

## CONTENTS

<b>A. Burov</b> Definition of Physics	...3
<b>S. Konstantinov</b> A New Look at the Cosmology of the Universe	...10
<b>S. Konstantinov</b> Proton Polarizability and Quark-Gluon Plasma	...18
<b>F. Gorbatsevich</b> Physical Categories – Mass and Density of Bodies	...28
<b>Tanui Peter, Sirma K. Kenneth, Jophine S. Namwetako</b> Giant Neutron Nucleus and Properties of Neutron Stars	...38
<b>Kiboi D. Chenge, Peter Tanui, Limo C. Samuel , Kapil M. Khanna</b> Electron-Hole Superconductivity in Bi-Layer Graphene Superconductors	...43
<b>P. Kudryavtsev</b> Modeling of Kinetics and Structure Formation at Sol-Gel Transition	...62
<b>P. Kudryavtsev , M. Zilberman</b> Osmotic Stability of Inorganic Ion-Exchange Materials	...74
<b>G. Ahmadov, H. Ibrahimov, M. Jafarov, R. Rzaev</b> Bi <sub>2</sub> Te <sub>3</sub> -SiO <sub>2</sub> Nanocomposite Materials	...117
<b>M. Ioelovich</b> Distortion and Paracrystallinity of C1β Crystallites	...125
<b>M. Ioelovich</b> Distinctive Features of Cellulose Nanocrystallites	...132
<b>NEWS &amp; EVENTS</b>	
<b>75<sup>th</sup> anniversary of Prof. E. Levich.</b>	...147
<b>New books by our authors</b>	
• <b>O.Figovsky, O.Bolshakov, I.Vihareva</b> Nonisocyanate Polyurethanes: Green Solution	...148
• <b>D.Belin, P.Kudryavtsev</b> Graphene and Graphene Modified Polymer and Cementitious Composites <b>P.Kudryavtsev, D.Belin</b> Silicon Dioxide Nanoparticles. Preparation, Properties, Application	
<b>Congress, conferences, symposia, etc.</b>	...152
• 7 <sup>th</sup> International Conference on Smart Monitoring, Assessment and Rehabilitation of Civil Structures, SMAR 2024	
• 3 <sup>rd</sup> World Congress “Nanoscience and Nanotechnology”, NANOTEK 2024	
• 6 <sup>th</sup> International Conference “Material Science and Engineering”, MATERIALS 2024	
• Gordon Research Conference “Computational Material Science and Engineering “	