactions in polycrystalline materials; analysis by diffraction-line broadening <i>M.K.A. Koker, U. Welzel and E.J. Mittemeijer</i>	2967
Influence of dispersoids on microstructure evolution and work hardening of aluminium alloys during tension and cold rolling <i>Q. Zhao, B. Holmedal and Y. Li</i>	2995
Spontaneous athermal cross-slip nucleation at screw dislocation intersections in FCC metals and $L1_2$ intermetallics investigated via atomistic simulations <i>S.I. Rao, D.M. Dimiduk, J.A. El-Awady, T.A. Parthasarathy, M.D. Uchic and C. Woodward</i>	3012
Part B: Condensed Matter Physics	
<i>NFE</i> approximation for the c/a determination for 3d-transition metal elements and their intermetallic compounds with Al and Zn <i>H. Sato, M. Inukai, E.S. Zijlstra and U. Mizutani</i>	3029
Superconductor-normal metal quantum phase transition in dissipative and non-equilibrium systems <i>F. Deus and M.A. Continentino</i>	3062
Issue 23	
Editorial	
The James Clerk Maxwell Young Writers Prize 2012: Nurturing tomorrow's researchers in Physics and Materials Science <i>E.A. Davis</i>	3081
Part A: Materials Science	
Studies of homogeneous precipitation in very dilute iron–copper alloys using kinetic Monte Carlo simulations and statistical theory of nucleation <i>V.G. Vaks, F. Soisson and I.A. Zhuravlev</i>	3084
Carrier transport in In-doped CuO thin films <i>S. Horzum, A. Yildiz, N. Serin and T. Serin</i>	3110
Dislocation content of geometrically necessary boundaries aligned with slip planes in rolled aluminium <i>C. Hong, X. Huang and G. Winther</i>	3118

Modelling work hardening of aluminium alloys containing dispersoids <i>Q. Zhao and B. Holmedal</i>	3142
Coalescence-induced planar defects in GaN layers grown on ordered arrays of nanorods by metal-organic vapour phase epitaxy <i>C.-N. Huang, P.A. Shields, D.W.E. Allsopp and A. Trampert</i>	3154
A study of the structure of G-P zones in Ti-rich TiNi shape memory melt-spun ribbons <i>S.-Y. Cheng, C.-H. Chen and S.-K. Wu</i>	3167
Surface instability and mass transfer during the bonding of ice spheres <i>S. Chen, I. Baker and H.J. Frost</i>	3177
Precipitate growth in concentrated binary alloys: a comparison between kinetic Monte Carlo simulations, cluster dynamics and the classical theory <i>J. Lépinoux and C. Sigli</i>	3194
Part B: Condensed Matter Physics	
Non-orthogonal tight-binding model for tellurium and selenium <i>J. Li, A. Ciani, J. Gayles, D.A. Papaconstantopoulos, N. Kioussis, C. Grein and F. Aqariden</i>	3216
Issue 24	
Part A: Materials Science	
Grain boundary curvature and grain growth kinetics with particle pinning <i>S. Shahandeh and M. Militzer</i>	3231
Atomistic scale fracture behaviours in hierarchically nanotwinned metals <i>F. Yuan and X. Wu</i>	3248
Structural, electronic and vibrational properties of ordered intermetallic alloys CoZ ($Z = \text{Al, Be, Sc and Zr}$) from first-principles total-energy calculations <i>Ş. Uğur, A. İyigör, Z. Charifi, H. Baaziz and M.R. Ellialtıođlu</i>	3260
Mössbauer effect studies of Fe-C combinatorially sputtered thin films <i>M.A. Al-Maghrabi, R.J. Sanderson and R.A. Dunlap</i>	3278
Fields induced by three-dimensional dislocation loops in anisotropic magneto-electro-elastic bimetals <i>X. Han, E. Pan and A. Sangghaleh</i>	3291
Analytical estimation of distance-disorientation function of the material microstructure <i>Y. Staraselski, A. Brahme, K. Inal and R.K. Mishra</i>	3314
Transport and luminescence phenomena in electroformed silicon nitride-based light emitting diode <i>M. Anutgan, T. Anutgan, I. Atilgan and B. Katirciođlu</i>	3332
Part B: Condensed Matter Physics	
e/a determination for 4d- and 5d-transition metal elements and their intermetallic compounds with Mg, Al, Zn, Cd and In <i>U. Mizutani, H. Sato, M. Inukai and E.S. Zijlstra</i>	3353