

Journal of MATERIALS RESEARCH

Volume 20, Number 5, May 2005

RAPID COMMUNICATIONS

- 1087–1089 **Spontaneous room temperature extrusion of Pb nano-whiskers from leaded brass surfaces** Z.M. Sun, M.W. Barsoum
- 1090–1092 **Comment on the determination of mechanical properties from the energy dissipated during indentation** Jürgen Malzbender
- 1093–1096 **Synthesis of Au nanoclusters supported upon a TiO₂ nanotube array** Xi Liu, Thomas F. Jaramillo, Andrei Kolmakov, Sung-Hyeon Baeck, Martin Moskovits, Galen D. Stucky, Eric W. McFarland
- 1097–1100 **Platelet interlocks are the key to toughness and strength in nacre** Kalpana S. Katti, Dinesh R. Katti, Shashindra M. Pradhan, Arundhati Bhosle

ARTICLES

- 1101–1106 **Band structure and bulk modulus calculations of germanium carbide** A. Mahmood, L. Enrique Sansores
- 1107–1112 **Exfoliated single molecular layers of Mn_{0.8}PS₃ and Cd_{0.8}PS₃** R.F. Frindt, D. Yang, P. Westreich
- 1113–1121 **Complex formation by bismuth and boron with fullerene (C₆₀): A reaction that opens up a novel route for synthesis of C₆₀-inorganic hybrid composites** D. Banerjee, R. Sahoo, R. Debnath, B. Pradhan, T. Kundu
- 1122–1130 **Microstructure and wear resistance of Cu_{ss}-toughened Cr₅Si₃/CrSi metal silicide alloys** Y.X. Yin, H.M. Wang
- 1131–1138 **Raman-based analysis of implantation-induced expansion and stresses in sapphire crystals** V.N. Gurarie, P.H. Otsuka, D.N. Jamieson, S. Prawer
- 1139–1145 **Effect of pH on ceria-silica interactions during chemical mechanical polishing** Jeremiah T. Abiade, Wonseop Choi, Rajiv K. Singh
- 1146–1153 **Grain boundary self-diffusion in Ni: Effect of boundary inclination** Mikhail I. Mendeleev, Hao Zhang, David J. Srolovitz
- 1154–1163 **New type of bioactive materials: Hydroxyapatite/ α -wollastonite composites** Hyun-Seung Ryu, Jung Kun Lee, Hwan Kim, Kug Sun Hong
- 1164–1171 **Infrared reflectivity and intrinsic dielectric behavior of RETiTaO₆ (RE = Y, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, and Yb) microwave ceramics** C.W.A. Paschoal, R.L. Moreira, K.P. Surendran, M.T. Sebastian
- 1172–1179 **Effect of cold rolling on the indentation deformation of AA6061 aluminum alloy** Fuqian Yang, Wenwen Du, Kenji Okazaki
- 1180–1185 **Topology of charge density and elastic anisotropy of Ti₃SiC₂ polymorphs** R. Yu, X.F. Zhang, L.L. He, H.Q. Ye
- 1186–1193 **Anisotropic elastic properties of nanocrystalline nickel thin films** D.C. Hurley, R.H. Geiss, M. Kopycinska-Müller, J. Müller, D.T. Read, J.E. Wright, N.M. Jennett, A.S. Maxwell
- 1194–1206 **An energy-based method to extract plastic properties of metal materials from conical indentation tests** Yan Ping Cao, Xiu Qing Qian, Jian Lu, Zhen Han Yao
- 1207–1215 **Deposition of inorganic bronze coatings over ceramic foams** M. Mann, G.E. Shter, G.S. Grader

(Continued)

- 1216–1233 **Liquid mediated growth and the bimodal microstructure of $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ films made by the ex situ conversion of physical vapor deposited BaF_2 precursors**
T.G. Holesinger, P.N. Arendt, R. Feenstra, A.A. Gapud, E.D. Specht, D.M. Feldmann, D.C. Larbalestier
- 1234–1241 **Gel-melting method for preparation of organically modified siloxane low-melting glasses**
Hirokazu Masai, Masahide Takahashi, Yomei Tokuda, Toshinobu Yoko
- 1242–1249 **Early stage soldering reaction and interfacial microstructure formed between molten Sn–Zn–Ag solder and Cu substrate**
Chang-Ho Yu, Kwang-Lung Lin
- 1250–1256 **Heteroepitaxial growth and structural analysis of epitaxial $\alpha\text{-Fe}_2\text{O}_3(10\bar{1}0)$ on $\text{TiO}_2(001)$**
Joshua R. Williams, Chongmin Wang, Scott A. Chambers
- 1257–1268 **Combustion synthesis of metal carbides: Part I. Model development**
A.M. Locci, A. Cincotti, F. Delogu, R. Orrù, G. Cao
- 1269–1277 **Combustion synthesis of metal carbides: Part II. Numerical simulation and comparison with experimental data**
A.M. Locci, A. Cincotti, F. Delogu, R. Orrù, G. Cao
- 1278–1286 **Excellent creep properties of Mg–Zn–Cu–Gd-based alloy strengthened by quasicrystals and Laves phases**
Guangyin Yuan, Hidemi Kato, Kenji Amiya, Akihisa Inoue
- 1287–1294 **Synthesis of gold nanocrystals in concurrently polymerizing organic–inorganic hybrid films**
Mauro Epifani, Elvio Carlino, Davide Furlanetto, Cinzia Giannini, Patrizia Imperatori
- 1295–1299 **Oxygen transport studies in nanocrystalline ceria films**
Laxmikant Saraf, C.M. Wang, V. Shutthanandan, Y. Zhang, Olga Marina, D.R. Baer, S. Thevuthasan, P. Nachimuthu, D.W. Lindle
- 1300–1307 **Molecular-dynamics study of interfacial diffusion between high-permittivity gate dielectrics and germanium substrates**
T. Iwasaki
- 1308–1315 **Preparation of a transparent and flexible self-standing film of layered titania/isostearate nanocomposite**
Taki Matsumoto, Nobuo Iyi, Yoshiro Kaneko, Kenji Kitamura, Satoru Masaki, Tomohito Imai, Wataru Sugimoto, Yoshio Takasu, Yasushi Murakami
- 1316–1323 **Lead titanate glass-ceramics derived from a silicate-based melt**
P. Sooksaen, I.M. Reaney, D.C. Sinclair
- 1324–1329 **Effect of temperature on the cure shrinkage measurement of non-conductive adhesives for flip chip interconnects**
H. Yu, S.G. Mhaisalkar, E.H. Wong
- 1330–1335 **Structure property relationships in the design of alloy composition: Moving beyond electron to atom ratios**
M.E. Eberhart, T.E. Jones, M.A. Batchelder, G.B. Olson
- 1336–1347 **Flame-coating of titania particles with silica**
A. Teleki, S.E. Pratsinis, K. Wegner, R. Jossen, F. Krumeich
- 1348–1355 **Colloidal processing, surface characterization, and sintering of nano ZrO_2 powders**
Cihangir Duran, Yu Jia, Yuji Hotta, Kimiyasu Sato, Koji Watari
- 1356–1368 **Evolution of the microstructure, residual stresses, and mechanical properties of W–Si–N coatings after thermal annealing**
A. Cavaleiro, A.P. Marques, J.V. Fernandes, N.J.M. Carvalho, J.Th. De Hosson

ERRATUM

- 1369 **Erratum: Absence of one-to-one correspondence between elastoplastic properties and sharp-indentation load-penetration data [J. Mater. Res. 20, 432 (2005)]**
J. Alkorta, J.M. Martínez-Esnaola, J. Gil Sevillano