



Volume 19, Issue 2

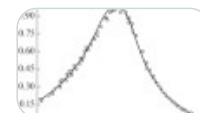
April 2025



44 articles in this issue

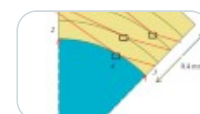
A Simple Physical Model of Nonlinear Dependence of Helium Stopping Power on the Velocity of Low-Energy Hydrogen Ions

OriginalPaper | 10 September 2025 | Pages: 273 - 275



Mechanisms of the Volume Capture of Fast Charged Particles in a Curved Single Crystal

OriginalPaper | 10 September 2025 | Pages: 276 - 284



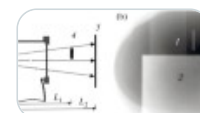
On the Features of the Formation of Polar Distribution of Sputtered Atoms in the MD Model of the (001) Ni Face Sputtering

OriginalPaper | 10 September 2025 | Pages: 285 - 289



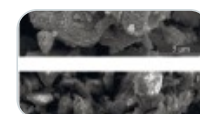
Anomaly in the Interaction between Microfocus Bremsstrahlung from a New 18 MeV Betatron-Based Source and a Sharp Edge of a Steel Plate

OriginalPaper | 10 September 2025 | Pages: 290 - 295



Modification of Bentonite Properties with Iron Oxide Nanoparticles

OriginalPaper | 10 September 2025 | Pages: 296 - 303



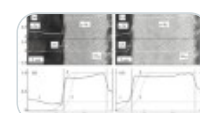
Study of Radiation Resistance of Optical Properties of ZrO₂ Micropowder Modified with MgO Nanoparticles

OriginalPaper | 10 September 2025 | Pages: 304 - 308

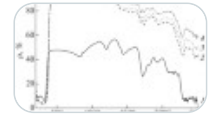


Study of Silicon Amorphization by Xenon Ions Using Transmission Electron Microscopy and Monte Carlo Simulation

OriginalPaper | 10 September 2025 | Pages: 309 - 313

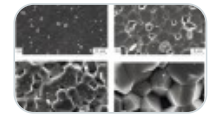


Influence of UV and Visible Radiation on Optical Properties of Coatings Based on Two-Layer Hollow Particles of Silicon Dioxide and Zinc Oxide



OriginalPaper | 10 September 2025 | Pages: 314 - 319

Action of a High-Power Ion Beam of Nanosecond Duration on Commercial AlN Ceramics



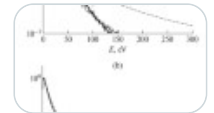
OriginalPaper | 10 September 2025 | Pages: 320 - 323

Change in the Charge State of MOS Structures under Radiation and High-Field Injection at a Constant Voltage



OriginalPaper | 10 September 2025 | Pages: 324 - 328

Energy Spectra of Atoms Sputtered by Low-Energy Ions: Computer Simulation



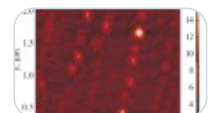
OriginalPaper | 10 September 2025 | Pages: 329 - 333

Calculation of Binding Energy in a Fragment of a Teflon Molecule Using Density Functional Theory



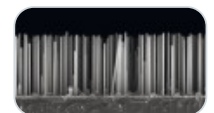
OriginalPaper | 10 September 2025 | Pages: 334 - 338

On the Use of Underwater Plasma and Magnetic Pulse Treatment of FeSiBNb Ribbon Amorphous Alloys



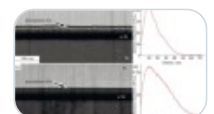
OriginalPaper | 10 September 2025 | Pages: 339 - 344

A Study of Elastic Light-Emitting Diode Based on CsPbBr₃ Perovskite Film Crystallized on a Gallium Phosphide Nanowires Array



OriginalPaper | 10 September 2025 | Pages: 345 - 353

Initiation of Periodic Relief Development on the Silicon Surface under Ion Irradiation



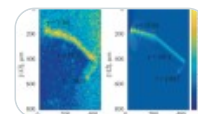
OriginalPaper | 10 September 2025 | Pages: 354 - 357

Diversity of Different-Scale Atomic Groups in a Cu–NbTi Composite under the Influence of Batch Hydroextrusion



OriginalPaper | 10 September 2025 | Pages: 358 - 364

Contemporary Phase and Achievements of the X-ray Computer Diffraction Microtomography



OriginalPaper | 10 September 2025 | Pages: 365 - 369

Tribological Properties of Steel Surface in the Presence of Thermolysis Products of Nickel and Zinc Carboxylates Based on Substituted Aromatic Acids



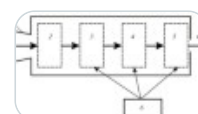
OriginalPaper | 10 September 2025 | Pages: 370 - 376

Etching Tracks of Swift Heavy Ions as a Tool for Creating Elongated Nanopores in Olivine



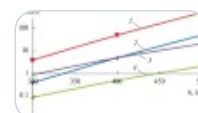
OriginalPaper | 10 September 2025 | Pages: 377 - 381

Method for Modeling Free Molecular Flow in the Presence of Particle Sources Inside the Computational Domain



OriginalPaper | 10 September 2025 | Pages: 382 - 389

Study of the Force Impact on the Surface of a Space Debris Object during Its Noncontact Removal from Orbit



OriginalPaper | 10 September 2025 | Pages: 390 - 398

Structural Evolution of Nanoscale Ferroelectric Hf_{0.5}Zr_{0.5}O₂ Layers as a Result of Their Cyclic Electrical Stimulation



OriginalPaper | 10 September 2025 | Pages: 399 - 404

Structural Analysis of Brazilian Graphite by X-ray Diffraction, Scanning Electron Microscopy, and Thermogravimetric Analysis with Simultaneous Differential Scanning Calorimetry



OriginalPaper | 10 September 2025 | Pages: 405 - 412

Crystallographic Theory of Martensitic Transformations



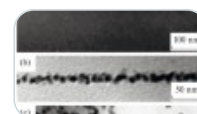
Device for Determining the Contour of the Visible Area of Optical Elements (Contourograph)



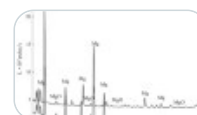
Two Channels of Minority Charge Carriers Recombination in a Homogeneous Semiconductor Target



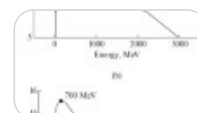
The Role of Electrostatic Field in the Appearance of a Narrow and Dense Layer of Metal Nanoparticles near the Surface of a Metal-Containing Dielectric after Electron Irradiation



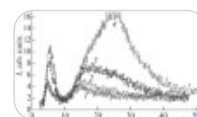
The Effect of Irradiation with a High-Power Ion Beam on Atmospheric Oxidation of Polycrystalline Magnesium



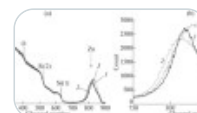
Modeling of Damage along the Tracks of Swift Heavy Ions in Polyethylene



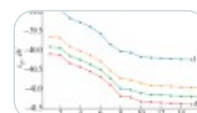
Analysis of the Angle-Resolved X-ray Photoelectron Emission Spectra of Highly Oriented Pyrolytic Graphite



Study of SiO₂ Films Obtained by PECVD and Doped with Zn Ions

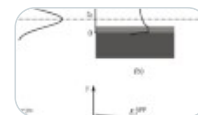


Interpretation of X-ray Photoelectron Spectra of Ge(111), GeO₂/Ge(111), and C₆₀F₁₈/Ge(111) Samples Using Quantum Chemical Calculations



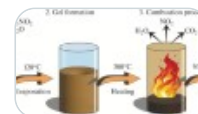
On Optimal Conditions for Generation of Terahertz Surface Plasmon-Polaritons by the End-Fire Coupling Technique

OriginalPaper | 10 September 2025 | Pages: 465 - 469



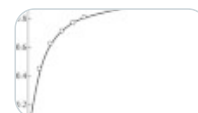
Photocatalytic Activity of Ba-Doped BiFeO₃ Nanoparticles

OriginalPaper | 10 September 2025 | Pages: 470 - 480



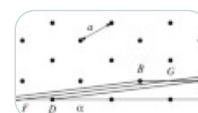
Size Dependence of Linear Tension at a Curved Two-Dimensional Phase Boundary

OriginalPaper | 10 September 2025 | Pages: 481 - 485



Calculation of Parameters of Electromagnetic Radiation of Accelerated Electron Beams during Sliding Interaction with a Dielectric Surface

OriginalPaper | 10 September 2025 | Pages: 486 - 490



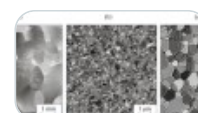
Change in the Free Volume in Amorphous Al₈₈Ni₁₀Y₂ Alloy under Plastic Deformation

OriginalPaper | 10 September 2025 | Pages: 491 - 496



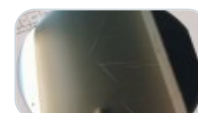
Structural Suppression of Blister Formation on the Surface of Tungsten under 30-keV He⁺-Ion Implantation

OriginalPaper | 10 September 2025 | Pages: 497 - 503



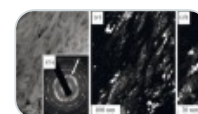
Polymorphic States in the Electron-Beam Exposure-Induced CaSi₂ Film Growth at the CaF₂ Epitaxy on Si

OriginalPaper | 10 September 2025 | Pages: 504 - 509

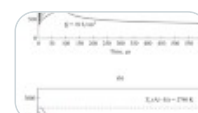


Thermal Stability of Titanium Film Formed on a Substrate by Vacuum Plasma (Argon Plasma) Electric Arc Sputtering

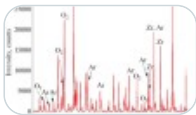
OriginalPaper | 10 September 2025 | Pages: 510 - 514



Erosion of Aluminum-Silicon Eutectic Alloy under Compression Plasma Flows Impact

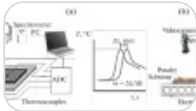


Synergistic Effects of Sr-CaP and ZrO₂ Coatings on the Corrosion Behavior of Magnesium Alloy for Implant Applications



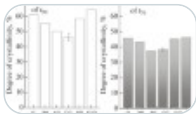
OriginalPaper | 10 September 2025 | Pages: 525 - 533

Self-Propagating High-Temperature Synthesis in Multilayer Ti/Al/C Powder Systems



OriginalPaper | 10 September 2025 | Pages: 534 - 539

Modification of the Structure and Elastic-Strength Properties of Elastomers Based on Nitrile Butadiene Rubber with the X-ray



OriginalPaper | 10 September 2025 | Pages: 540 - 544