

2008 2nd IEEE International Nanoelectronics Conference

**Shanghai, China
24-27 March 2008**

Pages 1-406



IEEE Catalog Number:
ISBN 13:

CFP08625-PRT
978-1-4244-1572-4

Table of Contents

Electron emission mechanism of diamond characterised by combined XPS/UPS/FES	1
<i>K. Okano, H. Yamaguchi, Y. Kudo, T. Masuzawa, M. Kudo, T. Yamada, T. Takakuwa</i>	
Synthesis and characterization of NaYF₄:Yb, Er nanoparticles with efficient up-conversion fluorescence based on new type solar cells	5
<i>X. D. Zhang, X. Jin, Z. F. Lei, N. Cai, S. Z. Xiong, Y. Zhao</i>	
Study of ZnO:V thin films prepared by dc reactive magnetron sputtering at different pressures	10
<i>Liwei Wang, Lijian Meng, Vasco Teixeira, F. Placido, Jinzhao Huang, Zheng Xu</i>	
Suppressing Intermetallic Compound Growth in SnAgCu Solder Joints with Addition of Carbon Nanotubes	15
<i>S. M. L. Nai, M. Gupta, J. Wei</i>	
Effective photoluminescence modification of ZnO nanocombs by plasma immersion ion implantation.....	20
<i>Y. Yang, B. K. Tay, X. W. Sun, Z. J. Han, Z. X. Shen, C. Lincoln, T. Smith</i>	
Facile Preparation Method of Nanocrystal CdS Hollow Spheres with Miniemulsion Droplets as Templates	25
<i>Wei Lu, Min Chen, Limin Wu</i>	
Cohesive energy and surface energy of fcc metallic nanocrystals	30
<i>D. Liu, Q. Jiang</i>	
Preparing Graphitic Nanoribbons from Ultrathin Electrospun Poly(methyl methacrylate) Nanofibers by Electron Beam Irradiation.....	33
<i>Huigao Duan, Erqing Xie, Li Han, Shuhua Wei</i>	
Effects of AlCl₃ on preparation of mesocarbon microbeads	39
<i>Deqi Jing, Tiehu Li, Hao Li, Changqing Fang, Xiaoting Li, Zhengquan Zhang</i>	
Synthesis and Characterization of Transition Metal Ion Doping on the Photocatalytic Activity of TiO₂ Nanoparticles	43
<i>N. Wetchakun, K. Chiang, R. Amal, S. Phanichphant</i>	
Characterization of self-organized InAs/GaAs quantum dots under strain-induced and temperature-controlled nucleation mechanisms by atomic force microscopy and photoluminescence spectroscopy.....	48
<i>L. Y. Liang, X. L. Ye, P. Jin, Y. H. Chen, Z. G. Wang</i>	
ZnO Nanoneedle Arrays Directly Grown on Bulk Nickel Substrate for Li Ion Battery Electrodes with Improved Performance	53
<i>Jinping Liu, Yuanyuan Li, Xintang Huang</i>	
Synthesis, Optical Properties and Functional Applications of ZnO Nano-materials: A Review.....	58
<i>S. Tanemura, L. Miao, M. Tanemura, F. Y. Ran, Y. G. Cao, H. Y. Yang, S. P. Lau</i>	
Structural and Wetting Properties of Metal Polymer Nanocomposites.....	64
<i>Z. J. Han, B. K. Tay, P. C. T. Ha, M. Shakerzadeh, G. F. You</i>	
Combinatorial Investigations of Co-LiF and Co-Li₃N Nanocomposite as New Lithium Storage Material.....	69
<i>Yongning Zhou, Xiaojing Wu, Zhengwen Fu</i>	
Nanostructure Control of Carbon Aerogels and the Application in Lithium Ion Cells	74
<i>Shen Jun, Han Weina, Mi Yijie, Ou Yangling, Wu Guangming, Zhou Bin, Zhang Zhihua, Ni Xingyuan, Niu Xixian, Wang Guoping, Wang Peiqing, Wang Qingfeng</i>	
Response Linearity and Time Drift of Polysilicon Nanofilm Resistance for Piezoresistive Effect	78
<i>Liu Xiaowei, Shi Changzhi, Chuai Rongyan, Chen Weiping, Li Jinfeng</i>	
Fabrication of Various Thickness of Flame-made Nano Zinc Oxide Thick Film and Its Response to Ethanol.....	83
<i>C. Liewhiran, S. Phanichphant</i>	

Table of Contents

Tunable Synthesis, Dispersion and Physical Characterization of Nanoparticle-based Organic Resists Inkjet Printing	89
<i>Hong-Show Koo, Mi Chen, Feng-Mei Wu, Li-Ping Cho, Tomoji Kawai</i>	
Self-Organized Pattern Formation by Ion Beam Erosion	93
<i>B. Rauschenbach, B. Ziberi, F. Frost</i>	
Monodisperse Nanocrystals of LnVO₄ (Ln=Ce, Nd): Controlled Synthesis and Upconverted Avalanche Luminescence	98
<i>Hong Deng, Shihe Yang, Si Xiao, Hong-Mei Gong, Qu-Quan Wang</i>	
Fabrication and characterization of n-ZnO nanorod/p-CuAlO₂ heterojunction	102
<i>Bo Ling, Xuiawei Sun, Junliang Zhao</i>	
Cooperative Energy Transfer in Gd₂(MoO₄)₃:Tb, Yb Nanophosphors	105
<i>X. F. Liang, Q. Y. Zhang, D. D. Chen</i>	
A First-Principles Study on Edge Doping of Armchair Graphene Nanoribbon	109
<i>Kai Tak Lam, Gengchiao Liang</i>	
New Microwave Concepts based on Carbon Nano Tibes	112
<i>Hans Ludwig Hartangel</i>	
Compositional Characterization of Nano-materials and Thin Films with Secondary Ion Massspectrometry	117
<i>H. Hanedal, K. Matsumoto, N. Saito, I. Sakaguchi, N. Ohashi, M. Fujimoto</i>	
Interaction between Flourene-Based Polymers and Carbon Nanotubes/Carbon Nanotube Field-Effect Transistors	122
<i>Lain-Jong Li, Fuming Chen, Yumeng Shi, Keke Zhang, Xiaochen Dong</i>	
Surface Resistance of Carbon Nanotube/Inorganic Binder/Silver Composite Film	125
<i>I-S Tsai, H-K Huang</i>	
Effect of chemical oxidation on the gas sensing properties of multi-walled carbon nanotubes	130
<i>M. Xu, Z. Sun, Q. Chen, B. K. Tay</i>	
Characterisation of Titanium Dioxide-Single Walled Carbon Nanotubes Composite Fibres Prepared by the Wet Spinning Technique	134
<i>Chonlada Dechakiatkrai, Carol Lynam, Jun Chen, Sukon Panichphant, Gordon G. Wallace</i>	
CVC Synthesis and Hydrogen Storage Properties of Multi-walled Carbon Nanotubes	140
<i>Yunjin Yao, Suping Zhang, Yongjie Yan</i>	
Improvement of Electrical Property in MWCNTs/PEDOT-PSS Nanocomposite Films via Microwave Treatment	144
<i>B. Ksapabutr, B. Lertanyapornchai, M. Panapoy</i>	
Experimental study of a novel aligned carbon nanotubes gas sensor	150
<i>Wu Lili, Yuan Chao, Hui Guohua, Pan Min, Chen Yuquan, Zhang Xiaobin</i>	
Room-temperature growth and characterization of iron-carbon nanocomposite fibers	154
<i>Z. P. Wang, K. Yamaguchi, D. Takeuchi, Y. Hayashi, M. Tanemura</i>	
Integration of Individual Nanoscale Structures into Devices Using Dynamic Nanostenciling	158
<i>Stefan Egger, Adelina Ilie, Shinichi Machida, Tomonobu Nakayama</i>	
Quantum dot sensitized solar cells	160
<i>Yasuhiro Tachibana, Hitomi Y. Akiyama, Kazuya Umekita, Yasuhide Otsuka, Tsukasa Torimoto, Susumu Kuwabata</i>	
Impact of Casimir Force in Molecular Electronic Switching Junctions	166
<i>Aaron Katzenmeyer, Logeeswaran VJ, Bayram Tekin, M. Saif Islam</i>	
Molecular Controlled Semiconductor Devices	170
<i>Eyal Capua, Roberto Cao, Carlos A. A. Eraso, I. Levy, Ron Naaman</i>	

Table of Contents

GeO₂/Organically Modified Silane Sol-Gel Hybrid Organic-Inorganic Films for Photonic Applications.....	176
<i>Wenxiu Que, C. Y. Jia, M. Sun, L. Cheng, L. L. Wang, Z. J. Zhang, Z. Sun</i>	
ZnO nanorod heterojunctions and LEDs	182
<i>A. B. Djuricic, Y. F. Hsu, Y. Y. Xi, A. M. C. Ng, K. H. Tam, W. K. Chan</i>	
Photoluminescence and Raman Spectroscopy of Single Diamond Nanoparticle	186
<i>J. Y. Wang, T. Y. Ko, K. W. Sun</i>	
Dynamic Tuning of Slow Light Transmission in Manual Nanostructure Photonic Crystal Waveguide	191
<i>Changhong Li, Huiping Tian, Hui Lu, Yuefeng Ji</i>	
A Microstructure Fibre Doped with Nano-material Particles	195
<i>Ru Zhang, Xi Chen, Ly Guat Lee, Jin Wang</i>	
Optical Gain of Segregated GaInNAs/GaAs Quantum Wells at Emission Wavelength of 1.3 micron	198
<i>V. Dixit, H. F. Liu, N. Xiang</i>	
Simulation of Electrically Pumped Nanophotonic Lasers Using Dynamical Semiconductor Medium FDTD Method.....	202
<i>Yingyan Huang, Seng-Tiong Ho</i>	
Magnetic properties and photoluminescence of undoped and transition metal doped AlN nanorods.....	206
<i>X. H. Ji, S. P. Lau, S. F. Yu, T. S. Herng, H. Y. Yang, S. Y. Tang</i>	
Magnetically Tunable Two-Dimensional Photonic Crystal by Self-Assembling in Magnetite Magnetic Fluid	210
<i>Shengli Pu, Ming Liu</i>	
Improvement of Blue GaN-Based Light-Emitting Diodes with Nanosphere Layers	214
<i>Y. K. Su, C. C. Kao, J. J. Chen, R. W. Chuang, C. L. Lin</i>	
Transmission Properties and Application of A Two-Ring One-Bus Building Block	217
<i>Landobasa Yosef Mario, Stevanus Darmawan, Pieter Dumon, Roel Baets, Mee-Koy Chin</i>	
Study on Oxygen and Nitrogen Adsorption in Carbon Nanotube.....	222
<i>X. M. Min, D. X. Lan, F. Cheng</i>	
The study on field emission properties of different carbon nanotubes deposited by electrophoresis	228
<i>F. Y. Pang, M. L. Cao, M. C. Zhang, Z. J. Cheng, L. F. Lin, L. L. Wang, Y. Gao, J. Yang, P. G. He, L. K. Pan, Z. Sun</i>	
Preparation of Carbon Nanotube Field Emission Device and Its Driving Circuits	232
<i>M. Qian, T. Feng, L. F. Lin, Y. W. Chen, Z. Sun</i>	
Carbon Nanotubes Synthesized by Simple Thermal Chemical Vapor Deposition and Their Electrical Properties	236
<i>X. P. Zou, H. Abe, T. Shimizu, A. Endo, H. Tokumoto, S. M. Zhu, H. S. Zhou</i>	
Electrosorption of Cupric ions from Solutions by Carbon Nanotubes and Nanofibres Film Electrodes Grown on Graphite Substrates.....	242
<i>Y. Gao, H. B. Li, Z. J. Cheng, M. C. Zhang, Y. P. Zhang, Z. J. Zhang, Y. W. Chen, L. K. Pan, Z. Sun</i>	
Conductivity of Scree-printed Carbon Nanotube Composite Film and Its Sensitivity to Organic Gas.....	248
<i>J. B. Liu, Jun Chen, L. F. Zhu, J. C. She, S. Z. Deng, N. S. Xu</i>	
Study of electrochemical supercapacitors utilizing carbon nanotubes electrodes and PVA-hybrid polyacid electrolytes.....	252
<i>Yanping Zhang, Zhejuan Zheng, Haibo Li, Likun Pan, Yang Gao, Feiyan Pang, Zhuo Sun, Xiaowei Sun, Beng Kang Tay</i>	
Research on LLDPE-inorganic Nanocomposites	255
<i>Zhang Wanxi, Zhang Chunxiao, Li Hongji</i>	

Table of Contents

Electrosorption of NaCl by Carbon Nanotubes and Carbon Nanofibres Composite Film Grown at Different Temperatures.....	261
<i>H. B. Li, Y. Gao, Z. J. Cheng, M. C. Zhang, L. K. Pan, Y. P. Zhang, Y. W. Chen, Z. Sun</i>	
Porphyrin-functionalized Single-walled Nanotubes solution for DMMP detection.....	266
<i>Hou Changjun, Dong Jiale, Huo Danqun, Ren Guixiang, Luo Wei, Duan Yujuan</i>	
Raman and Morphological Characteristics of Carbon Nanotubes Depending on Substrate Temperatures by Chemical Vapor Deposition.....	271
<i>P. S. Guo, Z. Sun, T. Chen, M. Xu, Z. H. Zheng, Y. Sun</i>	
Covalent sidewall functionalization of single-walled carbon nanotubes via reduction of benzophenone by potassium metal	276
<i>Liangming Wei, Zijong Li, Yafei Zhang</i>	
The synergistic effect of carbon nanotubes and clay on the toughness of epoxy nanocomposites.....	280
<i>Qilin Mei, Jihui Wang, Zhixiong Huang, Lu Yuan</i>	
Response Modeling and Sensitivity of the Carbon Nanotubes/Graphite/Epoxy Composite Sensor.....	285
<i>Qilin Mei, Jihui Wang, Zhixiong Huang, Sha Xu, Zhengxiang Yue</i>	
Synthesis and characterization of dandelion-shaped SiCN rods	289
<i>Yanni Qian, Xueming Ma, Wenjuan Cheng</i>	
Mass Synthesis of Large, Single-crystal Gold Nanoplates Using a Pyridinium-based Ionic Liquid	293
<i>Lanzheng Ren, Lingjie Meng, Qinghua Lu</i>	
Synthesis of Nano-sized ZnO Structure in Ionic Liquid.....	297
<i>Chen Quanshui, Zheng Jugong, Liu Xiadong, Yang Ting</i>	
Multi-directionally grown ribbon-like carbon fibers.....	300
<i>Fei Li, Xiaoping Zou, Maofa Wang, Jin Cheng, Hongdan Zhang, Pengfei Ren, Guang Zhu</i>	
Subminiature Gas Sensor Based on the Photonic Crystals.....	303
<i>Wang Ziu, Han Kui, Shen Xiaoping</i>	
Research on Photocatalytic Activity of Nano-TiO₂ Coating on Foam Al by Composite Electroplating	307
<i>Liu Guifang, Zhang Jun, He Xuemin, Xu Chenwen</i>	
Preparation of PZT Ferroelectric Thin Films By Electrochemical Reduction.....	310
<i>P. F. Ren, J. L. Zhu, X. P. Zou, J. Cheng, F. Li, H. D. Zhang, G. Zhu, M. F. Wang, Y. Su</i>	
Higher Drive Current for SiGe Nanowires.....	315
<i>Kow-Ming Chang, Jium-Ming Kuo, Heng-Hsin Wu, Wen-Hsien Tzeng, Tzu-liu Wu, Wen-Chan Chao</i>	
B-doped TiO₂ Nanotubes and Its Photocatalytic Activity	320
<i>F. Y. Wei, L. Sang, H. L. Zeng, P. Cui</i>	
Influence of the Shape and Size of Catalyst on the Morphology of Carbon Sub-microfibers	325
<i>Fei Li, Xiaoping Zou, Maofa Wang, Jin Cheng, Hongdan Zhang, Pengfei Ren, Guang Zhu</i>	
Differences Between the nc-Si:H Thin Films Deposited by RF-sputtering and PECVD.....	330
<i>Zhao Zhanxia, Li Min, Zhan Yan, Yu Huacong, Ma Zhongquan, Sun Tietun</i>	
Structure and properties of Epoxidized Nature Rubber/organoclay Nanocomposite.....	335
<i>Xiaoping Wang, Demin Jia, Mei Chen</i>	
Performance Study of Abrasive Wear and Erosive Wear of WC-12Co Coatings Sprayed by HVOF.....	340
<i>Q. Wang, Z. H. Chen, Z. X. Ding, Z. L. Liu</i>	
Electrochemical studies of V₂O₅-CNTs nanocomposites.....	345
<i>Guangming Wu, Airong Wang, Mingxia Zhang, Huiyu Yang, Zhihua Zhang, Bin Zhou, Jun Shen</i>	

Table of Contents

Synthesis and Electrical Characteristics of P-type ZnO Film on Indium-Tin-Oxide Glass Substrate by Ultrasonic Spray Pyrolysis	350
<i>Jing Chen, Wei Lei, Chi Li, Xiaobing Zhang, Bo Ling</i>	
Fabrication and characterization of p-type ZnO nano-thin films prepared by in situ oxidation of sputtered Zn₃N₂	354
<i>Shao Le-xi, Zhang Jun</i>	
Efficiency enhancement for ZnO tetrapod dye-sensitized solar cells by TiO₂ coating ammonium treatment	358
<i>Y. F. Hsu, C. T. Yip, A. B. Djuricic, W. K. Chan</i>	
Preparation and Characterization of WO₃ Nano-powder with Microemulsion Method	362
<i>Hou Chang-Jun, Diao Xian-Zhen, Tang Yi-Ke, Huo Dan-Qun, Wei Li-Fan</i>	
Benzene Adsorption Properties of Silica Aerogel-Fiber Composites	366
<i>Zhang Zhihua, Shen Jun, Ni Xingyuan, Li Yang, Wang Bo, Wu Guangming, Zhou Bin, Wang Guoqing, Wang Peiqing, Wang Qingfeng, Niu Xixian</i>	
Mechanical reinforcement of silica aerogel insulation with ceramic fibers	371
<i>Zhang Zhihua, Shen Jun, Ni Xingyuan, Li Yang, Wang Jichao, Wu Guangming, Zhou Bin, Wang Guoqing, Wang Peiqing, Wang Qingfeng, Niu Xixian</i>	
Synthesis of In₂O₃ nanowires, nanoboquets and nanopins	375
<i>X. H. Ji, J. W. Zhai</i>	
Growth of Red-Cell like Bi₂WO₆ Hierarchical Architectures and Their Use as Recyclable Visible-Light Photocatalysts	377
<i>Yuanyuan Li, Jinping Liu, Xintang Huang</i>	
Preparation and characterization of SiO₂ nano-rods by CVD method	382
<i>Guang Zhu, Xiaoping You, Jin Cheng, Hongdan Zhang, Fei Li, Pengfei Ren, Maofa Wang, Yi Su</i>	
Synthesis and Electro-Optic Property of Intercalation Polyimide and Polyimide/silica	386
<i>Dongya Yang, Qing Zhang, Fengxian Qiu, Guorong Cao</i>	
Bienzymatic glucose biosensor based on co-immobilization of glucose oxidase and horseradish peroxidase on gold nanoparticles-mesoporous silica matrix	390
<i>Lihuan Xu, Yihua Zhu, Yaokia Li, Xiaoling Yang, Chunzhong Li</i>	
Preparation of nanometer silicon carbide powders by Sol-Gel processing	394
<i>Zhao Wu, Zhiyong Zhang, Junfeng Yan, Chunxue Zhai, Jiangni Yun</i>	
Determination of Rifampicin Location in Cholesterol-Lipid Liposomes by ²H and ³¹P Solid-State NMR	397
<i>N. Changsan, F. Separovic, T. Srichana</i>	
Study on preparation and antibacterial property of Cu/TiO₂ composite nanoparticles	402
<i>Y. L. Hu, H. F. Liu, W. R. Chen, X. P. Guo, D. B. Chen, J. H. Hu</i>	
Preparation of Nano-structured InGaAs Thin Film by Molecular Beam Epitaxy	407
<i>Yao Yanping, Liu Chunling, Qiao Zhongliang, LiMei, Gao Xin, Bo Baoxue</i>	
Optical and Electrical Properties of a-InGaAg:H Films Prepared by Double-Target Magnetron Co-sputtering	411
<i>Yao Yanping, Liu Chunling, Qiao Zhongliang, Li Mei, Gao Xin, Bo Baoxue</i>	
Antireflective sub-wavelength gratings fabricated by UV-NIL	415
<i>Xiaoli Li, Qingkang Wang, Jun Shen, Yanbo Liu, Zhaoying Zhu, Yongzhong Wan, Xiaming Niu</i>	
A Novel Vinyl Ether Resin of Poly(4-vinylphenol) Derivative for Lithographic Resist	422
<i>Jian Zhang, Haixiong Ge</i>	
Fabrication of silver nanowires in situ in Si chip based on a novel electrochemical method	424
<i>Jia Liu, Yunyi Fu, Ao Guo, Chuan Wang, Ru Huang, Xing Zhang</i>	

Table of Contents

Characterization of Ga-doped ZnO nanowires grown by thermal chemical vapor deposition	428
<i>Li-Wei Chang, Meng-Wen, Huang, Han C. Shih, F. S. Shieu, Jien-Wei Yeh</i>	
Synthesis of Carbon Nanofibers by Ethanol Catalytic Combustion	433
<i>J. Cheng, X. P. Zou, F. Li, H. D. Zhang, P. F. Ren,</i>	
Synthesis of R-SiC Nanowires Via Catalyst-Free Chemical Vapour Growth Route	438
<i>Wan Nur Fadzilah Wan Mustapha, Kuan Yew Cheong, Zainovia Lockman</i>	
Electrical Characteristics of Organic Molecular Wires by Scanning Probe Microscopy	443
<i>Lee N.J., Kim S. B., Koo S. H.,</i>	
Fabrication and characterization of p-poly(9, 9-diethylfluorene)/ n-ZnO nanorods hybrid heterojunction.....	448
<i>Mingjun Wang, Guojia Fang, Lei Ai, Nishuang Liu, Longyan Yuan, Hai Zhou, Kingzhong Zhao</i>	
Preparation and Electrical Conductivity of Ni/NiO Composite Using Microwave Radiation	452
<i>M. Panapoy, S. Suputtanapalapol, B. Ksapabutr</i>	
Effects of different annealing treatments on soft magnetic properties of Fimet alloy	458
<i>Long Ling, Yan Biao, Guan Le-ding, Yang Sha, Chen Zhi-hui</i>	
Doping Cu into ZnO Nanostructures.....	462
<i>G. Z. Xing, J. G. Tao, G. P. Li, Z. Zhang, L. M. Wong, S. J. Wang, C. H. A. Huan, T. Wu</i>	
Size-selected rare earth and palladium nanoparticles for hydrogen-induced switching and sensing applications.....	467
<i>B. R. Mehta, S. Kala, M. Khamuja, F. E. Kruis</i>	
Preparation of Nano-structured LiMn₂O₄ Thin Films by Electrostatic Spray Deposition	470
<i>Zhou-Cheng, Wang, Kwang-Bum Kim</i>	
Phase Analysis of Cobalt-Iron Films Electrodeposited from Ammonium Citrate Stabilized Electrolytes.....	474
<i>Xiaoxia Sarah Zhou, Qi Liu, Douglas G. Ivey</i>	
Synthesis of self-assembled silicon nanowires with uniform small diameter.....	480
<i>Y. W. Chen, S. H. Jiang, L. B. Liu, B. X. Shao, R. F. Rong, Z. G. Gu, R. C. Wang</i>	
Preparation of Nano-Powders of p-Type Transparent Conductive Copper Aluminum Oxide by Co-Precipitation Method.....	485
<i>Hsin-Chun Lu, Jo-Ling Lu, Chun-Lung Chu, Chi-You Lai, Gwo-mei Wu</i>	
Electrical and optical properties of In₂O₃ nanoparticles prepared by MOCVD	489
<i>Ch. Y. Wang, V. Cimalla, Th. Kups, O. Ambacher, M. Himmerlich, S. Krischok</i>	
Physics Based Current and Capacitance Model of Short-Channel Double Gate and Gate-All-Around MOSFETs.....	493
<i>H. Borli, S. Kolberg, T. A. Fjeldly</i>	
Electronic Properties and Doping Mechanism in Cuprates by First-Principles Calculations.....	499
<i>Alessio Filippetti, Vincenzo Fiorentini</i>	
A Compact Model of Channel Electron Mobility for Nano Scale Strained-Si nMOSFET	504
<i>Li Xiaojian, Tan Yaohua, Tian Lilin</i>	
An Analytic Potential-Based Model for Undoped Nanoscale Surrounding-Gate MOSFETs.....	509
<i>Wei Bian, Jin He, Yadong Tao, Min Fang, Jie Fang</i>	
Nanoelectronic Circuit Architecture Based on Single Electron Turnstiles	515
<i>Wancheng Zhang, Nan-jian Wu</i>	
3D Electro-Thermal Modeling for ESD protection structures in Sub-100nm CMOS.....	520
<i>L. Lin, X. Wang, J. Liu, A. Wang, H. Liu, Y. Zhou, L. Yang</i>	
Design For Manufacturing (DFM) in Nano-CMOS Era	524
<i>Yuhua Cheng</i>	

Table of Contents

Path Integral Quantum Monte Carlo Simulation of a Parabolic Quantum Dot.....	530
<i>N. Batenipour, K. Saghafi, M. K. Moravvej-Farshi</i>	
Analytical Threshold Voltage Model Using NEGF Approach for Nanoscale Double-gate MOSFETs.....	534
<i>JUian-Hong Yang, Xue-Yuan Cai, Ai-Guo Yang, Zhi-Chen Zhang</i>	
Fabrication of Multi-walled Carbon Nanotubes/Nickel Nano-composite Films By Electrochemical Processing	539
<i>Zhou-Cheng Wang, Zheng-Bing Qi, Qi-Hua Liao</i>	
Tuning Electrical Characteristics for Networked Carbon Nanotube Field-Effect Transistors using Violated Molecules.....	542
<i>Chun Wei Lee, Xiaochen Dong, Keke Zhang, H. Tangtang, S. G. Mhaisalkar, Lain-Jon Li</i>	
Effect of different gas medium on carbon nanotubes synthesis by arc discharge.....	545
<i>Xiaojun He, Mingdong Zheng, Xiayong Zhang, Shancheng Yan</i>	
Effect of Single Walled Carbon Nanotubes on the Performance of Poly-(3-hexylthiophene) Solar Cell.....	550
<i>Arun Tej Mallajosyula, S. Sundar Kumar Iyer, Baquer Mazhari</i>	
Fabrication of Carbon-Nanotube Enhanced Piezoelectric Membrane-based Biosensor	555
<i>Ting Xu, Zhihong Wang, Jianmin Miao</i>	
Performance of various quantum-key-distribution systems using 1550nm up-conversion single-photon detectors.....	559
<i>Jiao Rongzhen, Feng Chenxu, Zhang Wenhan, Ma Haiqiang, Zhang Ru, Yu Li</i>	
CVD Synthesis and Purification of Multi-walled Carbon Nanotubes.....	562
<i>Yunjin Yao, Suping Zhang, Yongjie Yan</i>	
ZnOx-decorated Vertically Aligned Carbon Nanotubes Prepared by Vapor Phase Transport Technique.....	566
<i>A. Wisitsoraat, A. Tuantranont, V. Patthanasettakul, S. Mongpraneet</i>	
Nano-Tailoring of Carbon Nanotubes as nano-fillers for composite materials applications	570
<i>Charles Baudot, Cher Ming Tan, Charles Wang</i>	
Ballistic Quantum Transport in Nano Devices and Circuits.....	573
<i>Vijay K. Arora</i>	
Fabrication, Optimization and Application of Complementary Multiple-Gate Tunneling FETs.....	579
<i>M. Fulde, A. Heigl, M. Weis, M. Wirnshofer, K. v. Arnim, Th. Nirschl, M. Sterkel, G. Knoblinger, W. Hansch, G. Wachutka, D. Schmitt-Landsiedel</i>	
Alcohol gas sensors based on magnesium tetraphenyl porphyrins	585
<i>Sumana Kladsomboon, Sirapat Pratontep, Sureeporn Uttiya, Teerakait Kerdcharoen</i>	
Highly Sensitive Waveguide-based Porous Anodic Alumina Nanosensor for Monitoring Atomic Layer Deposition	589
<i>Han Gao, Yun Zong, Tan Lee Kheng, Maria A. S. Chong</i>	
Investigation of silicon NC memory with improved threshold voltage window.....	593
<i>Yongbian Kuang, Yan Li, Dake Wu, Zhe Yu, Ruyan Tang, Ru Huang</i>	
Effect of Channel Length on NBTI in Sub-100nm CMOS Technology	597
<i>Lei Jin, Mingzhen Xu</i>	
Investigation of Turn-On Speeds of Electrostatic Discharge Protection Devices Using Transmission-Line Pulsing Technique.....	601
<i>M. X. Huo, Y. Han, S. R. Dong, J. J. Liou, K. B. Ding, X. Y. Du, Q. Cui, D. H. Huang</i>	
Nanophotodetector Array for Near-field Nano-imaging.....	607
<i>Boyang Liu, Yingyan Huang, Ki Young Kim, Seng-Tiong Ho</i>	
Size effect in Cu nano-interconnects and its implication on electromigration	610
<i>Yuenjin Hou, Cher Ming Tan</i>	

Table of Contents

Size and effect in Cu nano-interconnects and its implication on electromigration.....	614
<i>Yuejin Hou, Cher Ming Tan</i>	
Volatile Organic Compound Sensor Arrays Based on Zinc Phthalocyanine and Zinc Porphyrin Thin Films.....	618
<i>Sureeporn Uttiya, Sirapat Pratontep, Worowan Bhanthumnavin, Radchada Bunttem, Teerkiat Kerdcharoen</i>	
Polarization-Independent Micro-Ring Resonator on Silicon-on Insulator.....	624
<i>Minming Geng, Lianxi Jia, Lei Zhang, Lin Yang, Yuliang Liu, Fang Li</i>	
Ternary Bulk Heterojunction Organic Photovoltaic Cell.....	627
<i>Qian Liu, Nan Zhang, Zunfeng Liu, Shougen Yin, Yongsheng Chen</i>	
The Effect of Scattering Particles on the Photoluminescence of Organic Dye Films.....	630
<i>Ye Lihua, Wang Qiong, Xi Jun, Xu Deng, Cui Yiping</i>	
Gain and Noise Characteristics of Single-mode Er³⁺/Yb³⁺ Co-doped Phosphate Glass Fibers.....	633
<i>S. H. Xu, Z. M. Yang, Z. M. Feng, Q. Y. Zhang,</i>	
Electronic Polarization of ions in Lithium Tantalate (LiTaO₃) Optical Wave Guide from Natural birefringence data.....	636
<i>Vardhani Chunduru, R. Ethiraj</i>	
Directional lasing and energy transfer in ZnO nanotree.....	641
<i>F. L. Zhao, C. R. Ding, M. Huang, F. H. Zhao, X. F. Yang, J. G. Zheng, T. R. Zhang, M. M. Wu, Z. R. Tian, H. Z. Wang</i>	
The first-principles calculation of the effects oxygen defect on the electronic structure of SnO₂.....	645
<i>Yan Jun-Feng, Zhang Zhi-Yong, Zhang Fu-Chun, Yun Jiang-Ni, Zhao Wu, Deng Zhou-Hu</i>	
Synthesis of PMN by mechanochemical process.....	651
<i>Cheng Chen, Cheng Zhang, DanQing Xie, Qiang Li</i>	
Luminous Performance of YAG:Ce Powder Synthesized via Self-propagating Synthesis Process.....	655
<i>Lu Ji, Cheng Zhang</i>	
Quantitative analysis of Si/Ge quantum structures by high-resolution transmission electron microscopy.....	659
<i>C. W. Zhao, Y. M. Xing, J. Z. Yu, G. Q. Han</i>	
Nanoscale strain analysis of Si/Ge heterostructures.....	664
<i>C. W. Zhao, Y. M. Xing, J. Z. Yu, G. Q. Han</i>	
Periodic Nanoscale Si Structures by Ion Beam Induced Glancing Angle Deposition.....	669
<i>B. Rauschenbach, C. Patzig</i>	
Electrical transport properties and magnetoresistance of La_{0.7}Sr_{0.3}MnO₃:xZn_{1-y}Co_yO composites.....	674
<i>Bin Zhuang, Shuiyuan Chen, Renrong Lin, Liangyou Fu, Yingbin Lin, Heng Lai, Zhigao Huang</i>	
The size effects of the magnetic properties for the 200-nm Co nanorings: Monte Carlo Simulation.....	677
<i>Zhiqin Lin, Kehua Zhong, Qingyin Ye, Zhigao Chen, Zhigao Huang</i>	
Theoretical investigation on structural, electronic and optical properties of Sb-doped ZnO.....	681
<i>F. H. Zhang, Z. Y. Zhang, W. H. Zhang, S. Q. Xue, J. N. Yun, J. F. Yan</i>	
Numerical Simulation of Ballistic Carbon Nanotube Field-Effect Transistors.....	686
<i>M. Yaghuti, K. Saghafi</i>	
Circuit Modeling of SAGCM-APD.....	689
<i>Xiao-Xue Fang, Xie Sheng, Chen-Xiao Hong, Chen Chao</i>	
Intersubband Scattering Effects on the Carrier Velocity of a AlGaAs/GaAs Single-Well Heterostructure.....	695
<i>O. Ghaffari, K. Saghafi</i>	
Ab initio study of ferromagnetism in N doped ZnO and its stabilization by Li co-doping.....	700
<i>Q. Y. Wu, R. Wu, Z. G. Chen, Y. B. Lin, J. M. Zhang, Z. G. Huang</i>	

Table of Contents

Ferromagnetism of Cu doped ZnO: first-principles calculations and Monte Carlo simulation.....	704
<i>Shan Chen, Qinyun Wu, Zhigao Chen, Zhigao Huang</i>	
Research of Mechanism on the Improvement of Silicon Carbide Ohmic Contact Property Influenced by Nanometer Metal Particles	708
<i>Jiang Yanfeng, Yang Bing, Zhang Xiaobo, Ju Jiabin</i>	
Molecular Dynamics Simulation of Heat Distribution during Nanometric Cutting Process.....	711
<i>Y. C. Liang, Y. B. Guo, M. J. Chen, Q. S. Bai</i>	
Theoretical Study on Optical Scattering and Absorption Behavior of Spherical Nanoparticle	716
<i>Xiao Ting, Yang He-lin, Li Ming-hua, Zng Fan-qing</i>	
Fault-injection algorithm for the error of the single-event upset and calculation for the error resistance by coated nanofilms	719
<i>Qinghe Pan, Bingrong Hong, Qishu Pan, Di Wang, Lijiang Hu</i>	
Application of Density-Gradient Model to Nanoscale MOS Structures	724
<i>Jian-Hong Yang, Ying Wei, Jin-Zhi Ran</i>	
RF magnetron sputtered indium tin oxide thin films for application in solar cells	728
<i>J. B. Chu, H. B. Zhu, X. B. Xu, Z. Sun, Y. W. Chen, S. M. Huang</i>	
Ultra-narrow Bandwidth Filter in Fractal Photonic Crystal Containing Negative Material	732
<i>Cui Zheng, Huiping Tian, Yuefeng Ji</i>	
The Effects on Band Gaps for the Cross Section's Shape of the Medium Column in 2-D Photonic Crystals	736
<i>Hui Lu, Huiping Tian, Yuefeng Ji</i>	
Design and Analysis of Two-dimensional Photonic Crystals Resonant Cavity	741
<i>Ligkai Kong, Zhiqiang Zheng, Zhuohong Feng, Xiaoyan Li, Cuihua Jiang, Zhigao Huang</i>	
Open-circuit Voltage Improvement by Using TiO₂ Nanotubes as a Working Electrode of Dye-sensitized Solar Cell	746
<i>X. D. Li, D. W. Zhang, Z. Sun, Y. W. Chen, S. M. Huang</i>	
Electrochemic Growth of CuInSe₂ Thin Film on ITO/soda-lime Glass from Acidic Medium.....	751
<i>N. J. Yao, S. M. Huang, L. K. Pan, Z. Sun, Y. W. Chen</i>	
Preparation, Characterization and Electro-optic Properties of Polyimide/SiO₂ Nanohybrid Materials	755
<i>Fengxian Qiu, Wei Zhang, Dongya Yang, Guorong Cao, Pingping Li</i>	
Improved Heat-Dissipating Silicone by Nano-materials for LED Packaging	758
<i>M. L. Cao, F. Y. Pang, M. C. Zhang, Z. J. Cheng, Y. Gao, P. G. He, L. K. Pan, Z. Sun</i>	
Quasi-solid-state Dye-sensitized Solar Cells Prepared with a D102 Sensitizer and a Polymer Electrolyte	761
<i>D. W. Zhang, X. D. Li, Z. Sun, Y. W. Chen, S. M. Huang</i>	
Touch-panel Interface System Which Can Recognize Who Touched The Screen and Where Was Pointed	766
<i>Hiroyuki Fukuda, Kunio Sakamoto</i>	
Effect of Structure on Third Order Nonlinear Optical Performances for ZnO Nanocomposites.....	772
<i>C. Chang, Y. C. Gao, Q. Chang, Y. L. Song</i>	
The Characterization and Fabrication of Pyroelectric Infrared Sensors and Application of Gas Monitoring.....	776
<i>Tan Qiu-lin, Zhang Wen-dong, Xue Chen-yang, Xiong Ji-jun, Li Jun-hong, Liang Ting, Shi Yun-bo</i>	
Photoresponse of PdO/TiO₂ film under visible light.....	782
<i>Shi-An Gao, Ai-Ping Xian, Li-Hua Cao, Rong-Cai Xie, Jian-Ku Shang</i>	
A study on the image processing of nano scale using wavelet.....	787
<i>Wu Xiang, Wang Shu-xian, Liu Jin-gao</i>	

Table of Contents

Miniature and Tunable Filters with MEMS Switches	791
<i>Xinglong Guo, Yan Jin, Lei Liu, Weixia Ou'yang, Zongsheng Lai</i>	
Quantum tunneling behavior of nanocrystalline silicon/crystalline silicon heterostructure diode	794
<i>J. J. Lu, Z. Z. Jiang, J. Chen, W. Pan, W. Z. Shen</i>	
Analysis of Interconnect Sensitivity to Process Variation in 90 nm	798
<i>Jiang Lifei, Sun Lingling, Zhou Lei</i>	
Design of a new SMA micro-actuator	802
<i>Yang Yan, Huang Hao-lei, Lin Chang-hua</i>	
Fabrication of the Si₂Sb₂Te₅ phase change cell structure for PGRAM by using UV nanoimprint lithography	807
<i>Yanbo Liu, Xiaoli Li, Weimin Zhou, Xiaoming Niu, Zhitang Song, Min Guoquan, Bo Liu, Gaoming Feng, Cheng Xu, Yongzhong Wan, Jing Zhang</i>	
The Ge Enhance the Sensitivity for Bio-Sensor	811
<i>Kow-Ming Chang, Jiun-Ming Kuo, Wen-Chan Chao, Chia-Jung Liang, Heng-Hsin Wu, Wen-Hsien Tzeng, Tzu-liu Wu</i>	
The Photoluminescence of Sr₂CeO₄ Phosphor Prepared by Modified Citrate-Gel Method	815
<i>Enguou Wang, Linlin Ye, Lidan Cen, Yaping Deng</i>	
Development of Fabricating Nanostructure Coatings by Cold Gas Dynamic Spraying	819
<i>Guan Le-ding, Yan Biao, Long Ling, Yang Sha</i>	
A new high speed pattern generator for nanolithography	824
<i>Shuhua Wei, Wei Liu, Li Han</i>	
Layout Design of Multi-finger Power SiGe HBTs for Thermal Stability Improvement	829
<i>Jin Dongyue, Zhang Wanrong, Shen Pei, Xie Hongyun, Yin Jixin, Wang Yang, Zhang Wei, He Lijian, Sha Yongping, li Jia, Gan Junning</i>	
ZnO thin film grown on glass by metal-organic chemical vapor deposition	833
<i>X. M. Ma, X. T. Yang, C. Wang, J. Yang, X. H. Gao, J. E. Liu, H. Jimg, G. T. Du, B. Y. Liu, K. Ma</i>	
Visible Light-Active Nano-Sized Fe-doped TiO₂ Photocatalysts and Their Characterization	836
<i>N. Wetchakun, P. Pirakitikulr, K. Chiang, S. Phanichphant</i>	
Preparation and characterization of metal Fe nanowires with graded diameter	842
<i>Zhi-hao Yuan, Zhi-quan Song, Xue-wei Wang, Li-ping Xu, Xiao-guang Zhang, Shao-qing Sun, Yue-qin Duan, Li-jian Bie, Da-jian Wang</i>	
Surfactant-Assisted Growth of Multipod In(OH)₃ Microcrystals via Facile Hydrothermal Process	845
<i>Q. C. Liu, J. M. Dai, Y. J. Yang</i>	
Thin-film Packaging of High-power LEDs by Magnetron Sputtering	848
<i>Da Su, Demiao Wang, Gaochao Ren, Yaoming Wang</i>	
Analysis of Mechanical Performance of Silver Inkjet-Printed Structures	851
<i>Umur Caglar, Kimmo Kaija, Pauliina Mansikkamaki</i>	
Fabrication of Nano-structured VO_x Film by Low Temperature Ion Beam Sputtering and Reductive Annealing	857
<i>Xiaodong Wang, Guike Li, Jiran Liang, An Ji, Ming Hu, Fuhua Yang, Jian Liu, Nanjian Wu, Hingda Chen</i>	
A simple method to fabricate silicon nanowires arrays by a catalytic electrochemical etching process	860
<i>Xiaocheng Li, Beng Kang Tay, Guofeng You, Yi Yang</i>	
New High Charge Density Polymers for Printable Electronics, Sensors, Batteries, and Fuel Cells	863
<i>Hong Gu, Dustin England, Feng Yan, John Texter</i>	

Table of Contents

Characterization and Photocatalytic Activity of Pd-doped ZnO Nanoparticles Synthesized by Flame Spray Pyrolysis.....	869
<i>C. Siritwong, C. Lewhiran, N. Wetchakun, S. Phanichphant</i>	
Raman Spectroscopy in Aluminum-doped Zinc Oxide Nanorods.....	875
<i>M. Eskandari, V. Ahmadi, S. H. Ahmadi, F. Ghorab</i>	
Initial growth of conducting island-like structure on insulating polymer substrate.....	878
<i>Peter C. T. Ha, Z. J. Han, G. F. You, D. R. McKenzie, S. Praver, B. K. Tay</i>	
Preparation and characterization of magnetic carboxymethyl chitosan/Fe₃O₄ composite nanoparticles	882
<i>Zhou Li-min, Wang Yi-ping, Huang Qun-Wu, Liu Zhi-Rong</i>	
Ion beam irradiation of high-temperature superconductors: From nano-sized defects to the fabrication of nanodevices.....	886
<i>W. Lang, H. Richter, M. Marksteiner, K. Siraj, M. A. Bodea, J. D. Pedarnig, D. Bauerle, C. Hasenfuss, L. Palmetshofer, R. Kolarova, P. Bauer</i>	
Preparation, Characteristic and Effect of Annealing Temperature of Low Voltage ZnO Film Varistor.....	891
<i>Jz Xia, Xj Ni</i>	
Ball Milled MgH₂ = 5%wt. M(M=Fe and FeF₃) Nanocomposites For Improving Hydrogen Storage.....	894
<i>N. W. B. Balasooriya, Ch. Poinson</i>	
Correlation between functional group and dielectric properties of structure-polarized nanohybrids	899
<i>G. Kie, D. Wang, L. Hu, Y. Feng</i>	
Research pf Mechanical Properties of a Micro/Nano Rod Material Based on the Shape of Nocadi.....	903
<i>Liang Xin, Liu, Jianhua, Li Songmei, Yu Mei, Wang Yanqing</i>	
Rational Design of Molecular Self-Assemblies: a Platform for NanoTechnology	906
<i>David Bleger, Fabrice Mathevet, David Kreher, Andres-Jean Attias, Guillaume Schull, Ludovic Douillard, Celine Fiorni-Debuisschert, Fabrice Charra</i>	
Temperature Characteristics of Polysilicon Piezoresistive Nanofilm Depending on Film Structure.....	909
<i>Xiaowei Liu, Yajing Wu, Rongyan Chaui, Changzhi Shi, Weiping Chen, Jinfeng Li</i>	
Comparison of the structure and properties between the Cladophora and Spirogyra filamentous macroalga	914
<i>Shui-Ping Chang</i>	
Synthesis of nano-sized powders of transparent conductive aluminum-doped zinc oxide by electrolysis-modified co-precipitation method	917
<i>Hsin-Chun Lu, Chen-Sung Chang, Chia-Wei Li, Yu-Shiang Lin, Chun-Lung Chu, Chi-you Lai</i>	
Low Temperature Deposited Nano-structured Vanadium Oxide Thin Films for Uncooled Infrared Detectors	921
<i>Guike Li, Xiaodong Wang, Jiran Liang, An Ji, Ming Hu, Fuhua Yang, Jian Liu, Nanjian Wu, Hongda Chen,</i>	
Low Dielectric Constant and Hydrophobic Nanoporous Silica Films.....	924
<i>Shen Jun, Zhu Yumei, Lin Xuejing, Wu Guangming, Zhou Bin, Ni Xingyuan, Yao Lanfang, Niu Xixian</i>	
Effect of pressure on nanocrystalline diamond films deposition by hot filament CVD technique from CH₄/H₂/Ar gas mixture	928
<i>Shumin Yang, Zhoutong He, Dezhang Zhu, Jinlong Gong</i>	
Nanostructured Silicon Thin Films Prepared by Layer-by-layer Deposition Technique.....	931
<i>Goh Boon Tong, Siti Meriam Ab. Gani, Muhamad Rasat Muhamad, Saadah Abdul Rahman</i>	
Fabrication of CNT Interconnect Structures and Active Devices using Laser Beam Manipulation and Deposition	937
<i>M. H. Nai, S. Z. Wang, A. M. Moo, V. Vinciguerra, J. Kasim, Z. X. Shen</i>	

Table of Contents

Fabrication of SWNT device by self-assembly technology	941
<i>Yanyan Wang, Liyue Liu, Hai Liu, Ying Wang, Dong Xu, Yafei Zhang</i>	
Multi-walled carbon nanotubes under N ion beam irradiation	945
<i>A. Ishaq, L. Yan, J. L. Gong, D. Z. Zhu</i>	
Rapidly Dispersion and Loading of Pt Nanoparticles on CNTs for DMFC Electrodes	948
<i>Mi Chen, Chieng-Ming Chen, Hung-Wei Yu, Su-Chen Lu, Horng-Show Koo</i>	
Electropolymerized Polyaniline Enzyme Immobilized Carbon Nanotube Electrode for Electrochemical Detection of Cholesterol	954
<i>K. Wong-ek, A. Wisitsoraat, C. Karuwan, A. Tuantranont, Y. Wanna</i>	
Carbon Nitride Nanotubes Synthesized by High-frequency Induction Heating Quickly and Their Field-emission Properties	958
<i>Zijiong Li, Lianming Wei, Ping Liu, Yafei Zhang</i>	
Humidity Sensor Utilizing Multiwalled Carbon Nanotubes Coated Quartz Crystal Microbalance	961
<i>K. Jaruwongrungrsee, A. Wisitsoraat, A. Tuantranont, T. Lomas</i>	
The influence of the temperature in the organic modification of single walled carbon nanotubes	965
<i>Liu Liyue, Chen Changxin, Zhang Yafei</i>	
Optical Characterization of Single Walled Carbon Nanotubes Dispersed in Sodium Cholate and Sodium Dodecyl Sulfate	968
<i>P. C. Mathur, P. K. Bhatnagar, Inderpreet Singh, L. M. Bharadwaj, Ravindra Pandey</i>	
Study of Photoluminescence Quenching and DC Conductivity Measurements in Polymer-SWNT Composite Films for Various SWNT Concentrations	972
<i>P. K. Bhatnagar, P. C. Mathur, Inderpreet Singh, L. M. Bharadwaj, Ravindra Pandey</i>	
CNTs/Cu Composite Thin Films Fabricated by Electrophoresis and Electroplating Techniques	975
<i>Ping Liu, Jiahao Wu, Dong Xu, Yuanzhi Pan, Chang You, Yafei Zhang</i>	
Research on EVAA-inorganic nanocomposites	979
<i>Zhang Wanxi, Zhang Chunkiao, Li Hongji</i>	
Nanostructured Biosensors built by Layer-by-Layer Assembly of Multiwall Carbon Nanotubes and Zn-salen	985
<i>Lin-Jie Feng, Li-Wei Wang, Yuan Tian, Yue-Zhing Xian, Li-Tong Jin</i>	
NASICs: A Nanoscale Fabric for Nanoscale Microprocessors	989
<i>Teng Wang, Pritish Narayanan, Michael Leuchtenburg, Csaba Andras Moritz</i>	
Investigation of NBTI by Conventional and New Measurement Methods for p-MOSFETs	995
<i>W.J. Liu, Z. Y. Liu, D. Huang, Y. Luo, C. C. Liao, L. F. Zhang, Z. H. Can, Waisum Wogn, Ming-Fu Li</i>	
Nano phototubes - A new approach towards electronics	999
<i>Gilad Diamant, Erez Halahmi, Leor Kronik, Ron Naaman, John Roulstone</i>	
Comparison of Analog and Digital Nanosystems: Issues for the Nano-Architect	1003
<i>Pritish Narayanan, Teng Wang, Michael Leuchtenburg, Csaba Andras Moritz</i>	
Novel Nanowire Integration Schemes for Massively Parallel and Manufacturable Nanoscale Electronics and Photonics	1009
<i>M. Saif Islam, Mobuhiko P. Kobayashi, Shih-Yuan Wang</i>	
Read Stability and Write Ability Analysis of Dual - Vt Configurations of a single Cell of an SRAM Array - Effect of Process - Induced Intra-Die Vt Variations	1015
<i>Samson Mamatha, M. B. Srinivas</i>	
Resistive Switching Devices Based on Cu₂S Electrolyte	1020
<i>J. R. Zhang, J. Yin</i>	

Table of Contents

Synthesis and Characterization of Magnetic-Fluorescent Composite Colloidal Nanostructures.....	1023
<i>F. Grasset, V. Roullier, V. Marchi-Artzner, O. Cador, F. Dorson, S. Cordier, Y. Molard, S. Mornet, A. Demourges, E. Duguet, M. Mortier, T. Sasaki, H. Haneda</i>	
Enhancement of high-frequency permeability of FeCoHf films by surface oxidation.....	1028
<i>Shandong Li, Dawei Wang, Peiyu Li, Jenq-Gong Duh</i>	
Spin-dependent Transport Characteristics across Magnetic Nanoscale Junctions through Doped IV and III/V Semiconductors	1032
<i>Keqiang Wang, Jiri Stehlik, Jian-Qing Wang</i>	
High-coercivity SmCo₅ thin films deposited on MgO and glass substrates.....	1038
<i>L. N. Zhang, J. Ding, J. F. Hu, J. S. Chen</i>	
Extraordinary Hall-effect sensor in split-current design for readout of magnetic field-coupled logic devices	1043
<i>M. Becherer, G. Csaba, R. Emling, P. Osswald, W. Porod, P. Lugli, D. Schmitt-Landsiedel</i>	
The structure and magnetic properties of NiO with different sizes	1047
<i>J. J. B. Yi, J. Ding, S. Thonfnee, Y. P. Feng, G. M. Chow</i>	
Growth and Magnetic Properties of Ferromagnetic Co Nanorods Filled inside Carbon Nanotubes towards Nanoscale Spintronics.....	1051
<i>Yasuhiko Hayashi, T. Fujita, T. Tokunaga</i>	
Effect of process conditions and NiO on magnetoresistance of La-(Ca,Ba)-Mn-O composites	1056
<i>Shuiyuan Chen, Yan Xu, Qingying Ye, Zhigao Chen, Zhigao Huang, Dunhui Wang, Youwei Du</i>	
Preparation and Magnetic Properties of Size-monodispersed Fe-Co Alloy Nanoclusters	1062
<i>D. L. Peng, H. She, Y. Chen, G. H. Yue, R. Katoh, K. Sumiyama</i>	
Observation of photogalvanic current for interband absorption in InN films at room temperature	1066
<i>C. G. Tang, Y. H. Chen, Y. Liu, R. Q. Zhang, X. L. Liu, Z. G. Wang</i>	
Magneto-optical investigation of Fe/Zr and Fe/Zr/Fe thin-film systems	1070
<i>E. E. Shalyguina, G. V. Maximova, M. A. Mukasheva, A. N. Shalygin, L. Kozlovski, E. Tamanis</i>	
Conjugated Polymers as Novel Electrochemical and Optical DNA Sensors	1074
<i>Jadranka Travas-Sejdic, Hui Peng, John Spires, Christian Soeller</i>	
Interaction of Nanomaterials with Biological Molecules: Manganese and Dopamine	1080
<i>Chunhui Liu, Haiying He, Ralph H. Scheicher, Ravindra Pandey, Saber Hussain</i>	
Interaction of size expanded DNA bases with small neutral gold nanoclusters	1083
<i>Purshotam Ahrma, Sitansh, Sharma, Harjinder Singh, Abhijit Mitra</i>	
Cytotoxicity of Polystyrene Nanospheres Internalization in Mouse Fibroblast Cells.....	1087
<i>Cheng-Yu Jin, Bang-Shang Zhu, Qing-Hua Lu</i>	
Titanate nanotubes: synthesis, properties and loading with silver-nanoparticles for photochromic application	1093
<i>L. Miao, S. Tanemura, T. Jiang, M. Tanemura, K. Yoshida, R. Huang, G. Xu</i>	
Local structural properties and growth mechanism of ZnO nanostructures.....	1099
<i>Eod-Seok Jeong, Sang-Wook Han, Lionel Vayssieres</i>	
Optical response of carbon nanotube field effect transistor with optical sensitive protein	1102
<i>M. Fujimoto, H. Koyama, N. Nakanishi, Y. Sugiyama, H. Hajime</i>	
Directly Assembly and Electrical Transport Measurement of nanowires by Nano-Manipulator Probes	1107
<i>You Guo Feng, Tay Beng Kang, Li Xiao Cheng, Yang Yi, Sun Xiao Wei</i>	
Determination of contact and intrinsic nanowire resistivity in two-contact ZnO nanowire devices.....	1112
<i>Y. F. Lin, W. B. Jian, Z. Y. Wu, F. R. Chen, J. J. Kai, J. J. Lin</i>	

Table of Contents

Fabrication and Magnetic Properties of Metal Nanowires via AAO Templates.....	1116
<i>S. Thongmee, H. L. Pang, J. Ding, J. B. Yi, J. Y. Lin</i>	
The High-Field Drift Velocity in Degenerately-Doped Silicon Nanowires.....	1121
<i>Hui Houg Lau, Ing Hui Hii, Aaron Chii Enn Lee, M. Taghi Ahmadi, Razali Ismail, Vijay K. Arora</i>	
In-situ TEM electrical and mechanical properties measurements of one-dimensional inorganic nanomaterials.....	1127
<i>D. Goldberg, P. M. F. J. Costa, M. Mitome, Y. Bando</i>	
1/f Noise analysis of ZnO nanowire and thin film.....	1132
<i>Lin Ke, Wang Li, Soo Jin Chua</i>	
P-I-N junction in Silicon Nanowires.....	1137
<i>K. L. Foo, M. B. Yu, N. Singh, K. D. Buddharaju, Y. S. Sun, L. Chan, C. M. Ng</i>	
Direct electrochemistry of horseradish peroxidase in layer-by-layer nanotubes synthesized on template.....	1140
<i>Fang-Hua Wu, Zhi-Chao Hu, Jing-Jing Xu, Yue-Zhing Xian, Li-Tong Jin</i>	
Spectrum Analysis and its Application of Tunneling Current in Scanning Tunneling Microscopy	1145
<i>X. D. Ding, J. X. Zhang</i>	
The Exposure Process Study of 100KV JBX-6300LS Electron-beam Nanolithograph System.....	1148
<i>Qunqing Li, Lihui Zhang, Mo Chen, Shoushan Fan</i>	
Fabrication and characterization of Traveling wave dielectrophoretic (twDEP) microfluidic devices	1152
<i>T. Maturos, A. Wisitsoraat, T. Lomas, K. Jaruwongrungrungsee, A. Sappat, A. Tuantranont</i>	
Electric Field Assisted Fabrication on Si and HOPG Surfaces by AFM	1155
<i>Niandong Jiao, Yuechao Wang, Zaili Dong</i>	
On-Line Displacement Measurement using a High Stability Multiplexed Optical Fiber Interferometer System	1159
<i>Yi Lu, Fang Xie, Sijin Wu</i>	
New Challenges in MOS Compact Modeling for Future Generation CMOS	1162
<i>X. Zhou, G. H. See, G. J. Zhu, Z. M. Zhu, C. Q. Wei, A. Srinivas, J. B. Zhang</i>	
Methodologies for size, and temperature dependant change of materials properties	1167
<i>Mingxia Gu, Chang Q. Sun, Cher Ming Tan, Shan zhong Wang</i>	
Width Effects in Ballistic Graphene Nanoribbon FETs.....	1187
<i>Gengchiao Liang</i>	
Off-State Leakage Current in Nano-Scale MOSFET with Hf-Based Gate Dielectrics.....	1189
<i>Jian-Hong Yang, Gui-Fang Li, Hui-Lan Liu</i>	
Real- and Mode-Space Simulation of Electron Transport in Metallic Carbon Nanotubes using NEGF.....	1193
<i>Zhidong Chen, Ming Zhang, Ximeng Guan, Jinyu Zhang, Zhiping Yu</i>	
Carbon Nanotubes (CNTs) as Conductive Filler for Polymer Composite.....	1198
<i>K. P. Yung, J. Wei, Z. F. Wang, B. K. Tay</i>	