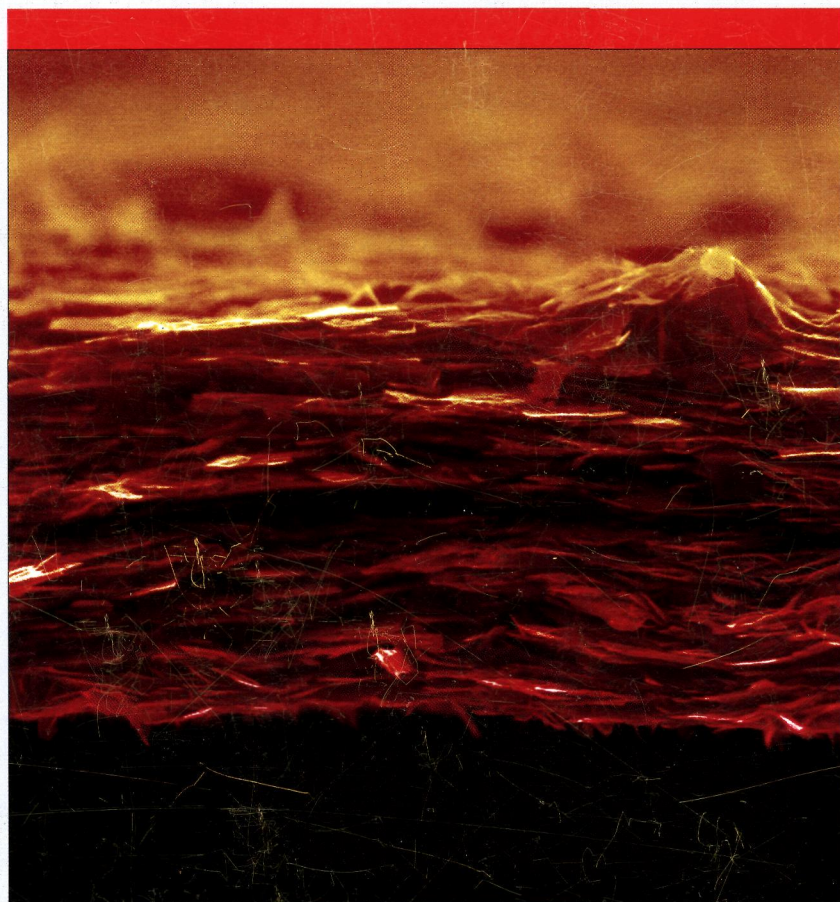


PI  
N21

ISSN 0957-4484

# NANOTECHNOLOGY

VOLUME 24 NUMBER 20 24 MAY 2013



[iopscience.org/nano](http://iopscience.org/nano)

**Featured article**

Scalable, printable, surfactant-free graphene ink  
directly from graphite

X Han, Y Chen, H Zhu, C Preston, J Wan, Z Fang and L Hu

**IOP** Publishing

# Nanotechnology

## Volume 24

Number 20, 24 May 2013

### ***Topical Review***

202001 Synthesis and properties of antimonide nanowires [REVIEW ARTICLE](#) B Mattias Borg and Lars-Erik Wernersson

### ***Papers***

#### ***Biology and medicine***

205101 A new technique for reversible permeabilization of live cells for intracellular delivery of quantum dots Krishnakiran Medepalli, Bruce W Alphenaar, Robert S Keynton and Palaniappan Sethu

205102 Tailor-made Au@Ag core-shell nanoparticle 2D arrays on protein-coated graphene oxide with assembly enhanced antibacterial activity Huiqiao Wang, Jinbin Liu, Xuan Wu, Zhonghua Tong and Zhaoxiang Deng

#### ***Electronics and photonics***

205201 Coherent confinement of plasmonic field in quantum dot-metallic nanoparticle molecules S M Sadeghi, A Hatf, Simon Fortin-Deschenes and Michel Meunier

205202 A low voltage programmable unipolar inverter with a gold nanoparticle monolayer on plastic Ye Zhou, Su-Ting Han, Long-Biao Huang, Jing Huang, Yan Yan, Li Zhou and V A L Roy

#### ***Patterning and nanofabrication***

205301 Separation, folding and shearing of graphene layers during wedge-based mechanical exfoliation B Jayasena, C D Reddy and S Subbiah

205302 Direct physical exfoliation of few-layer graphene from graphite grown on a nickel foil using polydimethylsiloxane with tunable elasticity and adhesion Kwanghyun Yoo, Yusuke Takei, Sungjin Kim, Shohei Chiashi, Shigeo Maruyama, Kiyoshi Matsumoto and Isao Shimoyama

205303 Fabrication of nanocrystalline SnO<sub>2</sub> using electron stimulated oxidation C F Li and Z Q Liu

205304 Scalable, printable, surfactant-free graphene ink directly from graphite X Han, Y Chen, H Zhu, C Preston, J Wan, Z Fang and L Hu

## ***Energy at the nanoscale***

205401 A hierarchical hybrid design for high performance tin based Li-ion battery anodes  
Xuefeng Song

205402 Simultaneous increase in electrical conductivity and Seebeck coefficient in highly boron-doped nanocrystalline Si Neophytos Neophytou, Xanthippi Zianni, Hans Kosina, Stefano Frabboni, Bruno Lorenzi and Dario Narducci

### ***Materials: synthesis or self-assembly***

205601 Ultraviolet radiation synthesis of water dispersed CdTe/CdS/ZnS core-shell-shell quantum dots with high fluorescence strength and biocompatibility Bin Xu, Bing Cai, Ming Liu and Hongsong Fan

205602 Sub-2 nm size and density tunable platinum nanoparticles using room temperature tilted-target sputtering Balavinayagam Ramalingam, Somik Mukherjee, Cherian J Mathai, Keshab Gangopadhyay and Shubhra Gangopadhyay

205603 Crystallization kinetics of Ga metallic nano-droplets under As flux S Bietti, C Somaschini and S Sanguinetti

### ***Materials: properties, characterization or tools***

205701 The effect of quantum size confinement on the optical properties of PbSe nanocrystals as a function of temperature and hydrostatic pressure Esteban Pedrueza, Alfredo Segura, Rafael Abargues, Jose Bosch Bailach, Jean Claude Chervin and Juan P Martínez-Pastor

205702 Fractal H-shaped plasmonic nanocavity Guanhai Li, Xiaoshuang Chen, Bo Ni, Oupeng Li, Lujun Huang, Yuan Jiang, Weida Hu and Wei Lu

205703 Raman spectroscopy study of the nanodiamond-to-carbon onion transformation Jonathan Cebik, John K McDonough, Filipe Peerally, Rene Medrano, Ioannis Neitzel, Yury Gogotsi and Sebastian Osswald

205704 Interpreting Kelvin probe force microscopy under an applied electric field: local electronic behavior of vapor-liquid-solid Si nanowires Nathaniel J Quitoriano, Robert N Sanderson, Sung-Soo Bae and Regina Ragan