

Volume 68, Number 1, 2004

Proceedings of the International Workshop «Nanophotonics»

Z.F. Krasilnik Nanophotonics and O.V. Losev: Connection of Times	1
I.P. Ipatova, V.G. Malyshkin, and V.A. Shchukin Decomposition of Semiconductor Alloys	3
D. Meinhold, B. Rosam, V.G. Lysenko, F. Rossi, K. Köhler, and K. Leo Resonant Zener Tunneling Between Below- and Above-Barrier States in Shallow Superlattices GaAs/Al _{0.11} Ga _{0.89} As	7
V.M. Ustinov, A.Yu. Egorov, A.R. Kovsh, V.A. Odnoblyudov, V.V. Mamutin, D.A. Livshits, N.V. Kryzhanovskaya, E.S. Semenova, E.V. Nikitina, Yu.M. Shernyakov, and M.V. Maksimov Low-Threshold InGaAsN QW Lasers for Fiber-Optical Communication Lines	11
V.A. Gaisler, A.I. Toropov, A.K. Bakarov, O.R. Bayutova, I.A. Derebezov, A.K. Kalagin, M.M. Kachanova, N.B. Kuzmin, A.S. Medvedev, L.A. Nenasheva, and A.S. Suranov Lasing Characteristics of Vertical-Cavity Lasers Based on In _{0.2} Ga _{0.8} As Quantum Wells.....	14
T.S. Shamirzaev, A.M. Gilinsky, A.K. Bakarov, A.I. Toropov, D.A. Tenne, K.S. Zhuravlev, C. von Borczyskowski, and D.R.T. Zahn Long-Term Kinetics of Exciton Photoluminescence of InAs/AlAs Quantum Dot.....	17
E.A. Vinogradov and Yu.E. Lozovik Ultrafast Photoinduced Processes at Schottky Barrier.....	21
S.V. Zhukovsky, S.V. Gaponenko, and A.V. Lavrinenko Optical Properties of Fractal Multilayer Nanostructures	26
S.P. Svetlov, V.Yu. Chalkov, V.G. Shengurov, V.I. Gavrilenko, M.N. Drozdov, Yu.N. Drozdov, and Z.F. Krasilnik Growth of Multilayer δ -Doped Si/Si _{1-x} Ge _x Structures by Sublimation MBE in Germane.....	30
M.V. Yakunin, G.A. Alshansky, Yu.G. Arapov, V.N. Neverov, N.G. Shelushinina, G.I. Kharus, O.A. Kuznetsov, B.N. Zvonkov, E.A. Uskova, A. de Visser, and L. Ponomarenko Specific Features of Magnetoresistance Induced by Parallel Magnetic Field in Double Quantum Well Containing Electron or Hole Gas	33
V.A. Sablikov and S.V. Polyakov Spontaneous Spin Polarization and Electron Correlations in Mesoscopic Quantum Wires....	38
A.I. Klimovskaya, O.O. Pikaruk, Yu.A. Dryga, and E.G. Gule Superradiance Spectrum Shape of Quantum Wells under Various Excitation Powers	41
N.V. Baidus, B.N. Zvonkov, P.B. Mokeeva, E.A. Uskova, S.V. Tikhov, and M.I. Vasilevsky Electroluminescence of Schottky Diodes Based on Heterostructures with InAs/GaAs Quantum Dots in Range of 1.3–1.5 μ m.....	44
T. Warming, P.N. Brunkov, A.E. Zhukov, V.M. Ustinov, S.G. Konnikov, F. Guffarth, C. Kapteyn, R. Heitz, and D. Bimberg Modification of Absorption Spectrum of Self-Assembled InAs/GaAs Quantum Dots in Narrow Spectral Range	48
M.Ya. Valakh, V.G. Litovchenko, V.V. Strelchuk, H.L. Hartnagel, and J. Sigmund Manifestation of Intersubband Plasmon-Phonon Excitations and Specific Features of Interfaces in Raman Spectra of InAs/AlSb Quantum Well Structures	51

N.V. Vostokov, V.M. Daniltsev, M.N. Drozdov, Yu.N. Drozdov, A.V. Murel, and V.I. Shashkin Formation of Al Nanoclusters and Their Overgrowth with GaAs Layer by Metal-Organic Vapor-Phase Epitaxy.....	55
V.Ya. Aleshkin, A.V. Antonov, D.M. Gaponova, D.G. Revin, L.E. Vorobiev, D.A. Firsov, V.A. Shalygin, V.M. Ustinov, J.W. Cockburn, and A.M. Fox Time-Resolved Spectroscopy of InGaAs/AlGaAs Heterostructures with Asymmetric Funnel-Shaped Quantum Wells.....	59
A.V. Germanenko, G.M. Minkov, O.E. Rut, A.A. Sherstobitov, I.V. Gornyi, V.I. Shashkin, O.I. Khrykin, and B.N. Zvonkov Phase Relaxation with Increase in Disorder in GaAs/InGaAs Structures	63
Yu.A. Danilov, A.V. Kruglov, E.A. Pitirimova, Yu.N. Drozdov, A.V. Murel, M. Behar, and M.A.A. Pudenzi Structure and Properties of GaAs:Mn Layers Formed by Ion Implantation	68
A.V. Antonov, A.V. Gavrilenko, V.I. Gavrilenko, E.V. Demidov, B.N. Zvonkov, E.A. Uskova, M.N. Vinoslavskii, P.A. Belevskii, and A.V. Kravchenko Acoustoelectric Domains in GaAs/InGaAs Heterostructures with Quantum Wells	72
V.Ya. Demikhovskiy and D.V. Khomitsky Hall Conductivity of Hole Magnetic Subbands in p -Type Heterojunction with Periodic Potential of Surface Superlattice	75
Yu.N. Drozdov, V.M. Daniltsev, D.M. Gaponova, A.V. Murel, M.N. Drozdov, O.I. Khrykin, and V.I. Shashkin Multilayer Periodic GaAsN/InGaAs Structures Lattice-Matched to GaAs	80
Yu.N. Drozdov, Yu.A. Danilov, B.N. Zvonkov, Yu.V. Vasilieva, N.V. Vostokov, and A.V. Murel Photoluminescence of Partially Relaxed InGaAs Layers.....	84
V.I. Shashkin, V.M. Daniltsev, M.N. Drozdov, Yu.N. Drozdov, L.D. Moldavskaya, A.V. Murel, O.I. Khrykin, A.V. Antonov, and A.N. Yablonsky Temperature Dependence of Lateral Infrared Photoconductivity in InGaAs/GaAs Heterostructures with Quantum Dots.....	88
B.N. Zvonkov, V.Ya. Aleshkin, V.I. Gavrilenko, S.V. Morozov, D.M. Gaponova, V.K. Kononenko, V.N. Iodko, A.V. Mudriy, H.W. Kunert, and D. Dale Optical Characteristics of δ -Doped GaAs Superlattices.....	92
A.V. Murel, V.M. Daniltsev, M.N. Drozdov, Yu.N. Drozdov, D.M. Gaponova, O.I. Khrykin, and V.I. Shashkin GaInNAs–GaAs Quantum Wells Grown by MOVPE.....	95
I.A. Karpovich, S.V. Tikhov, B.N. Zvonkov, N.V. Baidus, A.P. Gorshkov, and E.L. Sholobov Photoelectric Properties of Schottky Diodes Based on Quantum-Size GaAs/InGaAs/InAs Heterostructures	99
N.A. Volchkov, K.S. Zhuravlev, M.A. Kitaev, V.A. Kozlov, S.V. Obolensky, A.I. Toropov, and V.T. Trofimov Detection of Optical Radiation by Field-Effect Transistor with Built-in Superlattice	103
D.O. Filatov, I.A. Karpovich, T.V. Shilova, V.Ya. Demikhovskiy, and D.V. Khomitsky Polarization Dependence of Photocurrent Spectra of Schottky-Barrier Photodiodes Based on Quantum-Well InGaAs/GaAs Heterostructures.....	109

N.V. Vostokov, D.M. Gaponova, V.M. Daniltsev, M.N. Drozdov, Yu.N. Drozdov, Z.F. Krasilnikov, A.Yu. Lukčyanov, O.I. Khrykhin, and V.I. Shashkin	
Study on GaN Layers Grown on Sapphire by Vapor-Phase Epitaxy Using Dimethylhydrazine and Ammonia.....	113
O.A. Aktsipetrov, T.V. Dolgova, D.G. Gusev, R.V. Kapra, M.G. Martemyanov, T.V. Murzina, I.V. Soboleva, and A.A. Fedyanin	
Nonlinear Optics and Nonlinear Magneto-Optics of Photonic Crystals and Microcavities ...	117
V.A. Burdov and D.S. Solenov	
Nonlinear Response of Electronic Subsystem in Double Quantum Dot Weakly Coupled to Cavity to Strong Variable Effect	121
T.I. Galkina, A.Yu. Klokov, and A.I. Sharkov	
Propagation of Nonequilibrium Acoustic Phonons in Diamond, II–VI Compounds, and Silicon with Quantum Wells. Scattering of Phonons by Embedded Layers and Extended Defects	126
S.V. Gaponenko	
Emission and Scattering of Light in Nanostructures: Role of Photon Density of States.....	130
N.V. Tkach, V.A. Holovatsky, and Ya.M. Berezovsky	
Spectrum and Interaction of Quasiparticles in Nanoheterosystems.....	134
S.V. Chekalin, V.O. Kompanets, N.F. Starodubtsev, A.P. Yartsev, and V. Sundström	
Femtosecond Spectroscopy of Initial Relaxation Stages of Photoexcited Quantum-Size Fullerene/Sn Structures.....	139
V.K. Kononenko, A.G. Smirnov, and D.V. Ushakov	
Effect of Gain Saturation on Output Power Characteristics of Photonic Crystal Heterostructures	144
V.N. Gusyatnikov, E.Yu. Altshuler, I.S. Nefedov, and Yu.A. Morozov	
Control of Photonic Miniband Spectrum in Layered GaAs-Based Structures.....	149
S.K. Sekatsky, B.N. Mironov, V.O. Kompanets, Yu.A. Matveets, G. Dietler, S.V. Chekalin, and V.S. Letokhov	
Nonperturbing Near-Field Visualization of Light with Femtosecond Laser Pulses	153–156