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Nota di contenuto	Advanced Materials, Synthesis, Development and Application; Preface, Committees and Sponsors; Table of Contents; I. Diagnostics and Engineering of Novel Materials; Bitumen Modification; Calculation of Energy Release Function of Ion Beam in Solids; Cathodoluminescence and Radiation-Induced Absorption in YLiF ₄ Crystals in Excitation by Electron Pulse; Colorimetric Polymethacrylate Sensor; Determination of the Optimal Operation Mode of the Platinum Dehydrogenation Catalysts Effect of Bicyclic Polyfunctional Modifier (BPM) on the Characteristics of Wood Composite Materials Based on Urea Formaldehyde Oligomers Effect of Energy on Plasmodynamic Synthesis Product in the Carbon-Nitrogen System; Effect of Hydrogen on Plastic Strain Localization of Construction Steels; Effect of the Zeolitic Matrix on the Reduction Process of Cu ²⁺ Cations in Clinoptilolite, Mordenite and Erionite; Estimation of Radiation Doses in X-Ray Visualization of Biological Objects; Evaluation of Operational Properties of Composite Reinforcement Used in Concrete Structures Features of F ₂ enters Accumulation in Oxygen-Containing LiF Crystals Hydrogen Accumulation in Technically Pure Titanium Alloy at Saturation from Gas Atmosphere; Hydrogen Redistribution in Technically Pure Titanium Alloy under X-Ray Exposure at Room Temperature; Influence

of Modifiers on the Structure and Properties of Composite Coatings System Ti-B-Fe; Influence of the Radiation Destruction of Polymeric Insulation on its Ageing in the Impulse Electric Field
Investigation of Commercially Pure Titanium Structure during Accumulation and Release of Hydrogen by Means of Positron Lifetime and Electrical Resistivity Measurements Measurement of Thermal Emission during Deformation of Metals; Non-Destructive Testing of Aluminum Alloys by Using Miniature Eddy-Current Flaw Transducers; Numerical Comparison of Heterogeneous Combustion Waves in Horizontal and Vertical Porous Objects under Free Convection; Numerical Method for Investigation of 1D Processes in Porous Media with Heterogeneous Reactions when Flow Rate of Oxidant Regulates itself
Optimization of High-Octane Gasoline Production Physical and Chemical Processes Research of Isotope Separation in Plasma under Magnetic Field; Positron Annihilation Spectroscopy of Defects in Commercially Pure Titanium Saturated with Hydrogen; The Resource Efficiency Assessment Technique for the Foundry Production; Thermal Cycle Durability of Heat-Shielding Coatings on the Basis of Zr-Y-O/Si-Al-N under Ion Treatment of Copper Substrates; Two Different States of Copper Ions in Zeolites
Unfiltered Aluminium Vacuum Arc Plasma Application for High-Frequency Short-Pulse Plasma Immersion Ion Implantation

Sommario/riassunto

Collection of selected, peer reviewed papers from the X International Conference Prospects of Fundamental Sciences Development (PFSD-2013), April 23-26, 2013, Tomsk, Russia. The 52 papers are grouped as follows: I. Diagnostics and Engineering of Novel Materials; II. Chemistry and Physics of Materials Surface
