

Contents

Vol. 10, No. 5, 2016

A simultaneous English language translation of this journal is available from Pleiades Publishing, Ltd.
Distributed worldwide by Springer. *Journal of Surface Investigation: X-ray, Synchrotron and Neutron Techniques* ISSN 1027-4510.

Investigation of Secondary-Emission Signal Formation in the Low-Voltage SEM Mode <i>V. V. Kazmiruk, I. G. Kurganov, N. N. Osipov, A. A. Podkopaev, and T. N. Savitskaya</i>	887
Backscattered Electron Imaging of Micro- and Nanostructures: 5. SEM Signal Formation Model <i>Yu. A. Novikov</i>	892
Recovery of Differential Cross Sections for Inelastic Scattering Based on X-Ray Photoelectron-Emission Spectra <i>V. P. Afanas'ev, A. S. Gryazev, D. S. Efremenko, P. S. Kaplya, and N. V. Lyapunov</i>	906
Analysis of the Oscillation Intensity of RHEED Specular Reflection during the MBE Growth of CaF ₂ /Si/CaF ₂ Structures <i>A. A. Velichko, V. A. Ilyushin, A. U. Krupin, V. A. Gavrilenko, and N. I. Filimonova</i>	912
Effect of Irradiation on Interfacial Interaction and Structure Formation in Filled PTFE Composites <i>N. V. Sadovskaya, A. Yu. Obvintsev, R. S. Khatipov, D. I. Seliverstov, and S. A. Khatipov</i>	917
Electron and Probe Microscopy Investigation of the Surface of Elastomers Modified with Antifriction Fillers <i>O. O. Stolyarova, T. I. Muravyeva, R. V. Gainutdinov, A. V. Morozov, D. L. Zagorskiy, N. N. Petrova, and V. V. Portnyagina</i>	925
Influence of Annealing on the Structure of Nanoporous Oxide Films on the Surface of Titanium–Aluminum Powder Alloy <i>K. V. Stepanova, N. M. Yakovleva, A. N. Kokatev, and H. Pettersson</i>	933
Surface Morphology and Electrocatalytic Properties of Nickel Nanoparticles Formed in Track Pores <i>S. A. Ziganshina, A. P. Chuklanov, D. A. Bizyaev, and A. A. Bukharaev</i>	942
Influence of the Probe Sizes on the Parameters of the Surface Morphology of Hemispherical-Grain Polysilicon Films: Estimation via Atomic-Force Microscopy <i>A. V. Novak and V. R. Novak</i>	949
Dislocation Glide in GaN Films Grown by the Lateral-Overgrowth Method Induced by Low-Energy Electron-Beam Irradiation <i>E. B. Yakimov and P. S. Vergeles</i>	959
Calculation of the Electrical Conductivity of a Thin Metal Layer in the Case of Different Specular Reflectances of Its Surfaces <i>A. I. Utkin, E. V. Zavitaev, and A. A. Yushkanov</i>	962
Properties of Oxide Films on Nickel Contact Surfaces <i>E. I. Bublikov, V. I. Kulinich, and E. E. Shcherbakova</i>	969
Surface Energy and the Melting Temperature of Loosened Metal Films <i>O. V. Gudieva, P. K. Korotkov, V. A. Sozaev, and Kh. B. Khokonov</i>	977
Study of the Composition and Properties of Protective Layers Formed by the Ion-Beam-Assisted Deposition of Cadmium, Zinc, and Aluminum onto Steel Surfaces <i>V. V. Poplavsky, A. V. Dorozhko, and V. G. Matys</i>	981
Neutron Diffraction Study of the Kinetics of Low-Temperature Martensite Decomposition in Medium-Carbon Steel <i>A. A. Alekseev, E. M. Grinberg, and S.G. Sheverev</i>	989
Two-Mirror Spin-Wave Neutron Interferometer <i>Yu. V. Nikitenko, V. K. Ignatovich, S. V. Kozhevnikov, and A. V. Petrenko</i>	992
Effect of Residual Atmospheric Pressure on the Development of Electrostatic Discharges at the Surface of Protective Glasses of Solar Cells <i>R. H. Khasanshin, L. S. Novikov, and S. B. Korovin</i>	1001
On the Formation of X-Ray Microbeams Utilizing a Short-Focus Refractive Lens and a Laboratory Radiation Source <i>Yu. I. Dudchik, P. A. Ershov, M. V. Polikarpov, A. Yu. Goikhman, I. I. Snigireva, and A. A. Snigirev</i>	1011

Theoretical and Numerical Analysis of Electron Motion in a Three-Dimensional Undulator Field	1016
<i>N. V. Smolyakov</i>	
Macroinhomogeneity of the Properties of Semiconductor Crystals Due to the Specifics of the Melt's Behavior under Microgravity Conditions	1023
<i>V. I. Strelov, B. G. Zakharov, and V. K. Artem'ev</i>	
Mathematical Model of the Supersonic Heterogeneous Flow Incident on a Flat Obstacle	1034
<i>P. V. Nikitin, S. A. Borisov, S. V. Dobrovolskiy, and Yu. I. Glukhovskaya</i>	
Effect of the Microstructure of SHS Powders of Titanium Carbide–Nichrome on the Properties of Detonation Coatings	1040
<i>O. P. Solonenko, V. E. Ovcharenko, V. Yu. Ulianitsky, A. E. Chesnokov, and I. S. Batraev</i>	
Nanostructure of Kapton Polyimide Irradiated with High-Energy Heavy Pb Ions	1048
<i>R. A. Sadykov, A. A. Shiryaev, A. G. Gavriluk, I. R. Sadykova, B. A. Kulnitskii, V. D. Blank, Yu. B. Lebed, and E. A. Koptelov</i>	
Correction Coefficients in X-Ray Photoelectron Spectroscopy	1053
<i>P. S. Kaplya and V. P. Afanas'ev</i>	
Turbulence in the System of Capillary Waves on the Surface of Water	1060
<i>S. V. Filatov, M. Yu. Brazhnikov, A. A. Levchenko, and A. M. Likhter</i>	
<i>In situ</i> X-ray Investigation of Coatings Based on Titanium Nitride Upon High-Temperature Oxidation in Air	1067
<i>O. V. Krygina, N. N. Koval, A. N. Shmakov, and Z. S. Vinokurov</i>	
On the Possibility of Decreasing the Thermal Desorption of Deuterium from Titanium during Ion Irradiation	1072
<i>L. B. Begrambekov, O. A. Dvoychenkova, A. E. Eysin, A. M. Zakharov, A. S. Kaplevsky, and P. A. Shigin</i>	
Influence of Annealing on the Optical Properties and Chemical and Phase Compositions of Tungsten-Oxide Films	1077
<i>V. I. Shapovalov, A. E. Komlev, V. V. Vit'ko, A. V. Zav'yalov, A. E. Lapshin, S. A. Moshkalev, and V. A. Ermakov</i>	
Thermal Stability, Structure and Phase Composition of $Ni_x(NbO)_{100-x}$ Composites	1087
<i>K. I. Semenenko, M. A. Kashirin, O. V. Stognei, and A. D. Al-Maliki</i>	
Structure, Phase Composition, and Properties of the Surface of Titanium Modified via Electron-Ion-Plasma Methods	1092
<i>N. N. Koval, Yu. F. Ivanov, Yu. Kh. Akhmadeev, I. V. Lopatin, E. A. Petrikova, O. V. Krygina, and V. V. Shugurov</i>	
Investigation of the Surface-Potential Distribution of Epitaxial CdHgTe Films	1096
<i>V. A. Novikov, D. V. Grigoryev, A. V. Voitsekhovskii, S. A. Dvoretzky, and N. N. Mikhailov</i>	
Long-Term Operation of Rail Steel: Degradation of Structure and Properties of Surface Layer	1101
<i>V. E. Gromov, Yu. F. Ivanov, K. V. Morozov, O. A. Peregudov, and O. A. Semina</i>	
Fabrication of Nitrogen-Containing Coatings in Reed Switches by Pulsed Ion-Plasma Treatment	1106
<i>I. A. Zeltser, V. S. Gurov, N. B. Rybin, and A. Tolstogouzov</i>	
Formation Features of Structure-Phase States of Cr–Nb–C–V Containing Coatings on Martensitic Steel	1119
<i>S. V. Kononov, V. E. Kormyshev, V. E. Gromov, Yu. F. Ivanov, E. V. Kapralov, and A. P. Semin</i>	
