



## CONTENTS

### Fields and Elementary Particles

*Afanasyev S.N.* Total and Differential Cross-Sections of  $^{16}\text{O}(\gamma, n)^3\text{He}\alpha\ ^8\text{Be}_0$  Reaction . . . . . 3

### Optics, Atoms and Molecules

*Nagy E.A., Gedeon V.F., Gedeon S.V., Lazur V.Yu.* Electron-Impact Excitation of  $5^1S - 5^1P^o$  Resonance Transition in Sr Atom . . . . . 11

### Liquid Crystals and Polymers

*Skryshevski Yu.A., Vakhnin A.Yu.* Comparisons of the Efficiency of Excitation Energy Transfer by Singlet and Triplet Excitons in Carbazolyl-Containing Polymers . . . . . 25

### Semiconductors and Dielectrics

*Trubaieva O.G., Lalayants A.I., Chaika M.A.* Band Gap Change of Bulk  $\text{ZnS}_x\text{Se}_{1-x}$  Semiconductors by Controlling the Sulfur Content . . . . . 33

*Kozinetz A.V., Skryshevsky V.A.* Amorphous Submicron Layer in Depletion Region: New Approach to Increase the Silicon Solar Cell Efficiency . . . . . 38

*Strikha M.V., Kurchak A.I., Morozovska A.N.* Influence of Domain Structure in Ferroelectric Substrate on Graphene Conductance (Authors' Review) . . . . . 49

### Surface Physics

*Gorishnyi M.P., Verbitsky A.B.* Donor-Acceptor Interaction in Films of Tetracene-Tetracyanoquinodimethane Heterostructures and Composites . . . . . 70

### Chronicle

*Tan'shyna A.* Lev Landau. Ukraine, Kharkiv, UPTI . . . . . 81