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Nanocomposites Based On Thermosetting Polyurethane Matrix And Chemically Modified Multi-Walled Carbon Nanotubes -- Polymeric Composite Films with Controlled Release of Natural Antioxidant Enoxil -- High-Temperature Electrochemical Synthesis of Nanostructured Coatings of Molybdenum (Tungsten)–Nickel (Cobalt) Alloys and Intermetallic Compounds -- Structure and Electrical/Dielectric Properties of Ion-Conductive Polymer Composites Based on Aliphatic Epoxy Resin and Lithium Perchlorate Salt -- Mechanical and Thermal Characteristics of Irradiation Cross-linked Hydrogels -- Nanostructural-and-nanochemical Processes in Peloid Sediments Aided with Biogeocenosis -- Part II: Nanocomposites and Nanomaterials -- Directional Synthesis of SnO2-based Nanostructures for Use in Gas Sensors -- “Polymer-oxide” Micro/Nano-composites: Background and Promises -- Interactions between Carbon-based Nanostructures and Biomembranes – Computer Simulations Study -- Percolation Threshold of 5-Cyanobiphenyls Mesogene Phases between Graphene – Computer Simulation Study -- The Ultrasonic Treatment as a Promising Method of Nanosized Oxide CeO2-MoO3 Composites Preparation -- High-Temperature Electrochemical Synthesis of Nanopowders of Tungsten Carbide in Ionic Melts -- Magnetic Memory of Antitumor Magneto-sensitive Nanocomplex -- Nonlinear Optical Properties of Polymer Nanocomposites with a random and Periodic Distribution of Silver Nanoparticles -- The Nanocomposite Diffusion Coating of Details prepared of Boriding -- Ni Addition Induced Changes in Structural, Magnetic and Cationic Distribution of Zn0.75-xNixMg0.15Cu0.1Fe2O4 Nanoferrite -- Dielectric Properties and AC Conductivity of Epoxy/Hybrid Nanocarbon Filler Composites -- Obtaining of the Modified NH4NO3 Granules with 3-D Nanoporous Structure: Impact of Humidifier Type on the Granule's Structure -- Bifunctional Silicas with Immobilized Lignin -- Cooperative Phenomena in Spin-crossover Molecular Crystals -- Copper Nucleation on Nickel from Pyrophosphate-based Polyligand Electrolyte -- Structural Study of the Modified Cu0.4Co0.4Ni0.4Mn1.8O4 and Cu0.1Ni0.8Co0.2Mn1.9O4 Ceramics using Combined Methods -- Effect of a Hydrogen Sulfide Containing Atmosphere on the Physical and Mechanical Properties of Solid Oxide Fuel Cell Materials -- Influence of Annealing in Vacuum on Dispersion Kinetics of Titanium and Zirconium Nanofilms Deposited onto Oxide Materials -- Grain-porous structure and exploitation properties of humidity-sensitive magnesium aluminate spinel-type ceramics -- Index.

Sommario/riassunto

This book presents some of the latest achievements in nanotechnology and nanomaterials from leading researchers in Ukraine, Europe, and beyond. It features selected peer-reviewed contributions from participants in the 5th International Science and Practice Conference Nanotechnology and Nanomaterials (NANO2017) held in Chernivtsi, Ukraine on August 23-26, 2017. The International Conference was organized jointly by the Institute of Physics of the National Academy of Sciences of Ukraine, Ivan Franko National University of Lviv (Ukraine), University of Tartu (Estonia), University of Turin (Italy), and Pierre and Marie Curie University (France). Internationally recognized experts from a wide range of universities and research institutions share their knowledge and key results on topics ranging from energy storage to biomedical applications. This book's companion volume also addresses nanooptics, nanoplasmonics, and interface studies.