

Volume 94 Numbers 16–18 June 2014

ISSN 1478-6435

AN
p57/s

Philosophical Magazine

First published in 1798

Structure and Properties of Condensed Matter



Taylor & Francis
Taylor & Francis Group

Philosophical Magazine

Volume 94 June 2014 Numbers 16–18

Contents

	Page
Issue 16	
Part A: Materials Science	
Origin of unrealistic blunting during atomistic fracture simulations based on MEAM potentials <i>W.-S. Ko and B.-J. Lee</i>	1745
Nanoscratch-induced deformation behaviour in B ₄ C particle reinforced ultrafine grained Al alloy composites: a novel diagnostic approach <i>L. Huang, T.D. Topping, H. Yang, E.J. Lavernia and J.M. Schoenung</i>	1754
Numerical implementation of static Field Dislocation Mechanics theory for periodic media <i>R. Brenner, A.J. Beaudoin, P. Suquet and A. Acharya</i>	1764
On the theory of the universal dielectric relaxation <i>J.Y. Fu</i>	1788
Twin migration in Fe-based bcc crystals: theory and experiments <i>A. Ojha, H. Sehitoglu, L. Patriarca and H.J. Maier</i>	1816
Part B: Condensed Matter Physics	
Localization of metallicity and magnetic properties of graphene and of graphene nanoribbons doped with boron clusters <i>C. Özdogan, J. Kunstmann and A. Quandt</i>	1841
Effects of transverse electric fields on Landau subbands in bilayer zigzag graphene nanoribbons <i>H.-C. Chung, P.-H. Yang, T.-S. Li and M.-F. Lin</i>	1859
Issue 17	
Editorial	
The James Clerk Maxwell Young Writers Prize 2013 <i>F.A. Davis</i>	1873
Part A: Materials Science	
Structure of liquid Al and Al ₆₇ Mg ₃₃ alloy: comparison between experiment and simulation <i>M.J. Kramer, M.I. Mendelev and M. Asta</i>	1876
Thermodynamics of multicaloric effects in multiferroics <i>A. Planes, T. Castán and A. Saxena</i>	1893

Microstructure evolution during electron and ion irradiation in commercial purity magnesium <i>A.K. Khan, Z. Yao and M.R. Daymond</i>	1909
On crystal shear, lattice rotation and constraint stress in (1 1 0) channel die compression: rate-independent and viscoplastic analyses and predictions compared <i>K.S. Haenner</i>	1924
Macroscopic theory of the electron work function in solids <i>F.R. Fazylov</i>	1956
Condensation of gold vapour on silicone oil – effect of the liquid substrate <i>P. Anantha, T. Cheng and C.C. Wong</i>	1967
Compositional dependence of serrated flow in nickel binary solid solutions during high-temperature microindentation <i>B. Gan and S. Tin</i>	1982
Issue 18	
Part A: Materials Science	
Grain growth and static recrystallization kinetics in Co–20Cr–15W–10Ni (L-605) cobalt-base superalloy <i>J. Fävre, D. Fabrègue, F. Maire and A. Chiba</i>	1992
Surface effect on size-dependent wave propagation in nanoplates via nonlocal elasticity <i>L.L. Zhang, J.X. Liu, X.Q. Fang and G.Q. Nie</i>	2009
Which stresses affect the glide of screw dislocations in bcc metals? <i>R. Gröger</i>	2021
The effect of matrix on melting and solidification behaviours of embedded Pb-Sn alloy nanoparticles <i>P.Y. Khan and K. Biswas</i>	2031
A phenomenological model for bake hardening in minimal carbon steels <i>S. Das, O.N. Mohanty and S.B. Singh</i>	2046
The effect of size on dislocation cell formation and strain hardening in aluminium <i>Q. Yu, R.K. Mishra, J.W. Morris Jr and A.M. Minor</i>	2062
Part B: Condensed Matter Physics	
Thermoelectric properties of Bi ₂ Se ₃ /Bi ₂ Te ₃ /Bi ₂ Se ₃ and Sb ₂ Te ₃ /Bi ₂ Te ₃ /Sb ₂ Te ₃ quantum well systems <i>O.C. Yelgel and G.P. Srivastava</i>	2072