

Contents

Vol. 1, No. 6, 2007

Simultaneous English language translation of the journal is available from Pleiades Publishing, Ltd.

Distributed worldwide by Springer. *Journal of Surface Investigation. X-ray, Synchrotron and Neutron Technique* ISSN 1027-4510.

Determination of the Electron Beam Size of the Kurchatov Synchrotron Radiation Source
Using an Edge Screen

*A. N. Artemyev, V. N. Korchuganov, A. G. Valentinov, V. V. Kvardakov, B. F. Kirillov,
N. A. Artemyev, A. V. Zabelin, V. A. Rezvov, A. G. Maevskiy, O. V. Nayda, and A. A. Dyatlov* 627

A Method of Automatic Correction of Drift-Distorted SPM Images

R. V. Lapshin 630

X-ray and Neutron Single Crystal Diffraction on $(\text{NH}_4)_3\text{H}(\text{SO}_4)_2$:
II. Refinement of Phase II Crystal Structure at Room Temperature*

*M. Reehuis, K. Wozniak, P. Dominiak, L. S. Smirnov, I. Natkaniec,
A. I. Baranov, and V. V. Dolbinina* 637

Study of the Electronic Structure and Properties of ^{13}C -Isotope-Based Composites

*E. I. Zhmurikov, A. I. Romanenko, P. V. Logachev, O. B. Anikeeva, Yu. V. Lavskaya,
L. G. Bulusheva, A. V. Okotrub, O. G. Abrosimov, S. V. Tsybulya, L. B. Tecchio* 645

Luminescence Excitation and its Relation to the Structures
of Natural Crystalline Diamond and Diamond-like Films

*M. B. Tsetlin, S. N. Ivanov, A. N. Vasil'ev, K. E. Prikhod'ko,
D. I. Dolgii, and E. D. Ol'shanskii* 651

Surface Microstructure and Morphology Study of Thin Films
Produced from Volatile Fluorine-Containing Rare-Earth β -Diketonate Complexes and Their Adducts

L. D. Nikulina, L. F. Bakhturova, and V. S. Danilovich 656

Mass-Spectrometric Study of the Kinetics of CdTe Molecular Beam Epitaxy:
Part 2. Cd, Te₂, Te, CdTe

V. I. Mikhailov, L. E. Polyak, and V. M. Kanevskii 660

Mechanism of the Formation and Evolution of Periodic Surface Relief Nanostructures
under the Scanning Laser-Induced Inelastic Photodeformation of Semiconductors

V. I. Emel'yanov, S. V. Vintsents, and G. S. Plotnikov 667

Ion-Beam Analysis of the Structure and Composition of Nanocomposite nc-TiC/a-C:H Coatings

N. G. Chechenin, P. N. Chernykh, V. S. Kulikauskas, Y. Pei, 674

D. Vainstein, and J. Th. M. De Hosson 674

Application of High-Frequency Magnetron Sputtering to Deposit
Thin Calcium-Phosphate Biocompatible Coatings on a Titanium Surface

*V. F. Pichugin, E. V. Eshenko, R. A. Surmenev, E. V. Shesterikov,
S. I. Tverdokhlebov, M. A. Ryabtseva, V. V. Sokhoreva, and I. A. Khlusov* 679

Comparative Analysis of the Bioactivity of Materials

E. S. Kovaleva, A. G. Veresov, A. V. Soin, V. I. Putlyaev, and Yu. D. Tret'yakov 683

Cathodoluminescence Technique for Studying the Pore Space of Rocks
Using Scanning Electron Microscopy

V. A. Kuzmin 687

Effect of Hydrogen on the Physical and Mechanical Properties of Zirconium

*I. P. Chernov, Yu. P. Cherdantsev, A. M. Lider, G. V. Garanin,
N. N. Nikitenkov, and A. V. Skirnevskii* 691

Resolution Function of Neutron Diffractometers with Focusing Monochromators.
III. Horizontal Focusing

V. I. Bobrovskii and I. L. Zhdakhin 698

Crystal Structure Phase Separation in Anion-Deficient $\text{La}_{0.70}\text{Sr}_{0.30}\text{MnO}_{3-\delta}$ Manganite System <i>S. V. Trukhanov, I. O. Troyanchuk, I. A. Bobrikov, V. G. Simkin, and A. M. Balagurov</i>	705
Sensitivity of PbSnTe:In Films to Submillimeter Radiation Under Conditions of Field Electron Injection <i>A. N. Akimov, A. V. Belenchuk, V. G. Erkov, A. E. Klimov, I. G. Neizvestnyi, O. M. Shapoval, and V. N. Shumskyi</i>	711
Nanorelief Formation under Ion Irradiation of Germanium and Silicon Surfaces <i>V. S. Chernysh, A. S. Patrakeev, E. S. Soldatov, D. V. Petrov, and S. V. Alyshev</i>	717
Ion-Enhanced Processes on a Solid Surface <i>M. B. Guseva, V. G. Babaev, and V. V. Khvostov</i>	722
Depth Profiling Using Secondary Ion Mass Spectrometry and Sample Current Measurements <i>A. Tolstogouzov, U. Bardi, and S. P. Chenakin</i>	734
Methods of Auger Signal Processing in the Quantitative Diagnostics of Nanostructures Composition <i>V. G. Beshenkov</i>	740
Formation of ZnS Nanoparticles under a Langmuir Monolayer of Zinc Arachidate <i>E. V. Rakova, N. D. Stepina, V. V. Artemov, V. G. Zhigalina, and V. V. Klechkovskaya</i>	745
Electron Microscopy Investigation of GaAs(100)–(Ga ₂ Se ₃)–GaAs Nanostructures <i>B. L. Agapov, N. N. Bezryadin, Yu. V. Synorov, G. I. Kotov, E. A. Tatokhin, A. A. Starodubtsev, and S. V. Kuzubov</i>	750
Features of Hydrogen Interaction in the Pd-Based Alloys with 3d Transition Metals <i>R. F. Minibaev, D. I. Bazhanov, A. A. Katsnel'son, S. E. Kul'kova, D. S. Xu, Q. M. Hu, and Y. L. Hao</i>	754
