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Nota di contenuto	PartI: Nanocomposites and Nanostructures -- Chapter1: A Microscopic Description of Spin Dynamics in Magnetic Multilayer Nanostructures -- Chapter2: Development of the nano mineral phases at the steel-bentonite interface in time of the evolution of geological repository for radioactive waste -- Chapter3: Development of a controlled in-situ process for the formation of porous anodic alumina and Al nanomesh from thin aluminum films -- Chapter4: Electrooxidation of ethanol on nickel-copper multilayer metal hydroxide electrode -- Chapter5: Metal surface engineering based on formation of nanoscaled phase protective layers -- Chapter6: Electrical Conductivity and 7Li NMR Spin-Lattice Relaxation in Amorphous, Nano- and Microcrystalline Li2O-7GeO2 -- Chapter7: Influence of surface ultrafine grain structure on cavitation erosion damage resistance -- Chapter8: The effect of

mechanochemical and ultrasonic treatments on the properties of composition CeO2-MoO3=1:1 -- Chapter9: Behavior oftempered surface nanocrystalline structures obtained by mechanical-pulse treatment -- Chapter10: Nano-sized Adsorbate Islands Formation in Adsorptive Anisotropic Multi-layer Systems -- Chapter11: The effect of ultrasonic treatment on the physic-chemical properties of ZnO/MoO3 system -- Chapter12: Hybrid nanocomposites synthesized into stimuli responsible polymer matrices: synthesis and applications prospects -- chapter13: Preparation and complex study of thick films based on nanostructured Cu0.1Ni0.8Co0.2Mn1.9O4 and Cu0.8Ni0.1Co0.2Mn1.9O4 ceramics -- Chapter14: Nanoscale investigation of porous structure in adsorption-desorption cycles in the MgO-Al2O3 ceramics -- Chapter15: Structure, morphology and spectroscopy studies of La1-xRExVO4 nanoparticles synthesized by various methods -- Chapter16: Investigation the conditions of synthesis of alumonickel spinel -- Chapter17: IV-VIB groups metals borides and carbides nanopowders corrosion resistance in nickeling electrolytes -- Chapter18: Hydrodynamic and Thermodynamic Conditions for Obtaining a Nanoporous Structure of Ammonium Nitrate Granules in Vortex Granulators -- Chapter19: Nanostructured mixed oxide coatings on silumin incorporated by cobalt -- Chapter20: Effect of carbon nanofillers on processes of structural relaxation in the polymer matrixes -- chapter21: Simulation of tunneling conductivity and controlled percolation in 3D nanotube-insulator composite system -- Chapter22: Radiation-stimulated formation of polyene structures in polyethylene nanocomposites with multi-walled carbon nanotubes -- Chapter23: Theoretical analysis of metal salt crystallization process on the thermoexfoliated and disperse graphite -- Chapter24: Modeling of dielectric permittivity of polymer composites with mixed fillers -- Chapter25: Nanostructural effects in Iron-oxide-silicate materials of Earth crust -- Chapter26: Two-dimensional ordered crystal structure formed by chain molecules in the pores of solid matrix -- Chapter27: Joint Electroreduction of Carbonate and Tungstate Ions as the Base for Tungsten Carbide Nanopowders Synthesis in Ionic Melts -- Chapter28: The kinetics peculiarities and the electrolysis regime effect on the morphology and phase composition of Fe-Co-W(Mo) coatings -- Chapter29: Dispersing of Molybdenum Nanofilms at the Non-metallic Materials as a Result of Their Annealing in Vacuum -- PartII: Applications -- Chapter30: Effective Hamiltonians for magnetic ordering within periodic Anderson-Hubbard model for quantum dot array -- Chapter31: PET Ion-Track Membranes: Formation Features and Basic Applications -- Chapter32: Impact of carbon nanotubes on HDL–like structures – computer simulations -- Chapter33: Approximation of a simple rectangular lattice for a conduction electron in grapheme -- Chapter34: Simulation of the formation of a surface nanocrater under the action of high-power pulsed radiation -- Chapter35: Ballistic transmission of the Dirac quasielectrons through the barrier in the 3D tpological insulators -- Chapter36: The Perspective Synthesis Methods and Research of Nickel Ferrites -- Chapter37: Electron iradiation of carbon nanotubes -- Chapter38: Influence of Irradiation with Deuterium Ions on the Magnetic Properties and Structure of Nickel -- Chapter39: Formation of VI-B group metals silicides from molten salts -- Chapter40: The structure of reinforced layers of the Complex Method -- Chapter41: Technology and the Main Technological Equipment of the Process to Obtain N4HNO3 with Nanoporous Structure -- Chapter42: Study of Structural Changes in a Nickel Oxide Containing Anode Material during Reduction and Oxidation at 600°C. .

Sommario/riassunto

This book highlights some of the latest advances in nanotechnology

and nanomaterials from leading researchers in Ukraine, Europe, and beyond. It features contributions from participants in the 6th International Science and Practice Conference Nanotechnology and Nanomaterials (NANO2018) in Kiev, Ukraine on August 27-30, 2018 organized by the Institute of Physics of the National Academy of Sciences of 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 material properties, behavior, and synthesis. This book's companion volume also addresses topics such as nanooptics, energy storage, and biomedical applications.