

Contents

381 Effect of proton irradiation on the parameters of AlGaIn/GaN HEMTs

Mykola Bataiev, Yurii Bataiev, Leonard Brillson

389 Influence of small miscuts on self-ordered growth of Ge nanoislands

O.Yo. Gudymenko, V.P. Kladko, O.M. Yefanov, M.V. Slobodian, Yu.S. Polischuk, Z.F. Krasilnik, D.V. Lobanov, A.A. Novikov

393 High-temperature expansion in self-consistent-field theory of spin-crossover compounds

Iu.V. Gudyma, Ye.M. Daskal

399 Optimized calibration of cryogenic silicon thermodiodes

O.M. Ivashchenko, Yu.M. Shwarts, M.M. Shwarts, D.P. Kopko, M.I. Sypko

403 Jones-matrix diagnostics of the structure and classification of optical properties inherent to birefringent polycrystalline networks of human biological tissues

O.G. Ushenko, V.O. Balanetska, N.I. Zabolotna

411 Development and investigation of microwave radiation sources and detector sections using SBDs within the 220–400 GHz frequency range

A.V. Zorenko, Ya.Ya. Kudryk, Yu.V. Marunenko

416 Tunneling current via dislocations in InAs and InSb infrared photodiodes

A.V. Sukach, V.V. Tetyorkin, N.M. Krolevets

421 Energy band gap and electrical conductivity of Cd_{1-x}Mn_xTe alloys with different manganese content

L.A. Kosyachenko, I.M. Rarenko, T. Aoki, V.M. Sklyarchuk, O.L. Maslyanchuk, N.S. Yurtsenyuk, Z.I. Zakharuk

427 Comparison of optical properties of TiO₂ thin films prepared by reactive magnetron sputtering and electron-beam evaporation techniques

V.V. Brus, Z.D. Kovalyuk, O.A. Parfenyuk, N.D. Vakhnyak

432 3C-6H transformation in heated cubic silicon carbide 3C-SiC

S.I. Vlaskina, G.N. Mishinova, V.I. Vlaskin, V.E. Rodionov, G.S. Svechnikov

437 Influence of mutual drag of light and heavy holes on magnetoresistivity and Hall-effect of *p*-silicon and *p*-germanium

I.I. Boiko

441 Photochromic properties of composite films of thermally irreversible diarylethenes and fulgimides in polytetrafluoroethylene matrix

O.I. Kobeleva, T.M. Valova, A.O. Ait, V.A. Barachevsky, K.P. Grytsenko, V.F. Machulin, M.M. Krayushkin

445 Influence of polarization of conduction electrons in semiconductor on their light absorption

V.S. Severin

452 Adsorption of ions and thickness dependence of conductivity in liquid crystals

O.V. Kovalchuk

456 Seebeck's effect in p-SiGe whisker samples

A.P. Dolgolenko, A.A. Druzhinin, A.Ya. Karpenko, S.I. Nichkalo, I.P. Ostrovsky, P.G. Litovchenko, A.P. Litovchenko

461 Investigation of luminescent properties inherent to SrTiO₃:Pr³⁺ luminophor with Al impurity

O.M. Marchylo, L.V. Zavyalova, Y. Nakanishi, H. Kominami, A.E. Belyaev, G.S. Svechnikov

465 Some aspects of thermal resistance measurement technique for IMPATT and light-emitting diodes

A.E. Belyaev, N.S. Boltovets, R.V. Konakova, Ya.Ya. Kudryk, V.M. Sorokin, V.N. Sheremet, V.V. Shynkarenko

470 Transformations of microdefect structure in silicon crystals under the influence of weak magnetic field

T.P. Vladimirova, Ye M. Kyslovs`kyy, V.B. Molodkin, S.I. Olikhovskii, O.V. Koplak, E.V. Kochelab

478 Modelling of temperature conditions in the three-dimensional piecewise homogeneous elements of microelectronic devices

V.I. Gavrysh

482 Partial dielectric behavior of the Mo electron spectrum as an effect of Van Hove singularities

T.A. Ignatyeva

489 Can nanoparticles be useful for antiviral therapy?

V. Lozovski, V. Lysenko, V. Pyatnitsia, M. Spivak

492 Author Index 2011 (Volume 14)

503 Contents