



CONTENTS

Fields and Elementary Particles

Hameed D.N., Hasan A.K. Energy Levels of Isobaric Nuclei (^{16}N , ^{16}F) within the Modified Surface Delta-Interaction Model 579

Hradyskiy A., Stepanoskiy Y. The Massless Limit of Bargmann–Wigner Equations for a Massive Graviton 584

Optics, Atoms and Molecules

Closca V., Puica-Melniciuc N., Closca M., Avadanei I.M., Dorohoi D.O. Spectral Study of (4'-Phenyl)-1,2,4-Triazol-1-Ium-Phenacylid (PTPhY) in Ternary Solutions 592

Abebe T., Gemechu N. Two-Level Atom with Squeezed Light from Optical Parametric Oscillators 600

Yamsuk Y., Yasaka P., Sangwaranatee N., Keawkao J. Fabrication and Characterization of Sm^{3+} -Doped Zinc Barium Borate Glasses 608

Romanenko V.I., Udovytska O.G., Khodakovskiy V.M., Yatsenko L.P. Atomic Momentum Diffusion in the Field of Counter-Propagating Stochastic Light Waves 616

General Physics

Fiscaletti D., Sorli A. Quantum Relativity: Variable Energy Density of Quantum Vacuum as the Origin of Mass, Gravity, and the Quantum Behavior 623

Kosobutskyy P. Optimal Regularities of the Normal Distribution for Estimating the Sample Statistics of the Results of a Physical Experiment 645

Physics of Liquids and Liquid Systems, Biophysics and Medical Physics

Chechko V.Ye., Gotsulsky V.Ya. Anomalous Light Scattering in Aqueous KCl Solutions 654

Semiconductors and Dielectrics

Korsunskaya N.O., Markevich I.V., Stara T.R., Borkovska L.V., Lavoryk S., Melnichuk L.Yu., Melnichuk O.V. Correlation between Photoluminescent and Photoelectrical Properties of Mn-Doped ZnO 660

Chronicle

In Memory of Mykola Grygorovych Nakhodkin (1925–2018) 665

In Memory of Sergii Mykhailovych Levitsky (1926–2018) 668