

# Journal of MATERIALS RESEARCH

Volume 21, Number 11, November 2006

## NANOTUBES AND NANOWIRES

2709–2710 **Forward**

Reshef Tenne, Pulickel M. Ajayan,  
Zhong Lin Wang, Yadong Li,  
Peidong Yang

## REVIEWS

2711–2725 **Geoinspired synthetic chrysotile nanotubes**

N. Roveri, G. Falini, E. Foresti,  
G. Fracasso, I.G. Lesci,  
P. Sabatino

2726–2743 **Inorganic nanotubes and fullerene-like nanoparticles**

R. Tenne

2744–2757 **Storage of hydrogen and lithium in inorganic nanotubes and nanowires**

Fangyi Cheng, Jun Chen

2758–2766 **Modified carbon nanotubes as broadband optical limiting nanomaterials**

Kok Chung Chin, Amarsinh Gohel,  
Hendry Izaac Elim, Weizhe Chen,  
Wei Ji, Ghee Lee Chong,  
Chong Haur Sow,  
Andrew T.S. Wee

2767–2773 **Nitrogen-induced carbon nanobells and their properties**

E.G. Wang

2774–2793 **Hybrid carbon nanotubes: Strategy, progress, and perspectives**

M. Monthieux, E. Flahaut,  
J-P. Cleuziou

## ARTICLES

2794–2800 **Boron nitride nanotubes/polystyrene composites**

Chunyi Zhi, Yoshio Bando,  
Chengchun Tang, Susumu Honda,  
Hiroaki Kuwahara, Dmitri Golberg

2801–2809 **Layer-by-layer and step-flow growth mechanisms in GaAsP/GaP nanowire heterostructures**

C. Chen, M.C. Plante, C. Fradin,  
R.R. LaPierre

2810–2816 **Size-dependent theoretical tensile strength and other mechanical properties of [001] oriented Au, Ag, and Cu nanowires**

F. Ma, K.W. Xu

2817–2823 **Optical enzymatic detection of glucose based on hydrogen peroxide-sensitive HiPco carbon nanotubes**

Chulho Song, Pehr E. Pehrsson,  
Wei Zhao

2824–2828 **Photoelectrochemical properties of N-doped self-organized titania nanotube layers with different thicknesses**

J.M. Macak, A. Ghicov, R. Hahn,  
H. Tsuchiya, P. Schmuki

2829–2834 **Theoretical phase diagrams of nanowires**

G. Abudukelimu, G. Guisbiers,  
M. Wautelet

2835–2840 **Single-walled carbon nanotubes synthesized by the pyrolysis of pyridine over catalysts**

J. Liu, D.L. Carroll, J. Cech, S. Roth

2841–2846 **Single-walled carbon nanotube-supported platinum nanoparticles as fuel cell electrocatalysts**

Esperanza Lafuente, Edgar Muñoz,  
Ana M. Benito, Wolfgang K. Maser,  
M. Teresa Martínez,  
Francisco Alcaide,  
Larraitz Ganborena, Ione Cendoya,  
Oscar Miguel, Javier Rodríguez,  
Esteban P. Urriolabeitia,  
Rafael Navarro

2847–2854 **Growth of width-controlled nanowires MnO<sub>2</sub> from mesoporous carbon and investigation of their properties**

Shenmin Zhu, Xiaolin Wang,  
Wei Huang, Deyue Yan,  
Honghua Wang, Di Zhang

(Continued)

- 2855–2869 **Mesoscale modeling of mechanics of carbon nanotubes: Self-assembly, self-folding, and fracture** Markus J. Buehler
- 2870–2875 **Fabrication and magnetic behavior of Co/Cu multilayered nanowires** Liwen Tan, Bethanie J.H. Stadler
- 2876–2881 **Effect of growth conditions on the composition and structure of  $\text{Si}_{1-x}\text{Ge}_x$  nanowires grown by vapor–liquid–solid growth** Kok-Keong Lew, Ling Pan, Elizabeth C. Dickey, Joan M. Redwing
- 2882–2887 **Elastic modulus of single-crystal GaN nanowires** Hai Ni, Xiaodong Li, Guosheng Cheng, Robert Klie
- 2888–2893 **Position-selective growth of carbon nanotubes on Ni catalysts/Mo underlayers by thermal chemical vapor deposition** Hiroki Okuyama, Nobuyuki Iwata, Hiroshi Yamamoto
- 2894–2903 **Transparent-conducting, gas-sensing nanostructures (nanotubes, nanowires, and thin films) of titanium oxide synthesized at near-ambient conditions** Jing-Jong Shyue, Rebecca E. Cochran, Nitin P. Padture
- 2904–2910 **Electrospun single-crystal  $\text{MoO}_3$  nanowires for biochemistry sensing probes** P. Gouma, K. Kalyanasundaram, A. Bishop
- 2911–2915 **Raman studies of optical phonons in vertical cadmium sulfide nanorod arrays** Dongjuan Xi, Jianzhong Li, Qibing Pei, Bin Chen
- 2916–2921 **Nanofabrication of top-gated carbon nanotube-based transistors: Probing electron-electron interactions in one-dimensional systems** J.A. Sulpizio, Z.Z. Bandić, D. Goldhaber-Gordon
- 2922–2926 **Bonding strength of a carbon nanofiber array to its substrate** Yi Zhang, Ephraim Suhir, Yuan Xu, Claire Gu
- 2927–2935 **Electronic structure of free-standing InP and InAs nanowires** B. Lassen, M. Willatzen, R. Melnik, L.C. Lew Yan Voon
- 2936–2940 **Solid-state growth of nickel silicide nanowire by the metal-induced growth method** Joondong Kim, Jong-Uk Bae, Wayne A. Anderson, Hyun-Mi Kim, Ki-Bum Kim
- 2941–2947 **Synthesis, characterization, and photocatalytic properties of pyrochlore  $\text{Bi}_2\text{Ti}_2\text{O}_7$  nanotubes** Hongjun Zhou, Tae-Jin Park, Stanislaus S. Wong
- 2948–2954 **Effective Young's modulus of carbon nanofiber array** Yi Zhang, Ephraim Suhir, Yuan Xu
- 2955–2962 **Synthesis, structure, and magnetic properties of iron-oxide nanowires** Matej Pregelj, Polona Umek, Boštjan Drolc, Boštjan Jančar, Zvonko Jagličič, Robert Dominko, Denis Arčon