

CONTENTS

Kukushkin S. A.

Special Issue. New materials for micro-, nano-, and optoelectronics: properties, structure, and growth mechanisms

Review

Baranov S. A.

Surface energy in microwires. Review

Original articles

Zakharov A. Yu., Zakharov M. A.

Relativistic model of interatomic interactions in condensed systems

Krasnitckii S. A., Smirnov A. M.

Pair interaction of intersecting dilatation and disclination defects

Bessolov V. N., Konenkova E. V., Orlova T. A., Rodin S. N.

Semi-polar GaN(11-22) on nano-structured Si(113): a structure for reducing thermal stresses

Gridchin V. O., Reznik R. R., Kotlyar K. P.,

Kirilenko D. A., Dragunova A. S.,

Kryzhanovskaya N. V., Cirlin G. E.

Structural and optical properties of composition-graded InGaN nanowires

Reznik R. R., Gridchin V. O., Kotlyar K. P.,

Neplokh V. V., Osipov A. V., Kukushkin S. A.,

Saket O., Tchernycheva M., Cirlin G. E.

Confirmation of spontaneous doping of GaN nanowires grown on vicinal SiC/Si substrate by electron beam induced current mapping

Semenov A. N., Nechaev D. M., Troshkov S. I.,

Berezina D. S., Abbas A. S., Jmerik V. N.

GaN micro- and nanostructures selectively grown on profiled sapphire substrates using PA-MBE without lithography

Butenko P. N., Timashov R. B., Stepanov A. I., Pechnikov A. I., Chikiryaka A. V., Guzilova L. I., Stepanov S. I., Nikolaev

Fabrication of a-Ga₂O₃:Sn/a-Cr₂O₃/a-Al₂O₃ heterostructure by mist CVD and HVPE

542

Kaminskii V. V., Kalganov D. A., Panov D. I., Spiridonov V. A., Ivanov A. Yu., Rozaeva M. V., Bauman D. A., Romanov A. E.

A study of gallium oxide by using the piezoelectric composite oscillator technique at a frequency of 100 kHz

548

Osipov A. V., Sharofidinov Sh. Sh., Kremleva A. V., Smirnov A. M., Osipova E. V., Kandakov A. V., Kukushkin S. A.

Phase transformations during the annealing of Ga₂O₃ films

557

Pronin I. P., Kaptelov E. Yu., Gushchina E. V., Senkevich S. V., Pronin V. P., Ryzhov I. V., Ugolkov V. L., Sergeeva O. N.

Crystallization features and physical properties of the thin-film heterostructure of lead zirconate titanate – lead oxide

564

Staritsyn M. V.

Anomalous electron channeling in PZT thin films

572

Baranov S. A.

Natural ferromagnetic resonance in microwires and its applications. Brief review

581

Manyakin M. D., Kurganskii S. I.

Electronic structure of germanium dioxide with rutile structure according to ab initio computer simulation data

587

Plyusnin N. I.

Solid wetting layer, interphase formation, and thin-film nanomaterials. Brief review

594