

# Contents

---

---

## Vol. 1, No. 3, 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.

---

---

X-Ray Intensity Distribution in the Image Plane of Elliptic Multilayer Mirrors <i>A. D. Akhsakhalyan, V. A. Murav'ev, and N. N. Salashchenko</i>	235
Diffraction Reflection of X-ray Radiation with a Two-Dimensionally Bounded Wavefront from Perfect Crystals <i>V. A. Bushuev and A. P. Oreshko</i>	240
Role of the Dislocation Screw Component in the Formation of the Dislocation Structure in Ge- and Si-Based Semiconductor Heterosystems <i>E. M. Trukhanov, A. V. Kolesnikov, A. S. Ilin, A. Yu. Krasotin, A. P. Vasilenko, A. S. Deryabin, M. M. Kachanova, and A. K. Gutakovsky</i>	247
X-Ray Study of Structural Features of GaSb(Si) Single Crystals Grown Using a Set of Diffraction Methods under Various Heat and Mass Transfer Conditions <i>I. A. Prokhorov, Yu. A. Serebryakov, E. N. Korobeinikova, B. G. Zakharov, V. V. Ratnikov, and I. L. Shul'pina</i>	255
X-Ray Topography Study of Microsegregation in Crystals <i>I. A. Prokhorov, I. Z. Bezbakh, B. G. Zakharov, and I. L. Shul'pina</i>	260
X-Ray Spherical Wave Scattering Patterns of the Epitaxial Si/GeSi/Si (001) Heterosystem <i>A. S. Ilin, A. P. Vasilenko, E. M. Trukhanov, A. V. Kolesnikov, and A. A. Fedorov</i>	265
TEM Study of the Structure of Gallium Nitride Epitaxial Films Grown on Substrates with Different Interface Morphologies <i>A. A. Sitnikova, S. G. Konnikov, D. A. Kirilenko, M. G. Mynbaeva, M. A. Odnoblyudov, V. E. Bugrov, and T. Lang</i>	269
Simulation of the Spatial Structure of X-ray Beams under Conditions of the Correction of the Heat Flow Incident on a Crystal <i>A. S. Markelov, V. N. Trushin, E. V. Chuprunov, and A. A. Zholudev</i>	273
Wavelet Processing of Topographic High Dynamic Range Images <i>V. A. Tkal', A. O. Okunev, M. N. Petrov, and L. N. Danil'chuk</i>	277
Computer Study of the Temperature Dependence of Physical Properties of Noncrystalline Silicon Nanoparticles <i>A. E. Galashev, I. A. Izmodenov, O. A. Novruzova, and A. N. Novruzov</i>	286
Features of the Formation of Thermal Donors in Silicon under Elastic Tensile Stress <i>I. I. Novak<sup>†</sup> and G. A. Oganessian</i>	294
Microanalysis Station at the Kurchatov Synchrotron Radiation Source <i>A. N. Artemiev, N. A. Artemiev, A. V. Zabelin, V. V. Kvardakov, B. F. Kirillov, A. G. Maevskii, O. V. Naida, and A. A. Dyatlov</i>	298
New Type of Regular Carbon Nanostructures: Nanocones on the Surfaces of Carbon–Silicon (a-C:H) Composite Films <i>V. D. Frolov, S. M. Pimenov, E. V. Zavedeev, V. I. Konov, E. N. Lubnin, and G. G. Kirpilenko</i>	303
Fabrication of X-ray Masks on a Thick Substrate for Deep X-ray Lithography <i>E. V. Petrova, B. G. Gol'denberg, V. I. Kondrat'ev, L. A. Mezentseva, V. F. Pindyurin, A. N. Gentshev, V. S. Eliseev, and V. V. Lyakh</i>	307
Study of the Process of PbS Nanocrystal Formation in Lead Stearate and Behenate Langmuir–Blodgett Films by Electron Diffraction and X-ray Reflectometry <i>V. V. Klechkovskaya, L. G. Yanusova, G. I. Ivakin, N. A. Arkharova, R. V. Gaynutdinov, N. D. Stepina, A. S. Orekhov, and V. V. Volkov</i>	312

Structure and Radiation Properties of Dislocations Arising during Oxygen Precipitate Growth in Silicon	
<i>E. A. Shteinman, A. N. Tereshchenko, and V. Ya. Reznik</i>	318
Effect of Surface Excitations on the Reflection Electron Energy Loss Spectrum in Silicon	
<i>A. S. Parshin, G. A. Aleksandrova, and A. V. Zyuganova</i>	323
Sputtering of Boron Nitride Single Crystals of Different Structure	
<i>V. E. Yurasova, S. S. Elovikov, and E. Yu. Zykova</i>	328
Mass Spectrometry Study of the Kinetics of CdTe Molecular-Beam Epitaxy: Part I. Cd, Te <sub>2</sub> , and CdTe	
<i>V. I. Mikhailov, L. E. Polyak, and V. M. Kanevskii</i>	342
Simulation of the MFM Contrast from Small Low-Coercive Ferromagnetic Nanoparticles in an External Field	
<i>V. L. Mironov, D. S. Nikitushkin, D. S. Petrov, A. B. Shubin, and P. A. Zhdan</i>	348
Magnetic Force Microscopy of GaAs:Mn Ferromagnetic Semiconductors	
<i>D. O. Filatov and E. I. Malysheva</i>	352
Nanocrystalline Ni–Mn Solid Solutions: New Materials with Competing Exchange Interaction	
<i>Yu. A. Babanov, V. P. Pilyugin, T. Miyanaga, A. M. Patselov, E. G. Chernyshev, A. V. Ryazhkin, and T. Ogasavara</i>	359
Off-Plane Grazing-Incidence Blazed Grating with Radial Grooves as an Efficient Spectral Purity Filter for EUV Lithography	
<i>L. I. Goray</i>	362

---

---