

Crystal growth and structural properties of semiconductor materials and nanostructures

1-01 Separation of Ga-polar GaN layer from Si substrate by wet chemical etching

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1-02 Preparation of a silicon surface for subsequent growth of dilute nitride alloys by molecular-beam epitaxy

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1-03 Simulation of the formation of polymorphic varieties of nanodiamonds

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1-04 Highly conductive indium nanowires deposited on silicon by dip-pen nanolithography

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1-05 WO₃ and Mo:WO₃ films produced by an aqueous sol-gel method

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1-06 Influence of annealing temperature on the upconversion luminescence properties of NaYF₄:Er,Yb@SiO₂ particles

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1-07 Novel approach for III-N on Si (111) templates fabrication by low-temperature PA MBE using porous Si layer

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1-08 Quantum dot based superstructures: optical anysotropy

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1-09 Germanium layers grown by zone thermal crystallization from a discrete liquid source

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1-10 Structural transformations on zirconium surface after heat treatment with high-frequency currents

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1-11 Experimental investigations of atomic ordering effects in the epitaxial Ga_xIn_{1-x}P, coherently grown on GaAs (100) substrates

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1-12 Stress relaxation in decahedral small particles by formation of circular prismatic dislocation loops

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1-13 Novel approach to investigation of semiconductor MOCVD by microreactor technology

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1-14 Evaluation of critical thickness for Stranski-Krastanow transition in GeSi/Sn/Si system

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1-15 Hybrid sp²+sp³ carbon phases created from carbon nanotubes

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1-16 The use of electrochemical deposition of metals at the surface microstructuring by laser ablation in liquids

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1-17 Electron beam induced current (EBIC) technique for non-destructive control of p-n junction device characteristics

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1-18 MBE growth and optical properties of GaN layers on SiC/Si(111) hybrid substrate

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1-19 Influence of granular silver overlayers on optical properties of epitaxial indium arsenide quantum dots

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1-20 Structure of graphene polymorphs

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1-21 Quinary InAlGaPAs/GaAs solid solutions grown by temperature gradient zone melting

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1-22 The structure of carbon nanotubes formed of graphene layers L4-8, L5-7, L3-12, L4-6-12

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1-23 Stress in heterostructures (Al, Ga)N/6H-SiC during plasma-assisted molecular beam epitaxy

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1-24 Investigation of milling processes of semiconductor zinc oxide nanostructured powders by X-ray phase analysis

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1-25 Optical study of vertically elongated InGaAs/GaAs quantum dots grown using As₂ and As₄ sources

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1-26 Copper (I) oxide rf-magnetron sputtering at elevated substrate temperatures

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1-27 The concept of the phases ratio control during the formation of composite filamentary nanocrystals $x\text{InSe}-(1-x)\text{In}_2\text{O}_3$ on glass substrates

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1-28 1D ZnO nanorods for piezoelectric nanogenerators

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1-29 Influence of target-substrate distance during pulsed laser deposition on properties of LiNbO_3 thin films

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1-30 Ultrasonic spray pyrolysis deposition of ZnO and ZnO:Al thin films

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1-31 The dopant profiles in GaAs nanowires

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1-32 Characterization of ZnSe nanocrystals doped with manganese

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1-33 Photosensitivity of Langmuir-Blodgett film of CdSe/CdS/ZnS Quantum Dots and Graphene Sheets Hybrid-Structure

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1-34 Si and SiO_2 nanoparticles synthesized by laser ablation.

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1-35 Effect of SiC/Si buffer layer on the growth of GaN films via PA-MBE

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1-36 Effects of temperature and power of PECVD on structure and refractive index of amorphous and polycrystalline silicon films

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1-37 The study of effect of solid electrolyte on capacitive characteristics of thin-film lithium-ion batteries

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1-38 Synthesis of Ge and Si nanoparticles by spark discharge

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1-39 Site-controlled GaN nanocolumns with InGaN insertions grown by MBE

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1-40 Excitonic luminescence of CuCl nanocrystals in borate glasses under UV irradiation

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1-41 Droplet epitaxy of In/GaAs(001) nanostructures studied by Monte Carlo simulations

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1-42 Study of the influence of crystallographic orientation on the growth kinetics during MBE of GaAs

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1-43 Synthesis of luminescent carbon nanocrystals by plasma and laser assisted techniques

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1-44 MBE growth of GaAs and InAs nanowires using colloidal Ag nanoparticles

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1-45 Modeling of nanowire MOCVD growth

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1-46 Formation of GaAs nanostructures by droplet epitaxy

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1-47 Research of influence of the underlayer material on the growth rate of carbon nanotube arrays for manufacturing non-volatile memory elements with high speed

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1-48 Nanoparticle shape investigation using molecular dynamics method

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1-49 Effect of the Ga seeding layer on the formation of GaN epitaxial nanostructures on silicon

Vladimir Fedorov, A Bolshakov, A Mozharov, G Sapunov, I Shtrom, A Sitnikova, D Kirelenko, I Muhin

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1-50 Electronic and optical properties of HEMT heterostructures with delta-Si doped GaAs/AlGaAs quantum rings - quantum well system

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1-51 Researching the electrical properties of single A3B5 nanowires

Aleksandr Vasiliev, A M Mozharov, F E Komissarenko, G E Cirlin, D A Bouravlev and I S Mukhin

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1-52 Broadening of nanowire length distributions due to surface diffusion

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Nanobiotechnology, Biophysics and Biophotonics

2-01 A classification code for Detection of Melanoma Skin Cancer by Elastic Scattering Spectrums

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2-02 NEXAFS studies of Ice Fish Hard Tissues and hydroxyapatite

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2-03 Application of Marcus theory for modeling proton transfer in cytochrome c oxidase

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2-04 Fabrication of tissuephantoms with embedded CdSe/ZnS quantum dots, gold and upconversion nanoparticles

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2-05 Application of quantum-mechanical approach to the simulation of proton transport in biological channels

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2-06 Stochastic modeling of isotope exchange reactions in glutamine synthetase

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2-07 A Single-Cell Electronic Sensor of Toxins

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2-08 The separation of complex spectra by artificial immune system

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2-09 Fluorescence imaging of the nanoparticles modified with indocyanine green

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2-10 Multifunctional monodisperse spherical core-shell mSiO₂/Fe₃O₄@mSiO₂/FITC particles for cancer theranostics

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2-11 Immobilization of cardioprotective drug of a phosphocreatine on a surface of nanoparticles of silica

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2-12 Cellular uptake and cytotoxicity of new generation of luminescent upconverting nanoparticles

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2-13 Registration of fluorescence in biomolecular solutions using dynamic pin-photodiode

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2-14 Blood cell aligning inside innovative liquid crystal cell

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2-15 Polymer-based microfluidic chips for isothermal amplification of nucleic acids

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2-16 cDNA damage at photodynamic treatment

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2-17 Super-resolution microscopy of living bacterial cells

Elena Ponomareva, I E Vishnyakov, N E Morozova, V S Polinovskaya, M A Khodorkovskii and A D Vedyaykin

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2-18 Application of rare earth-doped upconverting NaYF₄ nanoparticles in photodynamic therapy.

Anna Borodziuk, D Elbaum, P Kowalik, J Mikulski, K Fronc, I Kaminsa, T Wojciechowski, B Sikora, A Bombalska, e al.

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2-19 Study of monodisperse water-in-oil macroemulsion dynamics in a microfluidic chip

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2-20 The sensitivity research of multiparameter biosensors based on HEMT by the mathematic modeling method

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2-21 New nondestructive method for determining the composition of components in biological objects in express mode

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2-22 Hybrid mode Piezoresponse Force Microscopy for compositional electromechanical study of biopiezoelectrics

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2-23 Stability monolayer surfactant after its formation

Anna Kolesnikova, A Kolesnikova, S Embekov, O Shinkarenko, A Chumakov, N Begletsova, O Tsvetkova, E Selifonova, E Glukhovskoy

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2-24 The importance of the biomimetic composites components for recreating the optical properties and molecular composition of intact dental tissues.

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2-25 Application of the spectral-correlation method for diagnostics of cellulose paper

Alexandr Reznik, N Zhuravleva, D Kiesewetter, V Malyugin, A Yudin

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2-26 Effect of hemi-myeloperoxidase on erythrocyte functional and structural properties

Maria Terekhova, E Shamova, D Grigorieva, I Gorudko, A Sokolov

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2-27 Applicability of submerged jet model to describe the liquid sample load into measuring chamber of submillimeter sizes

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2-28 Modelling of thermal conductivity of water based MWCNTs nanofluids using artificial neural networks

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2-29 Multifunctional NaYF₄:Er³⁺,Yb³⁺,Gd³⁺&Fe₃O₄@SiO₂ nanoconstructs with optical and magnetic properties - towards theranostic applications

Bozena Sikora, B Sikora, P Kowalik, A Borodziuk, K Fronc, J Mikulski, I Kaminska, K Zajdel, G Gruzal, e al.

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2-30 Scanning ion-conductance microscope

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2-31 Normal modes of the atomic DNA structure with water shell in the terahertz range

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2-32 Optogenetic light pulses generator

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2-33 Numerical model of lysozyme protein nucleation and growth kinetics

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2-34 The kinetic study of solidification PEGDA microparticles in flow-focusing microfluidic chip

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2-35 Physical Principles of Discrete Hierarchies Formation in Protein Macromolecules

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2-36 Methods of non-destructive testing in the study of self-organization processes in the protein films

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2-37 Up-converting NaYF₄:Yb,Ln&Fe₃O₄@SiO₂ nanoconstructs with attached photosensitizer as a potential drug system for anti-cancer photodynamic therapy

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2-38 Cell-penetrating peptide induces aggregation of charged liposomes

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2-39 Visualization of morphological features of chitosan microtubes during biodegradation

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2-40 Mass spectrometry for identification of proteins that specifically bind to a distal enhancer of the Oct4 gene

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2-41 Sensibilization methods in the field of pluripotency and regenerative medicine

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2-42 Biocompatible Er:(Na,K)NbO₃ nanofibers

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2-43 Purification and biophysical characterization of a new single-domain antibody against human Her3 receptor

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Lasers, solar cells and other optoelectronic devices

3-01 The effect of p-doping on multi-state lasing in InAs/InGaAs quantum dot lasers for different cavity lengths

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3-02 Investigation of the effect of surface passivation on microdisk lasers based on InGaAsN/GaAs quantum well active region

Eduard Moiseev, N V Kryzhanovskaya, M V Maximov, A Mozharov, A S Gudovskikh, I S Mukhin, Yu A

Uspenskaya, M M Kulagina, S I Troshkov, T Niemi, R Isoaho, M Guina, A E Zhukov

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3-03 Free-space subcarrier wave quantum communication

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3-04 Lateral conductivity of n-GaP/p-Si heterojunction with an inversion layer

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3-05 Electroluminescence of InAsSb-based mid-infrared LEDs in wide temperature range (4.2 - 300 K)

Antonina Semakova, N Bazhenov, K Mynbaev, A Chernyaev, S Kizhayev, N Stoyanov

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3-06 Structural and optical properties of pulsed laser deposited cadmium telluride thin films

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3-07 Electroluminescence of InAsSb/InAs(Sb,P) multiple quantum wells at temperatures 4.2-300 K

Ekaterina Bykhanova, N Bazhenov, K Mynbaev, A Chernyaev, S Kizhaev, N Stoyanov

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3-08 Laser marking of contrast images for optical read-out systems

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3-09 Quantum random number generator based on quantum nature of vacuum fluctuations

Alena Ivanova, A Gleim, S Chivilikhin

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3-10 Study the effect of the plasma source power to the geometric parameters of the array of carbon nanotubes for making high-efficiency solar photovoltaic devices

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3-11 Water Splitting by Using Porous Silicon Photo-electrodes for Hydrogen Production

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3-12 Laser induced nanostructures created from Au layer on polyhydroxybutyrate

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3-13 Numerical Modelling of a Bidirectional Long Ring Raman Fiber Laser Dynamics

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3-14 Features of the induced photopoleochroism oscillations in a photosensitive structures based on CuInSe₂

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3-15 MBE growth, structural and optical properties of multilayer heterostructures for quantum-cascade lasers

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3-16 Waveguide and Γ -factor optimization for low-divergence ridge lasers

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3-17 Optical Rectification of Phase Modulated Signal Based on Injection Locking

Anton Lukashchuk, V Neskorniuk, I Gabitov, A Chipouline, V Lyubopytov, M Malekizandi, F Kueppers

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3-18 Energy transfer parameters of Gd₂O₃:Er nanoparticles applying as a down-conversion layer for solar cell

Yulia Kuznetsova, A Zatsepin, S Vyatkina, V Pustovarov, M Mashkovtsev, V Rychkov

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3-19 The study of response of electro-optic phase modulator based on LiNbO₃ with the aim of improving the accuracy of fiber-optic gyroscope

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3-20 MBE growth and characterization of InAlAs/InGaAs 9 PhC μ m range quantum cascade laser

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3-21 Degradation green InGaN-based LEDs during the tests at the constant current

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3-22 The impact of 3D compositional fluctuations on the external quantum efficiency and defect generation in nitride alloys with a low In or Al molar fraction

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3-23 Optical characterization of mid-infrared range quantum cascade laser structures grown by MBE

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3-24 Fiber-optic transmission system information for the testing of active phased antenna arrays in an anechoic chamber.

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3-25 Phosphorus-free mode-locked semiconductor laser with emission wavelength 1550 nm

Evgenii Kolodeznyi, V Bougrov, A Egorov, I Novikov, A Babichev, L Karachinsky, A Kurochkin, A Gladyshev, I Gadzhiev

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3-26 Solar water splitting with III-N nanocolumn structures

Oleg Medvedev, A Usikov, O Medvedev, M Puzyk, H Helava, Y Makarov

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3-27 Layer-by-layer deposition of nanostructured CsPbX₃ (X=Cl, Br, I) perovskite thin films

Alena Reshetnikova, L Matyushkin, A Andronov, V Sokolov, O Aleksandrova, V Moshnikov

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3-28 Photoelectric diagnostics of blue InGaN-based LEDs in static and dynamic modes

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3-29 Investigation of electrical and optical properties of low temperature TiN rf-magnetron sputtering

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3-30 About significance of absolute photocurrent values determination during the solar cell external quantum efficiency measurements

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3-31 Capacitance characterization of GaP/n-Si structure grown by PE-ALD

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3-32 Quantum analyzer of force lines structure of magnetic fields

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3-33 High-speed 1.3 -1.55 um PIN photodetector based on InGaAs/InP heterostructure for microwave photonics

Olga Kozyreva, Y Soloviev, I Polukhin, A Mikailov, M Odnoblyudov, V Bougrov, A Egorov, L Karachinsky, O Kozyreva

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3-34 Influence of dry etching condition to geometry of vertically aligned silicon nanostructures.

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3-35 Problems of optoelectronic system that measures the temperature of moving objects

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3-36 Er,Yb:phosphate-glass laser with nonlinear absorber for phase-sensitive optical time domain reflectometry

Andrey Zhirnov, A Pnev, C Svelto, M Norgia, A Pesatori, G Galzerano, P Laporta, D Shelestov, V Karasik

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3-37 Admittance spectroscopy of InGaNAs layers in solar cells

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3-38 Manifestation of counteracting photovoltaic effect on IV characteristics in multi-junction solar cells

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3-39 Lateral mode control in edge-emitting lasers with modified mirrors

Alexey Payusov, A Serin, I Muckhin, Y Shernyakov, Y Zadiranov, M Maximov, N Gordeev

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3-40 Investigation of whispering gallery modes in microlasers by scanning near field optical microscopy

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Nanophotonics, Spectroscopy, Microcavities, Optics, Plasmonics

4-01 Optical properties and energy structure parameters of Gd₂O₃ and Gd₂O₃:Er nanoparticles

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4-02 Laser printing of silicon nanoparticles for enhanced perovskite's photoluminescence and absorbance

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4-03 Laser treatment of Se/Bi heterostructure: Bi₂Se₃ nanofilm formation

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4-04 Photochemical synthesis of fluorescent silver nanoclusters bound to the surface of polymer substrates

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4-05 Dielectric-Metal-Dielectric (D-M-D) infrared (IR) heat reflectors

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4-06 Subwavelength population density gratings in resonant medium created by few-cycle pulses

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4-07 Rigorous theoretical analysis of the Casimir force measurements in systems with Si gratings.

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4-08 Ultraviolet writing of luminescent waveguides in photo-thermo-refractive glass

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4-09 Modeling of a narrow band pass filter for Bathymetry light detection and ranging (LIDAR) system

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4-10 Lattice and Magnetic Raman Scattering in an Orthorhombic Antiferromagnet $\text{Ni}_3(\text{BO}_3)_2$

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4-11 Multilevel laser optical information recording in photosensitive silver-containing glasses

Veronika Gorbyak, A Sidorov

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4-12 Generation of orbital-angular-momentum entangled biphotons in twisted nonlinear waveguides

Dmitrii Vavulin, A Sukhorukov

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4-13 The influence of dipole-dipole interaction on entanglement of two superconducting qubits in the framework of double Jaynes-Cummins model

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4-14 Quantum chemical calculations of copper clusters based on one atom thick chains

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4-15 Near-field mapping of three-particle plasmonic structures

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4-16 Localized topological states in Bragg multihelicoidal fibers with a twist defect in the presence of a spacer

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4-17 Security conditions for two state sub-carrier wave quantum key distribution protocol in errorless channel

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4-18 Light transmittance by asymmetrical metasurface as measured using a laser scanning microscope

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4-19 Interband optical transitions in ellipsoidal shaped nanoparticles

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4-20 High-brightness single-crystal approach in quantum imaging with undetected photons

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4-21 Fabrication of spherical GeSbTe nanoparticles by laser printing technique

*Mohammad Tajik, M Tajik, d Zuev, V Milichko, M Rybin, E Ubyivovk, A Pevtsov, S Yakovlev, s makarov
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4-22 Temperature dependence of optical limiting in carbon nanotubes suspension

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4-23 The development of PVDF-TrFE/por-Al₂O₃ composite for optical applications

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4-24 Effect of pre-irradiation annealing on formation of the near-surface color centers in lithium fluoride

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4-25 High sensitive InP emitter for InP/InGaAs heterostructures

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4-26 Quantum state engineering with single atom laser

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4-27 Experimental study of THz electro-optical sampling crystals ZnSe, ZnTe and GaP

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4-28 Light propagation through conventional and extreme-2D van-der-Waals resonant photonic crystals

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4-29 Optical properties of hybrid associates of colloidal Ag₂S quantum dots with J-aggregates of trimetincyanine dye

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4-30 Emission properties of individual InAs/Al_xGa_{1-x}As quantum dots

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4-31 Transparent glass-ceramics with Yb³⁺,Ho³⁺:YNbO₄ nanocrystals for green phosphors

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4-32 Horizontal strip-loaded slot waveguide for 1.3 P'Band

*Igor Reduto, S Pelisset, J Laukkanen, M Roussey, A Lipovskii, Y Svirko
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4-33 Toroidal moment induced spatial separation of electric and magnetic components of optical fields

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4-34 FTIR photorefectance of narrow-gap heterostructures based on Al_xIn_{1-x}Sb alloys

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4-35 Optical investigation of organic-inorganic structures of colloidal ZnS and ZnS:Mn quantum dots with molecules of thionine dye

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4-36 Fabrication of diffractive optical elements by direct laser writing process in aluminum thin films

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4-37 Luminescence and carrier concentration in Sb-containing narrow bandgap quantum wells under optical excitation

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4-38 Spin control of light using hyperbolic plasmons

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4-39 Polariton condensation, superradiance and difference combination parametric resonance in mode-locked laser

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4-40 Scattering SNOM in application to semiconductor devices

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4-41 Two-photon absorption cross section for Coumarins 102, 153 and 307

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4-42 Fabrication of 2D-PhCs based on Si-layers by EBL

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4-43 Optical absorption edge parameters of zirconium dioxide nanotubular structures

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4-44 Waveguide integrated superconducting single-photon detector for on-chip quantum and spectral photonic application

Vadim Kovalyuk, S Ferrari, O Kahl, A Semenov, Y Lobanov, M Shcherbatenko, A Korneev, W Pernice, G Goltsman
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4-45 Single photon emission from charged excitons in CdTe/ZnTe quantum dots

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4-46 Dependence of InGaAs/InP avalanche photodiode based single photon detector's noise characteristics on the photodiode's active area

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4-47 Enhancement of Eu³⁺ Luminescence by the silver clusters formed with ion exchange method in silicate glasses

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4-48 Far-infrared optical absorption in Ge/Si quantum dots

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4-49 Investigation of vortex laser beam injection into an optical fiber

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4-50 Numerical simulation of electromagnetic radiation mirage effect outside antenna location

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4-51 Plasmonic absorption of THz radiation in graphene structure with metal grating

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4-52 Optical properties of colloidal Ag₂S quantum dots

Aleksey Perepelitsa, O Ovchinnikov, M Smirnov, T Kondratenko, I Grevtseva
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4-53 Development of fast and high-effective single-photon detector for spectrum range up to 2.3 P'Вµm

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4-54 Surface plasmon-phonon polaritons in GaAs

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4-55 Anti-corrosion treatment of metal surfaces based on photonics methods

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4-56 Numerical simulation of eigenmodes of ring and racetrack optical microresonators

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4-57 Synthesis and postsynthetic anion exchange of CsPbX₃ (X = Cl, Br, I) quantum dots

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4-58 Integrated Bragg waveguides as an efficient optical notch filter on silicon nitride platform

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4-59 Band-pass filters based on photonic crystal

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4-60 Nonlinear optical properties of hybridized CdS/ZnS-PVP sols

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4-61 High-responsivity graphene plasmonic terahertz detector

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4-62 Investigation of modulation spectra of volume holograms recorded in additively colored fluorite crystals

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4-63 Phase shifting profilometry with optical vortices

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4-64 Linear dichroism of LiBa₁₂(BO₃)F₄ crystal in the IR region

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4-65 Suppression of slow decaying emission in II-VI quantum dots with Fano resonance energy transfer

Timofey Mikhailov, K Belyaev, A Toropov, A Rodina, S Ivanov, G Pozina, T Shubina
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4-66 Experimental sol-gel fabrication and theoretical simulation of one-dimensional photonic crystals with a defect state

Victoria Romanova, L Matyushkin, P Somov
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4-67 Coexistence of type-I and type-II band line-ups in 12 monolayer thick GaN/AlN single quantum wells

Evgenii Evropeitsev, V Jmerik, D Nechayev, S Rouvimov, T Shubina, V Kaibyshev, G Pozina, S Ivanov, A Toropov
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4-68 Resonance Fluorescence from an Ensemble of Optical Centres with Cooperativities Produced by a Dielectric Host

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4-69 Interplay between vibronic and Coulomb coupling in molecular aggregates: vibronic trimer

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4-70 Surface enhanced Raman spectroscopy of fullerene C₆₀ drop-deposited on the silvered porous silicon

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4-71 Magneto-optical microcavity with Au plasmonic layer

Tatyana Mikhailova, S Lyashko, S Tomilin, A Karavainikov, A Prokopov, A Shaposhnikov, V Berzhansky V.I. Vernadsky Crimean Federal University, Simferopol, Russian Federation

4-72 Yagi-Uda nanoantennas driven by electron-hole plasma photoexcitation

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4-73 Purcell effect in optical Fibonacci lattices

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4-74 The motion of nanoparticles under the non-conservative forces mediated by surface plasmon polaritons

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4-75 The optical microconcentrators for multielement IR photodetectors

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4-76 The x-ray study of 3d-metal doped bismuth titanates with a pyrochlore-type structure.

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4-77 Experimental quantum key distribution using polarization encoding with active measurement basis selection

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4-78 Optimization of Nanoantenna-Enhanced Terahertz Emission from Photoconductive Antennas

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4-79 Polarizing metasurface based on chiral unit cell in terahertz frequency range

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4-80 Blue photoluminescence of sponge-like highly porous alumina synthesized in hydrofluoric acid based electrolytes

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4-81 High resolution photolithography using arrays of polystyrene and SiO₂ micro- and nano-sized spherical lenses

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4-82 Optical properties of GaAsP–AlGaAs quantum well heterostructures

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Spintronics, Electro- and Magnetooptics

5-01 Giant Magnetoresistance in NiO/Co/Cu/Co/Ti spin valve fabricated by EBPVD

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5-02 Magnetic properties of epitaxial GaMnAs layers

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5-03 The induced magnetization and magneto-optical Kerr and Faraday effects in a two-dimensional electron gas with spin-orbit coupling subjected to a magnetic field and periodic potential

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5-04 Linear carrier dispersion in ultra narrow gap metamorphic InAsSbx/InAsSby superlattices

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5-05 Photoelectric properties of SiC/Si structure grown by the method of atoms substitution

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5-06 The electronic structure of magnetic d-ions in manganese doped copper metaborate $\text{Cu}_{1-x}\text{Mn}_x\text{B}_2\text{O}_4$

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5-07 Terahertz spectroscopy of multiferroic $\text{PrFe}_3(\text{BO}_3)_4$: electron-phonon interaction in external magnetic field

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5-08 Formation and research of spin light-emitting diodes based on structures with a GaMnAs injector

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5-09 Scanning probe microscopy of high-coercive iron garnet films

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Electric, Magnetic and Microwave Devices

6-01 Resistive contact MEMS switch in a “hot” operation mode

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6-02 A study of 4H-SiC diode avalanche shaper

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6-03 Diffusion theory and optimization of ohmic contacts to n-layers of bipolar nanoheterostructures

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6-04 Numerical simulation of induction heating considering the surface oxidation of titanium samples

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6-05 The influence of the current in the inductor on the temperature of heated titanium samples

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6-06 Features of transmission at analog intermediate frequency signals on fiber - optical communication lines in radar station.

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6-07 Fast electrochemical membrane actuator: Design, fabrication and preliminary testing

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6-08 Design and technology optimization of SiC-based RF MEMS switch

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6-09 CNTs-based gas sensor

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6-10 Conductive channel of microwave generator based on indium antimonide nanowires

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6-11 Electrical properties of polycrystalline materials from the system Cu-As-Ge-Se under high pressure condition

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6-12 Exploring ceramic-based composites as Ka-band absorbers

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6-13 Investigation of resistive switching of Zn_xTi_yHf_zO_i nanocomposite for RRAM elements manufacturing

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6-14 Silicon carbide of Ni/6H-SiC and Ti/4H-SiC type Schottky diode current-voltage characteristics modelling

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6-15 Optical thermometry based on level anticrossing in nano-silicon carbide

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6-16 Temperature Effects on the Magnetization and Magnetoimpedance in Ferromagnetic Glass-Covered microwires

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6-17 Non-destructive Testing of Nanomaterials by Using Subminiature Eddy Current Flaw Transducers

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6-18 Influence of current limitation on the adaptive behavior of the memristive nanostructures

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6-19 Bistable arch-like beams with modulated profile as perspective supporting structures of a microelectromechanical actuator

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6-20 Effect of temperature passivation on surface traps in the HEMT-transistors based on AlGa_N / SiC

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6-21 Suppression of the self-heating effect in AlGa_N/Ga_N high electron mobility transistor by few-layer graphene

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6-22 AlGaAs/GaAs HBTs with C-doped base and undoped emitter-base spacer layer

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6-23 Modeling the semiconductor devices with negative differential resistance based on nitride nanowires

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Other Aspects of Nanotechnology

7-01 Peculiarities of 2D structuring of glasses via thermal poling

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7-02 XPS Depth Profiling of Air-Oxidized Nanofilms of NbN on GaN Buffer-Layers

*Inessa Shurkaeva, I Shurkaeva, A Lubenchenko, A Batrakov, S Krause, A Pavolotsky, D Ivanov, O Lubenchenko
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7-03 The Formation of Quantum Dots - Liquid Crystal monolayers by Langmuir-Blodgett method

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7-04 Perspective structure of memory cell based on silver chalcogenides

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7-05 Degradation study of AlAs/GaAs resonant tunneling diode IV curves under influence of high temperatures

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7-06 Gamma radiation effects to the photoluminescence properties of thin films ZnTpp and ZnTpp/C60 nanocomposites

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7-07 Cobalt and silicon intercalation into the graphene-nickel interface

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7-08 Surface changes of poly-L-lactic acid due to annealing

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7-09 Creation of Timken installation for verification of friction materials

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7-10 Possibilities of X-ray optical element surface profiles formation

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7-11 Resistive switching in ZnO/ZnO:In nanocomposite

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7-12 Duration influence of gamma irradiation on the porous silicon properties

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7-13 The energy distribution of electrons in the nonlinear emission from metal surface

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7-14 Infra-red mediated synthesis of C-Cu-Zn nanocomposites using metal oxides and metal nitrates precursors

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7-15 Investigation of electronic properties of Quantum Dots in the Langmuir monolayer of Fatty Acids: Liquid Crystal mixture

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7-16 Matrix metal oxide films formed on porous anodic alumina

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7-17 Electronic properties of graphene-based heterostructures

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7-18 Investigation of the influence of polymerization temperature on the agglomeration process of the CNT in the composite matrix

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7-19 Ab-initio study of graphene/Fe/Ni(111) and graphene/Co/Ni(111) intercalation-like systems

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7-20 Optical properties of CuCr₂Se₄: ab initio simulation

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7-21 The synthesis method of copper nanoparticles in micellar solution

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7-22 Department of Quantum Electronics

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7-23 Nanoscale matrices to transport high-energy beams

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7-24 Features of electrophoretic deposition process of nanostructured electrode materials for planar lithium batteries

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7-25 Molecular dynamics simulations of GaAs-crystal surface modifications during nanoindentation with AFM probe.

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7-26 Mechanisms of charge transport and resistive switching in composite films of semiconducting polymers with particles of graphene oxide

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7-27 Study of aerosol jet printing with dry nanoparticles synthesized by spark discharge

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7-28 Automated installation for the controlled synthesis of MAO-coatings

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7-29 Formation of Langmuir monolayers of pyrene and pyrene butyric acid in eicosanoic acid matrix

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7-30 Evaluation of numerical characteristics of the current load distribution on the surface of multi-tip field emitters

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7-31 Finite element modelling of nanoindentation of diamond-like semiconductors with calculated ab initio Hill anisotropic plasticity

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7-32 Comparative study of thermal and plasma enhanced atomic layer deposition of aluminum oxide on graphene

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7-33 The Magnus force acting on microparticles actuated by magneto-optical tweezers

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7-34 Iron ions distribution profile obtained by irradiating the silicon single crystal

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7-35 Empirical evaluation of the field enhancement factor as a function from electrode spacing for LAPE and single emitter

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7-36 FDTD simulation of spontaneous emission in hyperbolic media

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