

Journal of MATERIALS RESEARCH

Volume 20, Number 9, September 2005

RAPID COMMUNICATIONS

- 2243–2247 **Bulk scandium-based metallic glasses**
X.K. Xi, S. Li, R.J. Wang,
D.Q. Zhao, M.X. Pan, W.H. Wang
- 2248–2251 **Effects of nano-sized microalloyed carbonitrides and high-density pinned dislocations on sulfide stress cracking resistance of pipeline steels**
Ming-Chun Zhao, Ke Yang
- 2252–2255 **Doubling the critical size for bulk metallic glass formation in the Mg–Cu–Y ternary system**
H. Ma, Q. Zheng, J. Xu, Y. Li,
E. Ma
- 2256–2260 **Transparent conductive In-doped Cd₃TeO₆ thin films with perovskite structure deposited by radio frequency magnetron sputtering**
Hiroyuki Tetsuka, Yue Jin Shan,
Keitaro Tezuka, Hideo Imoto,
Kiyotaka Wasa
- 2261–2265 **Microstructure of epitaxial SrTiO₃/Pt/Ti/sapphire heterostructures**
Steffen Schmidt, Young-Woo Ok,
Dmitri O. Klenov, Jiwei Lu,
Sean P. Keane, Susanne Stemmer

OUTSTANDING MEETING PAPER

- 2266–2273 **Constraint effects on thin film channel cracking behavior**
Ting Y. Tsui, Andrew J. McKerrow,
Joost J. Vlassak

ARTICLES

- 2274–2278 **Combustion synthesis and spectra characteristic of Gd₂O₂S:Tb³⁺ and La₂O₂S:Eu³⁺ x-ray phosphors**
Tian Xia, Wang-he Cao,
Xi-xian Luo, Ying Tian
- 2279–2287 **Stress evolution in sputter-deposited Fe–Pd shape-memory thin films**
Y. Sugimura, I. Cohen-Karni,
P. McCluskey, J.J. Vlassak
- 2288–2295 **Hydroxyapatite/diamondlike carbon nanocomposites: A novel surface modification to extend orthopaedic prosthesis lifetimes**
Roger J. Narayan
- 2296–2301 **Nitrogen loss and structural change of nitrogen-incorporated SBA-15 mesoporous materials under different treatment conditions**
Jiacheng Wang, Qian Liu
- 2302–2306 **Gravity-driven beryllium transport in ZrTiCuNiBe melt and its influence on glass formation**
C. Yang, R.P. Liu, X.Y. Wang,
Y.Z. Jia, M.Z. Ma, L.L. Sun,
W.K. Wang
- 2307–2313 **Understanding the glass-forming ability of Cu₅₀Zr₅₀ alloys in terms of a metastable eutectic**
W.H. Wang, J.J. Lewandowski,
A.L. Greer
- 2314–2321 **Directional coarsening of γ' phase induced by phase transformation stress**
K. Zhao, Y.H. Ma, L.H. Lou,
Z.Q. Hu
- 2322–2327 **Synthesis and greatly enhanced fluorescence emission of transparent Nd-doped Y₃Sc_xAl_{5-x}O₁₂ ceramics**
Tao Feng, Jianlin Shi, Jiyang Chen,
Danyu Jiang
- 2328–2339 **Assessment of geometrical and transport properties of a fibrous C/C composite preform using x-ray computerized micro-tomography: Part I. Image acquisition and geometrical properties**
Olivia Coindreau,
Gérard L. Vignoles
- 2340–2347 **Estimation of interdiffusivities of the pseudo NiAl binary phase formed in a nickel-based superalloy by pack cementation**
H. Wei, X.F. Sun, Q. Zheng,
H.R. Guan, Z.Q. Hu, G.C. Hou
- 2348–2353 **Effect of electroless copper on the growth of ZnO nanowires**
Wen-Ting Chiou, Wan-Yu Wu,
Jyh-Ming Ting

(Continued)

- 2354–2359 **Synthesis and dielectric properties of layer-structured compounds $A_{n-3}Bi_4Ti_nO_{3n+3}$ ($A = Ba, Sr, Ca$) with $n > 4$** R.Z. Hou, X.M. Chen
- 2360–2370 **Plane-strain bulge test for thin films** Y. Xiang, X. Chen, J.J. Vlassak
- 2371–2378 **Electrochemical synthesis and room temperature oxidation behavior of Cu nanowires** Xingmin Liu, Yanchun Zhou
- 2379–2385 **Effect of Ag addition on the improvement of glass-forming ability and plasticity of Mg–Cu–Gd bulk metallic glass** E.S. Park, J.Y. Lee, D.H. Kim
- 2386–2390 **Enhanced plasticity of Zr-based bulk metallic glass matrix composite with ductile reinforcement** Y.F. Sun, B.C. Wei, Y.R. Wang, W.H. Li, C.H. Shek
- 2391–2399 **Structure and microwave dielectric properties of $Ca_{1-x}Y_xTi_{1-x}Al_xO_3$ (CYTA) ceramics** Antonio Feteira, Derek C. Sinclair, Michael T. Lanagan
- 2400–2419 **Nanoscale morphology and indentation of individual nacre tablets from the gastropod mollusc *Trochus niloticus*** B.J.F. Bruet, H.J. Qi, M.C. Boyce, R. Panas, K. Tai, L. Frick, C. Ortiz
- 2420–2431 **Quantitative measurements of subcritical debonding of Cu films from glass substrates** Mengzhi Pang, Shefford P. Baker
- 2432–2442 **Microstructural evolution during electromigration in eutectic SnAg solder bumps** Y.H. Chen, T.L. Shao, P.C. Liu, Chih Chen, T. Chou
- 2443–2455 **Application of rotational isomeric state theory to ionic polymer stiffness predictions** Lisa Mauck Weiland, Emily K. Lada, Ralph C. Smith, Donald J. Leo
- 2456–2461 **Electric state and chemical bonding of $(Mg_{4-x}Mn_x)Nb_2O_9$ microwave dielectric ceramics** Akinori Kan, Hirotaka Ogawa, Atsushi Yokoi
- 2462–2473 **Aqueous dissolution of perovskite ($CaTiO_3$): Effects of surface damage and $[Ca^{2+}]$ in the leachant** Zhaoming Zhang, Mark G. Blackford, Gregory R. Lumpkin, Katherine L. Smith, Eric R. Vance
- 2474–2479 **Origin of the simultaneous improvement of strength and plasticity in Ti-based bulk metallic glass matrix composites** Yu Chan Kim, Eric Fleury, Jae-Chul Lee, Do Hyang Kim
- 2480–2485 **Copper(I) halide nanoparticle-dispersed glasses prepared by copper staining** Kohei Kadono, Tatsuya Suetsugu, Takeshi Ohtani, Toshihiko Einishi, Takashi Tarumi, Tetsuo Yazawa
- 2486–2490 **Self-assembly-based thermo-responsive luminescent organogels of chromophoric L-glutamide-derived lipids** Taisuke Yamada, Mahnaz Derakhshan, Hamid Reza Ansarian, Makoto Takafuji, Hiroshi Hachisako, Takashi Sagawa, Hirotaka Ihara
- 2491–2497 **Enhancement of electrical properties of the thermoelectric compound $Ca_3Co_4O_9$ through use of large-grained powder** Masashi Mikami, Emmanuel Guilmeau, Ryoji Funahashi, Kangji Chong, Damien Chateigner
- 2498–2502 **Fabrication of a composite structure of three-dimensional macroporous silica and carbon nanofilaments** S.M. Park, H. Li, B. Sheldon, H. Du
- 2503–2509 **Texture analysis of thin $In_2O_3:Sn$ films prepared by direct-current and radio-frequency magnetron-sputtering** Dieter Mergel, Karola Thiele, Zhaohui Qiao
- 2510–2515 **Synthesis and characterization of oxygen doped ZnTe for powder phosphor application** Z.T. Kang, H. Menkara, B.K. Wagner, C.J. Summers, V. Valdna

(Continued)

- 2516–2522 **Microstructure and optical properties of Au–Y₂O₃-stabilized ZrO₂ nanocomposite films**
George Sirinakis, Rezina Siddique, Christos Monokroussos, Michael A. Carpenter, Alain E. Kaloyeros
- 2523–2533 **Internal friction study of a composite with a negative stiffness constituent**
T. Jaglinski, D. Stone, R.S. Lakes
- 2534–2543 **Synthesis and characterization of FeCoNiAl nanocapsules by plasma arc discharge process**
Dian-Yu Geng, Woo-Young Park, Jin-Chun Kim, Ji-Hun Yu, Chul-Jin Choi, Zhi-Dong Zhang
- 2544–2552 **Ceramic coatings for fiber matrix composites: Titania thin films on bismaleimide-glass fiber composites**
Anna Razgon, Chaim N. Sukenik
- 2553–2561 **Chemical-mechanical polishing of copper using molybdenum dioxide slurry**
Sharath Hegde, Udaya B. Patri, S.V. Babu
- 2562–2567 **Thermally induced structural transformations on polymorphous silicon**
Chandana Rath, J. Farjas, P. Roura, F. Kail, P. Roca i Cabarrocas, E. Bertran
- 2568–2577 **Independent control of metal cluster and ceramic particle characteristics during one-step synthesis of Pt/TiO₂**
Heiko Schulz, Lutz Mädler, Reto Strobel, Rainer Jossen, Sotiris E. Pratsinis, Tue Johannessen
- 2578–2582 **Influence of annealing on the 1.5 μm light emission of Er-doped ZnO thin films and its crystal quality**
Yukari Ishikawa, Mitsuhiro Okamoto, Shigeru Tanaka, Dai Nezaki, N. Shibata
- 2583–2596 **Influence of deposition parameters on the composition and structure of reactively sputtered nanocomposite TaC/a-C:H thin films**
Ryan D. Evans, Jane Y. Howe, James Bentley, Gary L. Doll, Jeffrey T. Glass
- 2597–2602 **Dy³⁺-doped selenide glasses for 1.3-μm optical fiber amplifiers**
Zhiyong Yang, Wei Chen, Lan Luo