NANOTECHNOLOGY



iopscience.org/nano

Special issue

Sensing at the nanoscale C Hierold

IOP Publishing

Nanotechnology

Volume 24

Number 44, 8 November 2013

Special issue on sensing at the nanoscale

Editorial

440201 Sensing at the nanoscale Anna Demming and Christofer Hierold

Topical Reviews

442001 Flame spray pyrolysis for sensing at the nanoscale <u>REVIEW ARTICLE</u> J A Kemmler, S Pokhrel, L Mädler, U Weimar and N Barsan

442002 Silica nanoparticles for cell imaging and intracellular sensing <u>REVIEW ARTICLE</u> B Korzeniowska, R Nooney, D Wencel and C McDonagh

Papers

444001 Graphene-based charge sensors C Neumann, C Volk, S Engels and C Stampfer

444002 Electrochemical detection of commercial silver nanoparticles: identification, sizing and detection in environmental media E J E Stuart, K Tschulik, D Omanović, J T Cullen, K Jurkschat, A Crossley and R G Compton

444003 Detection of adenosine triphosphate through polymerization-induced aggregation of actin-conjugated gold/silver nanorods Yu-Ju Liao, Yen-Chun Shiang, Li-Yi Chen, Chia-Lun Hsu, Chih-Ching Huang and Huan-Tsung Chang

444004 Chemical to electrical transduction mechanisms from single metal oxide nanowire measurements: response time constant analysis J R Morante

444005 Electronic sensitization of the response to C₂H₅OH of p-type NiO nanofibers by Fe doping Ji-Wook Yoon, Hyo-Joong Kim, Il-Doo Kim and Jong-Heun Lee

444006 Development of 3D carbon nanotube interdigitated finger electrodes on polymer substrate for flexible capacitive sensor application Chih-Fan Hu, Jhih-Yu Wang, Yu-Chia Liu, Ming-Han Tsai and Weileun Fang

444007 Improved atomic force microscope infrared spectroscopy for rapid nanometer-scale chemical identification Hanna Cho, Jonathan R Felts, Min-Feng Yu, Lawrence A Bergman, Alexander F Vakakis and William P King

444008 Thermally oxidized zinc oxide nanowires for use as chemical sensors D Zappa, E Comini and G Sberveglieri

444009 Heat dissipation from suspended self-heated nanowires: gas sensor prospective Jie Zhang, Evgheni Strelcov and Andrei Kolmakov

444010 Sensor arrays from multicomponent micropatterned nanoparticles and graphene Enoch Nagelli, Rajesh Naik, Yuhua Xue, Yunxiang Gao, Mei Zhang and Liming Dai

444011 Nanomechanical recognition of prognostic biomarker suPAR with DVD-ROM optical technology Michael Bache, Filippo G Bosco, Anna L Brøgger, Kasper B Frøhling, Tommy Sonne Alstrøm, En-Te Hwu, Ching-Hsiu Chen, Jesper Eugen-Olsen, Ing-Shouh Hwang and Anja Boisen

444012 A silicon-based electrochemical sensor for highly sensitive, specific, label-free and real-time DNA detection Yuanyuan Guo, Shao Su, Xinpan Wei, Yiling Zhong, Yuanyuan Su, Qing Huang, Chunhai Fan and Yao He