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ANNOUNCEMENT

2435 **Howard E. Katz appointed *JMR* Associate Editor, Polymers and Organic Materials**

Gordon Pike

RAPID COMMUNICATIONS

2436–2439 **Strong Zn concentration effect on the soldering reactions between Sn-based solders and Cu**

S.C. Yang, C.E. Ho, C.W. Chang, C.R. Kao

2440–2443 **Formation of loops on the surface of carbon nanofibers synthesized by plasma-enhanced chemical vapor deposition using an inductively coupled plasma reactor**

Shinn-Shyong Tzeng, Pei-Lun Wang, Ting-Yu Wu, Kao-Shao Chen, San-Der Chyou, Win-Tai Lee, Chih-Shen Chen

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2453–2459 **In situ transmission electron microscope study of interface sliding and migration in an ultrafine lamellar structure**

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2460–2469 **AlN ceramics processed by aqueous slip casting**

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2470–2479 **Effect of solute on the growth rate and the constitutional undercooling ahead of the advancing interface during solidification of an alloy and the implications for nucleation**

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2480–2492 **Incipient yielding behavior during indentation for gold thin films before and after annealing**

David C. Miller, Mellisa J. Talmage, Ken Gall

2493–2503 **Determination of phase relations in the Co–Cu–Ti system by the diffusion triple technique**

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2504–2509 **Shaping different carbon nano- and submicro-structures by alcohol chemical vapor deposition**

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2510–2515 **Chemical gelation of cerium (III)-doped yttrium aluminium oxide spherical particles**

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2516–2523 **States of water in hydrated C₃S (tricalcium silicate) as a function of relative humidity**

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2524–2533 **Synthesis of Fe-filled carbon nanocapsules by an electric plasma discharge in an ultrasonic cavitation field of liquid ethanol**

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2534–2541 **Growth mechanism of Ag-foil-based artificially superconducting joints of YBa₂Cu₃O₇ monoliths**

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2542–2549 **Atomistic simulation for configuration evolution and energetic calculation of crack in body-centered-cubic iron**

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2550–2563 **Oxidation of silicon carbide and the formation of silica polymorphs**

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2564–2571 **Effect of ordered structure and domain boundary on low-loss Ba[Mg_{1/3}(Nb_{x/4}Ta_{(4-x)/4})_{2/3}]O₃ microwave dielectric ceramics**

Chen-Fu Lin, Horng-Hwa Lu, Tien-I Chang, Jow-Lay Huang

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- 2572–2581 **Electron-diffraction study on ϵ -iron nitride powders with various nitrogen contents: Variation of long-range nitrogen ordering** Z.Q. Liu, A. Leineweber, E.J. Mittemeijer, K. Mitsuishi, K. Furuya
- 2582–2586 **Effect of stress on the aluminum-induced crystallization of hydrogenated amorphous silicon films** Maruf Hossain, Husam H. Abu-Safe, Hameed Naseem, William D. Brown
- 2587–2592 **Structural characterization of a new layered-ternary Ta_4AlC_3 ceramic** Z.J. Lin, M.J. Zhuo, Y.C. Zhou, M.S. Li, J.Y. Wang
- 2593–2599 **Properties of ceramics in the system $ZrB_2-Ta_5Si_3$** I.G. Talmy, J.A. Zaykoski, M.M. Opeka, A.H. Smith
- 2600–2605 **Three-dimensional study of indentation-induced cracks in an amorphous carbon coating on a steel substrate** Z-H. Xie, P.R. Munroe, D. McGrouther, R.K. Singh, M. Hoffman, A. Bendavid, P.J. Martin, S. Yew
- 2606–2610 **Influence of microstructure and preparation methods on the magneto-crystalline structure and magnetic properties of submicron barium hexaferrite powders** I. Nedkov, T. Koutzarova, Ch. Ghelev, P. Lukanov, D. Lisjak, D. Makovec, R.E. Vandenberghe, A. Gilewski
- 2611–2616 **Monolithic nanoporous copper by dealloying Mn–Cu** J.R. Hayes, A.M. Hodge, J. Biener, A.V. Hamza, K. Sieradzki
- 2617–2627 **A critical examination of the relationship between plastic deformation zone size and Young's modulus to hardness ratio in indentation testing** J. Chen, S.J. Bull
- 2628–2637 **On the determination of spherical nanoindentation stress–strain curves** Sandip Basu, Alexander Moseson, Michel W. Barsoum
- 2638–2645 **The effect of primary crystallizing phases on mechanical properties of $Cu_{46}Zr_{47}Al_7$ bulk metallic glass composites** F. Jiang, Z.B. Zhang, L. He, J. Sun, H. Zhang, Z.F. Zhang
- 2646–2652 **Heat treating carbon nanofibers for optimal composite performance** J.Y. Howe, G.G. Tibbetts, C. Kwag, M.L. Lake
- 2653–2659 **Impression stress relaxation of Sn3.5Ag eutectic alloy** Fuqian Yang, Lingling Peng, Kenji Okazaki
- 2660–2668 **Thin-coating contact mechanics with adhesion** E.D. Reedy, Jr.
- 2669–2674 **Persistence of 5:3 plates in $RE_5(Si_xGe_{1-x})_4$ alloys** O. Ugurlu, L.S. Chumbley, C.R. Fisher
- 2675–2682 **Synthesis of ultrasmooth nanostructured diamond films by microwave plasma chemical vapor deposition using a $He/H_2/CH_4/N_2$ gas mixture** S. Chowdhury, Damon A. Hillman, Shane A. Catledge, Valery V. Konovalov, Yogesh K. Vohra
- 2683–2688 **Effect of adhesion energy on the contact stiffness in nanoindentation** Fuqian Yang
- 2689–2698 **Nanoscale control of silica morphology and three-dimensional structure during diatom cell wall formation** Mark Hildebrand, Evelyn York, Jessica I. Kelz, Aubrey K. Davis, Luciano G. Frigeri, David P. Allison, Mitchel J. Doktycz

ERRATUM

- 2699–2700 **Erratum: “Representative strain of indentation analysis” [J. Mater. Res. 20, 2225 (2005)] and “Limit analysis-based approach to determine the material plastic properties with conical indentation” [J. Mater. Res. 21, 947 (2006)]** Nagahisa Ogasawara, Norimasa Chiba, Xi Chen