

CONTENTS

Nuclei and Nuclear Reactions

Hussain K.A., Mohsin M.K., Sharrad F.I. Calculation of the Positive Parity Yrast Bands of $^{190-198}\text{Hg}$ Nuclei 653

Atoms and Molecules

Choudhury M.D., Sen R., Sharma B.I. Vibrational IR Active Frequencies of C_{36} : an Algebraic Approach 661

Optics, Lasers, and Quantum Electronics

Staschuk V.S., Kravets V.G., Lysiuk V.O., Polyanska O.P., Stukalenko V.V., Yampolsky A.L. Structure and Optical Properties of $(\text{Co}_{41}\text{Fe}_{39}\text{B}_{20})_x(\text{SiO}_2)_{1-x}$ Nanocomposites 666

Soft Matter

Makhlaiichuk V.N. Kinematic Shear Viscosity of Liquid Alkaline Metals 672

Solid Matter

Franiv A.V., Kashuba A.I., Bovgyra O.V., Futey O.V. Elastic Properties of Substitutional Solid Solutions $\text{In}_x\text{Tl}_{1-x}\text{I}$ and Sound Wave Velocities in Them 679

Nadutov V.M., Perekos A.Ye., Voinash V.Z., Zalutskiy V.P., Kabantsev T.G. Thermal Stability of Solid So-

lutions Formed by Ultrasonic Milling of Cu-Co and Cu-Fe Powder Mixtures 685

Mel'nyk P.V., Nakhodkin M.G., Fedorchenko M.I. Influence of Changes in Defect States on the Properties of Si-Gd-O Photocathode. 692

Rasheed H.S., Ahmed Naser M., Matjafri M.Z. New ZnO/Au/ZnO Multilayer Field Effect Transistor with Extended Gate as a Sensing Membrane 699

Nanosystems

Tomchuk P.M., Starkov V.M., Butenko D.V. Integral Equations in the General Theory of Light Absorption and Scattering 705

General Problems of Theoretical Physics

Manoilov E.G., Kravchenko S.A., Snopok B.A. Features of Near-Surface Layer at Monomolecular Isotropic Adsorption: Nonequilibrium Molecular Dynamics Simulation 717

Astrophysics and Cosmology

Beckwith A.W., Moskaliuk S.S. Generalized Heisenberg Uncertainty Principle in Quantum Geometrodynamics and General Relativity 727