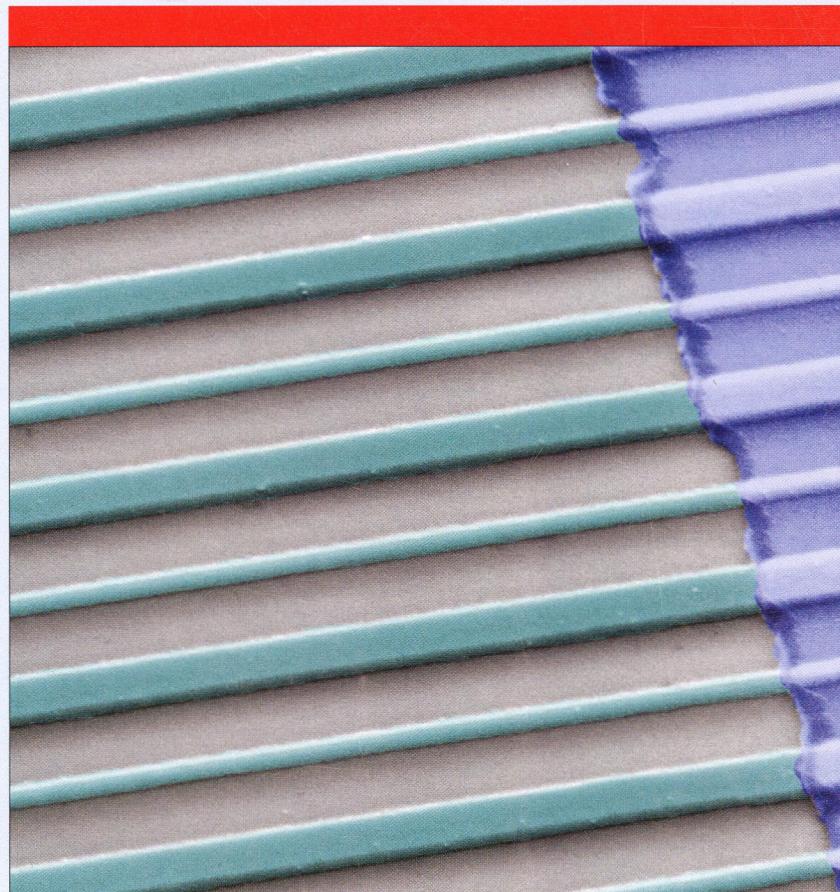


NU
N21

ISSN 0957-4484

NANOTECHNOLOGY

VOLUME 24 NUMBER 47 29 NOVEMBER 2013



iopscience.org/nano

Featured article

Charge and spin transport in PEDOT:PSS
nanoscale lateral devices

T V A G de Oliveira, M Gobbi, J M Porro, L E Hueso
and A M Bittner

Nanotechnology

Volume 24

Number 47, 29 November 2013

Papers

Biology and medicine

475101 Non-equilibrium folding of individual DNA molecules recaptured up to 1000 times in a solid state nanopore Calin Plesa, Ludo Cornelissen, Maarten W Tuijtel and Cees Dekker

475102 Synthesis of water-dispersible zinc oxide quantum dots with antibacterial activity and low cytotoxicity for cell labeling Shan-hui Hsu, Ying Yi Lin, Sherry Huang, Kwok Wai Lem, Dinh Huong Nguyen and Dai Soo Lee

475103 Galactosylated manganese ferrite nanoparticles for targeted MR imaging of asialoglycoprotein receptor Seung-Hyun Yang, Dan Heo, Eugene Lee, Eunjung Kim, Eun-Kyung Lim, Young Han Lee, Seungjoo Haam, Jin-Suck Suh, Yong-Min Huh, Jaemoon Yang and Sahng Wook Park

Electronics and photonics

475201 Charge and spin transport in PEDOT:PSS nanoscale lateral devices Thales V A G de Oliveira, Marco Gobbi, José M Porro, Luis E Hueso and Alexander M Bittner

475202 Flexible graphene–PZT ferroelectric nonvolatile memory Wonho Lee, Orhan Kahya, Chee Tat Toh, Barbaros Özyilmaz and Jong-Hyun Ahn

Patterning and nanofabrication

475301 3D hierarchical architectures based on self-rolled-up silicon nitride membranes Paul Froeter, Xin Yu, Wen Huang, Frank Du, Moyang Li, Iksu Chun, Seung Hyun Kim, Kuen J Hsia, John A Rogers and Xiuling Li

475302 Shadowing and mask opening effects during selective-area vapor–liquid–solid growth of InP nanowires by metalorganic molecular beam epitaxy A Kelrich, Y Calahorra, Y Greenberg, A Gavrilov, S Cohen and D Ritter

Energy at the nanoscale

475401 Piezoelectric properties of zinc oxide nanowires: an *ab initio* study K K Korir, G Cicero and A Catellani

475402 Preparation via an electrochemical method of graphene films coated on both sides with NiO nanoparticles for use as high-performance lithium ion anodes Gil-Pyo Kim, Inho Nam, Soomin Park, Junsu Park and Jongheop Yi

Sensing and actuating

475501 Characteristics of a pressure sensitive touch sensor using a piezoelectric PVDF-TrFE/MoS₂ stack Woojin Park, Jin Ho Yang, Chang Goo Kang, Young Gon Lee, Hyeon Jun Hwang, Chunhum Cho, Sung Kwan Lim, Soo Cheol Kang, Woong-Ki Hong, Sang Kyung Lee, Sangchul Lee and Byoung Hun Lee

475502 Rice-straw-like structure of silicon nanowire arrays for a hydrogen gas sensor Bohr-Ran Huang, Ying-Kan Yang and Hsien-Lung Cheng

Materials: synthesis or self-assembly

475601 Temperature dependence of stacking faults in catalyst-free GaAs nanopillars Joshua N Shapiro, Andrew Lin, Christian Ratsch and D L Huffaker

475602 Large scale production of highly-qualified graphene by ultrasonic exfoliation of expanded graphite under the promotion of (NH₄)₂CO₃ decomposition Yunwei Wang, Xili Tong, Xiaoning Guo, Yingyong Wang, Guoqiang Jin and Xiangyun Guo

475603 Highly efficient near-infrared light-emitting diodes by using type-II CdTe/CdSe core/shell quantum dots as a phosphor Huaibin Shen, Ying Zheng, Hongzhe Wang, Weiwei Xu, Lei Qian, Yixing Yang, Alexandre Titov, Jake Hyvonen and Lin Song Li

Materials: properties, characterization or tools

475701 Surface deformations as a necessary requirement for resistance switching at the surface of SrTiO₃:N Andrey Shkabko, Myriam H Aguirre, Amit Kumar, Yunseok Kim, Stephen Jesse, Rainer Waser, Sergei V Kalinin and Anke Weidenkaff

475702 Open loop Kelvin probe force microscopy with single and multi-frequency excitation L Collins, J I Kilpatrick, S A L Weber, A Tselev, I V Vlassiouk, I N Ivanov, S Jesse, S V Kalinin and B J Rodriguez

475703 Co nanostructures in ordered templates: comparative FORC analysis M P Proenca, K J Merazzo, L G Vivas, D C Leitao, C T Sousa, J Ventura, J P Araujo and M Vazquez 475704 Transient adhesion and conductance phenomena in initial nanoscale mechanical contacts between dissimilar metals William Paul, David Oliver, Yoichi Miyahara and Peter Grütter

475705 Thermally robust and blinking suppressed core/graded-shell CdSe/CdSe_{1-x}S_x/CdS ‘giant’ multishell semiconductor nanocrystals Pick Chung Lau, Zhaozhao Zhu, Robert A Norwood, Masud Mansuripur and Nasser Peyghambarian
475706 Cantilever energy effects on bimodal AFM: phase and amplitude contrast of multicomponent samples Ishita Chakraborty and Dalia G Yablon
475707 Deformation response of conformally coated carbon nanotube forests Parisa Pour Shahid Saeed Abadi, Matthew R Maschmann, Jeffery W Baur, Samuel Graham and Baratunde A Cola

475708 Epitaxy of MgO magnetic tunnel barriers on epitaxial graphene Florian Godel, Emmanuelle Pichonat, Dominique Vignaud, Hicham Majjad, Dominik Metten, Yves Henry, Stéphane Berciaud, Jean-Francois Dayen and David Halley