

CONTENTS

Nuclei and Nuclear Reactions

Zheltonozhskiy V.O., Savrasov A.M., Solodovnyk K.M., Plujko V.A., Gorbachenko O.M., Davydovska O.I. Isomer Ratios and Mean Angular Momenta of Primary ^{97}Nb Fragments at ^{235}U and ^{238}U Photofission 285

Atoms and Molecules

Bordyuh A.B. Mechanism of Dimerization of Viologens in Liquid Crystalline Medium 294

Optics, Lasers, and Quantum Electronics

Sizhuk A.S., Yezhov S.M. Application of the Generalized Absorptance for Accounting the Recoil and Doppler Effects 299

Plasmas and Gases

Cherednychenko T.M., Garkusha I.E., Makhlai V.O., Solyakov D.G., Petrov Yu.V., Chebotarev V.V., Ladygina M.S., Marchenko A.K., Staltsov V.V., Yelisyeyev D.V., Astashynski V.I., Ananin S.I. Creation of a Compression Zone in the Plasma Steam MPC under Different Initial Conditions 306

Moiseenko V.E., Lozin A.V., Kozulia M.M., Mironov Yu.K., Romanov V.S., Kononov V.G., Shapoval A.N. Alfvén Plasma Heating in Stellarator Uragan-2M 311

Solid Matter

Kozinetz A.V., Litvinenko S.V., Skryshevsky V.A. Physical Properties of Silicon Sensor Structures with Photoelectric Transformation on the Basis of “Deep” p - n -Junction . . . 318

Morozovska A.N., Glinchuk M.D., Varenyk O.V., Udod A., Scherbakov C.M., Kalinin S.V. Flexoelectric Effect Impact on the Hysteretic Dynamics of the Local Electromechanical Response of Mixed Ionic-Electronic Conductors 326

Nanosystems

Boichuk V.I., Bilynskyi I.V., Pazyuk R.I. Miniband Electrical Conductivity in Superlattices of Spherical InAs/GaAs Quantum Dots 335

General Problems of Theoretical Physics

Vasyuta V.M., Tkachuk V.M. Inverse Square Potential in a Space with Spin Noncommutativity of Coordinates 343

Teslenko V.I. Fourth-Order Differential Equation for a Two-Stage Absorbing Markov Chain with a Stochastic Forward Transition Probability 349