



COMMUNICATIONS IN PHYSICS

ISSN 0868 - 3166

Published by
VIETNAM ACADEMY OF SCIENCE AND TECHNOLOGY

Volume 21, Number 1

March 2011

Contents

	Page
Tran Huu Phat and Phan Thi Duyen – Several Physical Properties of Two Interacting Complex Scalar Fields at Finite Density	1
Tran Minh Hieu – Sparticle Masses in a Supersymmetric Grand Unified Model	11
Phung Kim Phu, Nguyen Minh Thuan, Tran Nam Trung and Nguyen Van Minh – Synthesis and Characterization of $\text{Rb}_x\text{Mn}[\text{Fe}(\text{CN})]_6$ and $\text{Mn}_3[\text{Cr}(\text{CN})_6]_2$	19
Vu Van Hung and Ho Khac Hieu – Study the Temperature Dependence of EXAFS Cumulants of Si and Ge by the Anharmonic Correlated Einstein Model	25
Pham Duc Thang – A Small-angle Neutron-scattering Study in Fe-Pt-Al	35
Vu Thi Thai Ha, Nguyen Thi Quy Hai, and Nguyen Ngoc Long – Effect of Heating Rate on the Responses of LiF: Mg, Cu, Na, Si Thermoluminescent Phosphor	43
Nguyen Nang Dinh, Le Ha Chi, Tran Thi Chung, and Thien Phap Nguyen – Spectroscopic and Photoluminescent Properties of Nanostructured Polyfluorenes/ TiO_2 Composite Films Used for OLEDs	51
Dang Tran Chien, Pham Duy Long, Pham Van Hoi, and Le Ha Chi – Nanocomposite Thin Film TiO_2/CdS Electrodes Prepared by Thermal Evaporation Process for Photovoltaic Applications	57
Nghiem Thi Ha Lien, Vu Xuan Hoa, Vu Thi Thuy Duong, Nguyen Van Tinh, and Tran Hong Nhung – Synthesis and Optical Properties of Colloidal Gold Nanoparticles for Biomedical Applications	63
Ho Quang Quy, Hoang Dinh Hai, and Hoang Van Nam – Influence of Principle Parameters on the Average Stiffness of Optical Tweezer Using Pulsed Gaussian Beams	71
Vu Van Hung, Hoang Van Tich, and Dang Thanh Hai – Study of Melting Temperature of Metals: Pressure Dependence	77
Ho Quang Quy, Nguyen Van Hoa, and Nguyen Thi Thanh Tam – Pulse Reshaping by the Two-port Nonlinear Fiber Mach-Zehnder Interferometer	83
Do Thuy Chi, Bui Huy, Nguyen Thuy Van, and Pham Van Hoi – Investigation of 1d Photonic Crystal Based on Nano-porous Silicon Multilayer for Optical Filtering	89