

Table of Contents

Preface.....	v
Hierarchical Diffusive Properties of Electrons in Quasiperiodic Chains.....	1
<i>Michael Schreiber</i>	
Effect of Single-Side Modulation Doping on Low-Temperature Transport Properties in Square Infinite Quantum Wells.....	11
<i>Nguyen Huyen Tung, Doan Nhat Quang and Do Thi Hien</i>	
Nonlinear Optical Conductivity in Doped Semiconductor Superlattices Due to LO Phonon Scattering	23
<i>Luong Van Tung, Tran Cong Phong and Nguyen Thi Le Thuy</i>	
The Effects of the Polarization Charges on the Quantum Lifetime of the Two-Dimensional Electron Gas in a Uniformly-Doped Heterostructure	31
<i>Nguyen Viet Minh</i>	
Possible T_C Superconducting Enhancement in Q2D Materials by Incommensurate Structural Phase Transition.....	41
<i>Do Tran Cat and Ong Phuong Khuong</i>	
Compressed Electron Distribution in the Nanostructure	51
<i>Nguyen Van Tri</i>	
Time and Space Resolved Studies on Metallic Nanoparticles	61
<i>D. Bayer, J. Lange, C. Wiemann, M. Rohmer, M. Bauer and M. Aeschlimann</i>	
Ultra-small One-Dimensional Metallic Nanostructures.....	69
<i>H. Pfnür</i>	
Synthesis and Optical Properties of Colloidal CdS/CdSe/CdS Quantum Wells	79
<i>Le Ba Hai, Nguyen Xuan Nghia, Pham Thu Nga, Vu Duc Chinh, Pham Thuy Linh and Nguyen Thi Thu Trang</i>	

Preparation and Optical Properties of One Dimensional Nano Hydroxides and Oxides.....	87
<i>Lam Thi Kieu Giang, Nguyen Vu, Dinh Xuan Loc, Man Hoai Nam, Gyu-Chul Yi, Tran Kim Anh and Le Quoc Minh</i>	
Hydrothermal Synthesis and Photocatalytic Properties of TiO₂ Nanotubes.....	95
<i>D.D. Vuong, D.T.N. Tram, P.Q. Pho and N.D. Chien</i>	
UHV studies on CO and methanol adsorption and decomposition on pristine and oxidized alumina-supported Co nanoparticles.....	103
<i>T. Nowitzki, V. Zielasek and M. Bäumer</i>	
Surface confined electrochemical compound formation: Incipient sulfidation of Au(111)	113
<i>C. Schlaup, D. Friebel, P. Broekmann, K. Wandelt</i>	
Giant Spin-Polarization and Magnetic Anisotropy of Nanostructures at Surfaces.....	123
<i>H. Brune</i>	
The Role of Spin-Polarized Tunneling on Transport Properties of (1-x) La_{0.7}Ca_{0.3}MnO₃ +xAl₂O₃ Nanocomposites (x = 0 ÷ 5wt%).....	133
<i>Pham Thanh Phong, Nguyen Van Khiem, Nguyen Xuan Phuc and Le Van Hong</i>	
Advanced Metallic Magnetic Materials Prepared by Electro-Chemical Deposition, Vapor Deposition and Rapid Quenching.....	141
<i>Nguyen Hoang Nghi, Mai Thanh Tung, Hoang Nhat Hieu, Nguyen Van Dung, Nguyen Huu Tinh, Le Cao Cuong and Trinh Thi Thanh Nga</i>	
Magnetic Interaction Between Polycrystalline Ultrathin Antiferromagnetic and Ferromagnetic Films	151
<i>Roland Mattheis and Klaus Steenbeck</i>	
The (100) → (111) Transition in Epitaxial Manganese Oxide Nanolayers...	163
<i>F. Allegretti, M. Leitner, G. Parteder, B. Xu, A. Fleming, M.G. Ramsey, S. Surnev, and F.P. Netzer</i>	

Growth and Structure of Zinc Oxide Nanostructured Layer Obtained by Spray Pyrolysis	171
<i>Son Vo Thach, Michel Jouan, Sang Nguyen Xuan, Thoan Nguyen Hoang and Hung Pham Phi</i>	
Influence of Different Post-treatments on the Physical Properties of Sprayed Zinc Oxide Thin Films	177
<i>Thoan Nguyen Hoang, Son Vo Thach, Michel Jouan, Sang Nguyen Xuan and Hung Pham Phi</i>	
The Effect of SiO₂ Addition in Hydrophilic Property of TiO₂ Films.....	185
<i>Tran Thi Duc, Nguyen Thi Mai Huong, Vu Thi Bich, Nguyen Dinh Dung, Nguyen Trong Tinh, and Tran Xuan Hoai</i>	
Investigation of the Transformation of a Modified Iron Oxide Structure During Redox Reaction	193
<i>Luu Thi Lan Anh, Nguyen Ngoc Trung, Van Dinh Son Tho</i>	
Structural Modification of Near-Surface Region of Strontium Titanate Single Crystal Under the Influence of a Static Electric Field Enhanced by X-ray Irradiation.....	201
<i>Alexandr A. Levin and Dirk C. Meyer</i>	
Thermoelectric Properties of Heavily Doped Polycrystalline SrTiO₃	209
<i>Nguyen Trong Tinh and Toshihide Tsuji</i>	
Optimization Study of TiO₂ Film Deposited by IAD Process	219
<i>Pham Hong Tuan</i>	
Polymorphs in GeO₂ Liquid.....	225
<i>P.K. Hung, N.T. Nhan, L.T. Vinh ,T.T.B. Phuong</i>	
Formation of Chiral Aggregates of Tetralactam Macrocycles on the Au(111) Surface	235
<i>Iordan Kossev, Thorsten Felder, Christoph A. Schalley, Fritz Vögtle, Mortiz Sokolowski</i>	
Surface Resonant Raman Spectroscopy at Indium-Nanowire-Terminated Si(111).....	247
<i>N. Esser, K. Fleischer, S. Chandola, J. McGilp</i>	

The Properties of Nano-Hexaferrite Sr-La Prepared by Citrate-Gel Method	257
<i>Dang Le Minh, Le Thanh Cong, Luu Tuan Tai, Nguyen Hanh</i>	
Glucose Sensor Based on Multi-wall Carbon Nanotubes Doped Polypyrrole.....	263
<i>T.T.N. Lien, L.H. Bac, T.D. Lam, and P. Q. Pho</i>	
Structural and Spectral Properties of Curcumin and Metal- Curcumin Complex Derived from Turmeric (Curcuma longa).....	271
<i>Vu Thi Bich, Nguyen Thi Thuy, Nguyen Thanh Binh, Nguyen Thi Mai Huong, Pham Nguyen Dong Yen, and Tran Thanh Luong</i>	
In-situ Chemically Polymerized PANi-SWNTs Composites: Characterizations and Gas Sensing Feature	279
<i>Duong Ngoc Huyen</i>	
Design, Simulation and Experimental Characteristics of Hydrogel-based Piezoresistive pH Sensors	287
<i>Thong Quang Trinh, Jorge Sorber, and Gerald Gerlach</i>	
Optimization of the Thermostable Nanogel Systems for High Temperature Reservoir Application	295
<i>Nguyen Phuong Tung, Nguyen T.Phuong Phong, Nguyen Hoang Duy and Nguyen T. Quynh Anh</i>	
Discovery of Nanotubes in Ancient Damascus Steel.....	305
<i>Marianne Reibold, Peter Paufler, Aleksandr A.Levin, Werner Kochmann, Nora Pätzke, and Dirk C.Meyer</i>	
Materials Research with Energetic Heavy Ions at GSI.....	311
<i>Reinhard Neumann</i>	
Nanoantennas for Surface Enhanced Infrared Spectroscopy	321
<i>F. Neubrech, M. Klevenz, F. Meng, and A. Pucci</i>	
Ultrafast Switching of Coherent Electronic Excitation: Great Promise for Reaction Control on the Femtosecond Time Scale	327
<i>Matthias Wollenhaupt, Tim Bayer, Andrea Klumpp, Cristian Sarpe-Tudoran and Thomas Baumert</i>	

InGaAsp/InP Semiconductor Optical Amplifiers and their Some Nonlinear Effects	337
<i>Vu Doan Mien, Vu Thi Nghiem, Tong Quang Cong and Pham Van Truong</i>	
Simulation and Lock-In Phase Analysis in Photoreflectance Modulation Spectroscopy of Gaas and Photoreflectance Investigations of The Heterojunction Structure Al_xga_{1-x}as(N⁺)/Gaas(P⁻)/Gaas(P⁺)	345
<i>Nguyen Thi Ngoc Ha, Truong Kim Hieu, Le Hong Vu, Huynh Sa Hoang, Pham Thanh Tam, Vuong Trung Kien</i>	
Principally Basic Effects of Laser on the Bulk Semiconductor Bands	355
<i>N.Vinh Quang</i>	
Controlling the Bragg Wavelength Spectral Profile Expansion of FBG Sensors by Nano-Particle Coated Layers	363
<i>Pham Van Hoi, Pham Thanh Binh, Ha Xuan Vinh, Tran Thi Cham</i>	
Controlled Cantilever-Tips Adapted from the Scanning Probe Microscopies as Active Working Elements in Smart Systems.....	371
<i>Michael Hietschold, Falk Müller, Anne-Dorothea Müller, and Thomas Gessner</i>	
Design and Fabrication of a Miniaturized Three-Degree-of-Freedom Piezoresistive Acceleration Sensor Based on MEMS Technology Using Deep Reactive Ion Etching	377
<i>Vu Ngoc Hung, Nguyen Van Minh, Le Van Minh, Nguyen Huu Hung, Chu Manh Hoang, Dzung Viet Dao, Ranjith Amarasinghe, Bui Thanh Tung, and Susumu Sugiyama</i>	
Contributors.....	385