

NANOSTRUCTURE MATERIALS, APPLIED OPTICS AND PHOTONICS

**International school for young scientists
within the framework of the 16th international symposium
"NANOSTRUCTURES: PHYSICS AND TECHNOLOGY"**

Vladivostok, Russia, July 14 – 18, 2008

PROGRAMME

Institute of Automation and Control Processes FEB RAS

Vladivostok, 2008

The School is held under the auspices of
The Russian Academy of Sciences

Organizers

*Institute of Automation and Control Processes of Far Eastern Branch of RAS
Far-Eastern National University*

Acknowledgements

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for their contribution to the success of the School:



Russian Academy of Sciences



Far Eastern Branch of RUS



Russian Foundation for Basic Research



*Administration of Primorsky
Region of the Russian Federation*



MINISTRY OF EDUCATION AND SCIENCE
OF THE RUSSIAN FEDERATION

*Ministry of Education and
Sciences of the Russian Federation*

Location and Date

School is held in Vladivostok, July 14 –18, 2008

International Programme Committee

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General Information

Location and Date

The School is held in Vladivostok, July 13 – 19, 2008.

Events of School days (13-18) will take place at the Assembly Hall in the Building of Administration of Primorsky Region located in the downtown of Vladivostok.

Language

The official language of the School is English. No simultaneous translation services will be provided.

Accommodation

Non-Vladivostok participants will be accommodated in *Guest house* of Marine State University (Verkneportovaya Str., 50) in Vladivostok during July 13 – 19.

Transportation

The Organizing Committee will arrange the following free-charge services for participants:

- Airport transfers upon arrival and departure.
- Transfer of participants to the places of Excursions by buses

Social Programme

Welcome party

Participants and accompanying persons are cordially invited to the Welcome Party in the Café of the Building of Administration of Primorsky Region on Sunday evening, July 13, at 18:00.

Excursions

Two free-of-charge excursions will be arranged for participants and accompanying persons.

Excursion 1: “Night Vladivostok”

Monday, July 14, at 21:30.

Excursion 2: “Islands and beaches of Amur bay”

Thursday, July, 17, at 9:00

Scientific Programme

Oral Sessions

Monday	July 14	9:00 – 20:00
Tuesday	July 15	9:00 – 18:20
Wednesday	July 16	9:00 – 17:10
Friday	July 18	9:00 – 18:00

Poster Sessions

Monday	July 14	20:00 – 21:20
Tuesday	July 15	18:20 – 19:40

The size of a poster board is 100x100 cm. Each board will be marked with a number of a corresponding paper. The author is supposed to be at the board during the relevant session. The papers will be stucked early in the morning of the presentation day and removed after closing of the session.

Timetable of Symposium and School

Sunday, July 13

- 09:00 – 15:00 Airport arrival
15:00 – 18:00 Registration (Building of Administration of Primorsky Region, Big Hall)
18:00 – 20:00 Welcome Party

Monday, July, 14 (Building of Administration of Primorsky Region, Big Hall)

- 08:00 - 09:00** Registration
09:00 - 09:30 Opening Remarks (S. Dar`kin, Zh. Alferov)
09:30 - 10:50 Opening Plenary Session
10:50 - 11:20 Coffee Break
11:20 – 12:30 Infrared and Microwave Phenomena in Nanostructures
12:30 - 12:40 Break
12:40 – 14:00 Lasers and Optoelectronic Devices – 1
14:00 – 15:10 Lunch
15:10 – 16:20 Nanostructure Technology – 1
16:20 – 16:30 Break
16:30 – 17:50 Nanostructures and Life Science
17:50 – 18:10 Coffee Break
18:10 – 19:10 Metal Nanostructures
19:10 – 19:20 Break
19:20 – 20:00 Tunneling Phenomena
20:00 – 21:20 Poster Session + Coffee Break
21:30 – 23:30 Excursion 1 (Night Vladivostok)

Tuesday, July, 15 (Building of Administration of Primorsky Region, Big Hall)

- 09:00 – 10:20** Spin Related Phenomena in Nanostructures – 1
10:20 – 10:30 Break
10:30 – 11:50 Nanostructure Characterization
11:50 – 12:10 Coffee Break
12:10 – 13:10 Nanostructure devices

13:10 – 14:40 Lunch
14:40 – 15:50 Lasers and Optoelectronic Devices – 2
15:50 – 16:00 Break
16:00 – 17:00 Nitride Nanostructures
17:00 – 17:20 Coffee Break
17:20 – 18:20 Nanostructure Technology – 2
18:20 - 19:40 Poster Session + Coffee Break

Wednesday, July, 16 (Building of Administration of Primorsky Region, Big Hall)

09:00 – 10:50 Nanostructure Technology – Surface Controlled Nanostructure Formation
10:50 – 11:10 Coffee Break
11:10 – 12:20 Spin Related Phenomena in Nanostructures – 2
12:20 – 12:30 Break
12:30 – 14:00 Nanostructure Characterization – silicides
14:10 – 15:20 Lunch
15:20 – 17:10 Quantum Wells and Quantum Dots
17:10 – 17:30 Coffee Break

Thursday, July, 17

09:00 – 18:00 Sea Excursion “**Islands and beaches of Amur bay**”

Friday, July, 18 (Building of Administration of Primorsky Region, Big Hall)

09:00 – 10:40 Transport in Nanostructures
10:40 – 11:00 Coffee Break
11:00 – 12:10 Lasers and Optoelectronic Devices – 3
12:10 – 12:20 Break
12:20 – 14:20 Technical Session
14:20 – 15:30 Lunch
15:30 – 17:30 Closing Plenary Session

17:30 – 17:50 Coffee Break

17:50 – 18:10 Aixtron Young Scientist Award Ceremony

18:10 – 18:30 Clothing Remarks

19:00 – 22:00 Symposium Dinner

Saturday, July, 19

9:00 – 14:00 Departure

Monday, July, 14

Opening Plenary Session

09:30 - 10:50

Chairman: *Zh. Alferov*

OPS.01pl *S. Tarucha*

Electron manipulation of electron and nuclear spins in quantum dots

OPS.02pl *V.I. Sergienko* and V.A. Avramenko

Nanostructured Matrix Sorption Materials – Promising Media for Low-Energy Nanotechnology and Ecology

Infrared and Microwave Phenomena in Nanostructures

11:20 – 12:30

Chairman: *Yu. Gulyaev*

IRMP.01i *V. Ryzhii*, M. Ryzhii, N. Ryabova, V. Mitin and T. Otsuji

Far infrared and terahertz devices based on graphene heterostructures

IRMP.02o *Y.V. Kislinskii*, I.V. Borisenko, K.Y. Constantinian, P.V.

Komissinskiy, G.A. Ovsyannikov and A.V. Shadrin

Millimeter wave dynamics of Josephson junctions with antiferromagnetic layer

IRMP.03o *V.V. Popov*, G.M. Tsymbalov and M.S. Shur

Amplification of terahertz radiation due to plasmonic instability in the field-effect transistor array

Lasers and Optoelectronic Devices – 1

12:40 – 14:00

Chairman: *Xiaomin Ren*

LOED.01o *S.V. Ivanov*, E.V. Lutsenko, S.V. Sorokin, I.V. Sedova,

S.V. Gronin, A.G. Voinilovich, N.P. Tarasuk, G.P. Yablonskii, and P.S. Kop'ev

Violet-green injection laser converter based on II-VI quantum dot nanostructures

LOED.02o *S.V. Alyshev*, A.O. Zabezhaylov, R.A. Mironov, V.I. Kozlovsky and E.M. Dianov

3 watt scanning blue VCSEL with electron-beam pumping based on MBE grown ZnCdSe/ZnMgSSe structure

LOED.03o *S. V. Sorokin*, I. V. Sedova, S. V. Gronin, M. M. Zverev,

N. A. Gamov, D. V. Peregoudov, V. B. Studionov and S. V. Ivanov

Effective electron beam pumped green semiconductor lasers based on heterostructure with multiple CdSe/ZnSe QD active layers

- LOED.04o **A.O. Zabezhaylov**, S.V. Alishev, R.A. Mironov, S.A. Vasiliev,
M.V. Grekov and E.M. Dianov
Optical properties of MBE grown Cr²⁺:ZnSe layers and
Cr²⁺:ZnSe/ZnMgSSe waveguide structures for mid-IR lasers
-

Nanostructure Technology –1

15:10 – 16:20

Chairman: *V. Dubrovskii*

NSTE.01i **J. Johansson**

Synthesis, properties and applications of III-V nanowires

NSTE.02o **G.E. Cirlin**, Yu.B. Samsonenko, V.A. Egorov, I.P. Soshnikov,
V.G. Dubrovskii, N.V. Sibirev, V.P. Ulin, V.M. Ustinov and F. Glas
Critical diameter of A₃B₅ nanowires grown on lattice

NSTE.03o V. G. Dubrovskii, **N. V. Sibirev**, I. P. Soshnikov, G. E. Cirlin,
J.-C. Harmand, G. Patriarche and F. Glas
Formation of hexagonal crystal structure in nanowires of cubic
semiconductor materials

Nanostructures and Life Science

16:30 – 17:50

Chairman: *A. Aseev*

NSLS.01i **Yu.N. Kulchin**

Self-assembled Biosilification Processes in Animate Nature as the
Base of Prospective Nanostructures

NSLS.02i **Werner E.G. Müller**, Xiaohong Wang, Ute Schloßmacher,
Alexandra Boreiko and Heinz C. Schröder
Fractal-related assembly of the axial filament in the demosponge
Suberites domuncula: contribution to the pattern formation of bio-
silica

NSLS.03o S.S. Voznesenskii, **A.N. Galkina**, Yu.N. Kulchin
The features of nanostructured biosilica

Metal Nanostructures

18:10 – 19:10

Chairman: *Zh. Krasil'nik*

MNS.01o **W.-H. Li**, C.-W. Wang, C.-Y. Li, C.K. Hsu and C.-M. Wu
Coexistence of superconductivity and ferromagnetism in Sn
nanoparticles

- MNS.02o **V.L. Gurtovoi**, M. Exarchos, R. Shaikhaidarov, V.N. Antonov, A.V. Nikulov and V.A. Tulin
Magnetic field oscillation phenomena in multiple asymmetric superconducting rings of 1 μm diameter
- MNS.03o **T.A. Komissarova**, T.V. Shubina, V.N. Jmerik, M.A. Timofeeva, N.A. Pikhtin, L.I. Ryabova, D.R. Khokhlov, P.S. Kop'ev and S.V. Ivanov
Photovoltaic effect in InN films with In clusters
-

Tunneling Phenomena

19:20 – 20:00

Chairman: *P. Kop'ev*

- TP.01o **Yu.I. Latyshev**, A.P. Orlov, V.A. Volkov, A.V. Irzhak, D. Vignolles, J. Marcus and T. Fournier
Interlayer tunneling spectroscopy of Landau levels in graphite
- TP.02o **I.N. Kotel'nikov** and M.N. Feiginov
Tunnel Schottky structures with 2D channels and negative differential conductance
-

Poster Session – 1

20:00 – 21:20

Tuesday, July, 15

Spin Related Phenomena in Nanostructures – 1

09:00 – 10:20

Chairman: *M.-W. Wu*

- SRPN.01o **A.V. Larionov** and L.E. Golub
Electrical control of spin-orbit splitting in GaAs/AlGaAs coupled quantum wells
- SRPN.02o **R.V. Cherbunin**, M.S. Kuznetsova, S.V. Potavtsev, I.Ya. Gerlovin, I.V. Ignatiev, Yu.K. Dolgikh, Yu.P. Efimov, S.A. Eliseev, V.V. Petrov, A.V. Larionov and A.I. Il'in
Carrier spin dynamics in quantum wells GaAs under lateral localizing electric potential
- SRPN.03o **S.Yu. Verbin**, R.V. Cherbunin, T. Auer, D.R. Yakovlev, M. Bayer, D. Reuter, A.D. Wieck, I.Ya. Gerlovin and I.V. Ignatiev
Dynamics of nuclear spin polarization in InGaAs quantum dots

- SRPN.04o **A. F. Zinovieva** A. V. Dvurechenskii, N. P. Stepina,
A. I. Nikiforov, L. V. Kulik and A. S. Lyubin
Spin-echo measurements of electrons localized on Ge quantum
dots
-

Nanostructure Characterization

10:30 – 11:50

Chairman: *A. Chaplik*

- NC.01o V.Ya. Aleshkin, A.V. Antonov, **V.I. Gavrilenko**, L.V. Gavrilenko
and B.N. Zvonkov
Phonon induced Fano resonances in photocurrent spectra of InP doped
with shallow donors
- NC.02o V.Ya. Aleshkin, A.A. Dubinov, L.V. Gavrilenko, **Z.F. Krasilnik**,
D.I. Kuritsyn, D.I. Kryzhkov, S.V. Morozov
Picosecond dynamics of transmittance in GaAs/InGaAs quantum well
heterostructure
- NC.03o **D.V. Marin**, V.A. Volodin, E.B. Gorokhov, H. Rinnert, P. Miska and
M. Vergnat
Visible photoluminescence from Ge nanocrystals in GeO₂ matrix
- NC.04o **R.V. Romashko**, Yu.N. Kulchin, S.Di Girolamo, A.A. Kamshilin and
J.-C. Launay
Multi-channel adaptive measurement system for sub-nanometer
metrology
-

Nanostructure devices

12:10 – 13:10

Chairman: *S. Tarucha*

- NSD.01o **Zs.J. Horvath**, P. Basa, T. Jaszi, A.E. Pap, A.I. Kovalev,
D.L. Wainstein and L. Dozsa
MNOS memory structures with embedded silicon nanocrystals
- NSD.02o **K. Kral**
Quantum dot nanodevice with electron-phonon interaction
- NSD.03o **V. V. Koledov** V. Ya. Pokrovskii and S. G. Zybtsev
Self-sensitive torsional microresonators based on a charge-density
wave system
-

Lasers and Optoelectronic Devices – 2

14:40 – 15:50

Chairman: *A. Dvurechenskii*

- LOED.05i **V.A. Haisler**
Single photon solid state emitter

- LOED.06o **L.Ya. Karachinsky**, I.I. Novikov, G. Fiol, M. Kuntz,
Yu.M. Shernyakov, N.Yu. Gordeev, M.V. Maximov, M.B. Lifshits,
T. Kettler, K. Posilovic, V.A. Shchukin, N.N. Ledentsov,
S.S. Mikhrin and D.Bimberg
High-Power Wavelength Stabilized Laser Based on the Tilted
Cavity Concept
- LOED.07o **S.V. Zaitsev**, M.V. Dorokhin, Yu.A.Danilov, P.B. Demina,
V.D. Kulakovskii and B.N. Zvonkov
Circular polarized electroluminescence in diodes with
InGaAs/GaAs quantum wells and Mn δ -lay
-

Nitride Nanostructures

16:00 – 17:00

Chairman: *N. Sibel'din*

- NNS.01i **T. V. Shubina**, M. M. Glazov, A. A. Toropov, N. A. Gippius,
J. P. Bergman, B. Monemar, A. Usui, A. Vasson, J. Leymarie,
S. V. Ivanov, and P. S. Kop'ev
Slow light in GaN
- NNS.02i **A. Yoshikawa**, S. B. Che, Y. Ishitani, X. Q. Wang, H. Saito,
T. Fujimoto, N. Hashimoto, A. Hikida, K. Matsui, A. Yuki,
M. Otsuki, K. Soudalin and E. S. Hwang
Fabrication and characterization of one monolayer InN-based
novel nanostructures embedded in GaN matrix
-

Nanostructure Technology –2

17:20 – 18:20

Chairman: *J. Johansson*

- NSTE.04o N. V. Sibirev, **V. G. Dubrovskii**, G. E. Cirlin, V. A. Egorov,
Yu. B. Samsoneno, I. P. Soshnikov and V. M. Ustinov
Some calculations related to the growth of GaAs nanowires
- NSTE.05o **A.V. Prinz** and V.Ya. Prinz
Periodically corrugated nanostructures
- NSTE.06o **A.V. Vakhruchev**, A. Y. Fedotov, L. L. Vakhroucheva,
A. A. Shushkov
Mathematical simulation and experimental investigation of the
formation of powder nanocomposites

Poster Session - 2

18:20 - 20:00

Wednesday, July, 16

Nanostructure Technology – Surface Controlled Nanostructure Formation

09:00 – 10:50

Chairman: *A. Latyshev*

- SCNF.01i *A.A. Saranin* and A.V. Zotov
Self-Assembly formation of Adsorbate Nanostructures on
Semiconductor Surfaces with atomic precision
- SCNF.02o *A.V. Zotov*, A.A. Saranin, Y.L. Wang and M.Y. Lai
Surface magic clusters on silicon
- SCNF.03o A.E. Afanasiev, *P.N. Melentiev* and V.I. Balykin
Fabrication of nanostructures on the surface
- SCNF.04o *D.V. Gruznev*, D.A. Olyanich, D.N. Chubenko, I.A. Kuyanov,
A.V. Zotov and A.A. Saranin
Controllable modification of surface reconstructions
- SCNF.05o *I.B. Troitskaia*, T.A. Gavrilova, V.G. Kostrovsky, L.D. Pokrovsky
and V.V. Atuchin
The synthesis, micromorphology and structure of germanium
oxide(IV) nanocrystals
-

Spin Related Phenomena in Nanostructures – 2

11:10 – 12:20

Chairman: *K. Kral*

- SRPN.05i *B. Huang* and I. Appelbaum
Silicon Spintronics
- SRPN.06o *N. Averkiev* and M. M. Glazov
Optical Orientation and Spin Dynamics in Quantum Wells with
Large Spin-Orbit Splitting
- SRPN.07o *K. Shen* and M. W. Wu
Robust strongly-modulated transmission of a *T*-shaped structure
with local Rashba interaction
-

Nanostructure Characterization – silicides

12:30 – 14:00

Chairman: *A. Yoshikawa*

- NCS01i *A.V. Latyshev*
Atomic steps and nanoclusters on Si surface

- NCS02o ***N.G. Galkin***
Multilayer silicon – silicide heteronanostructures with buried semiconductor silicide nanocrystallites: growth, properties and device perspectives
- NCS03o ***N.G. Galkin, E.A. Chusovitin***, D.L. Goroshko, R.I. Batalov, R.M. Bayazitov, T.S. Shamirzaev, A.K. Gutakovsky, K.S. Zhuravlev and A.V. Latyshev
Si/ β -FeSi₂/Si heteronanostructures fabricated by ion implantation and Si MBE: growth, structural and luminescence properties
- NCS04o ***K.N. Galkin***, S.A. Dotsenko, N.G. Galkin, V.V. Korobtsov, M. Kumar, Govind and S. M. Shivaprasad
Formation, structural and optical properties of two-dimensional silicide phases in Si(111)/Mg system

Quantum Wells and Quantum Dots

15:20 – 17:10

Chairman: *V. Volkov*

- QW/QD.01i ***A.V. Dvurechenskii*** and A. I. Yakimov
Electronic states in 3D dense array of Ge/Si quantum dots
- QW/QD.02o ***M.-E. Pistol***, N. Sköld, C. Pryor and L. Samuelson
Optical properties of InAs quantum dots in InP quantum wires
- QW/QD.03o ***V. G. Talalaev***, J. W. Tomm, N. D. Zakharov, P. Werner, U. Gösele, B. V. Novikov, Yu. B. Samsonenko, V. A. Egorov and G. E. Cirlin
Carrier transfer and light emission in hybrid nanostructures including InGaAs quantum well and quantum dots array
- QW/QD.04o ***Katz***, V. P. Kochereshko, V. F. Agekyan, L. Besombes and G. Karczewski
Exciton recombination in ZnMnTe quantum well heterostructures
- QW/QD.05o N. G. Romanov, ***D. O. Tolmachev***, P. G. Baranov, R. A. Babunts, B. R. Namozov, Yu. G. Kusrayev, I. V. Sedova, S. V. Sorokin and S. V. Ivanov
Evidence of Mn²⁺ fine structure in CdMnSe/ZnSe quantum dots caused by their low dimensionality

Friday, July, 18

Transport in Nanostructures

09:00 – 10:40

Chairman: *J. Johansson*

- TN.01o *Yu.S. Yukecheva*, A.B. Vorob'ev, V.Ya. Prinz, A.I. Toropov and D.K. Maude
Observation of 2DEG transport in helical geometry at low filling factors
- TN.02o *A.V. Germanenko*, G.M. Minkov, O.E. Rut, A.A. Sherstobitov and A.K. Bakarov
Weak localization in patterned 2D structures with a single quantum well
- TN.03o *S.N. Artemenko* and D.S. Shapiro
Current oscillations in strongly correlated quantum wires with an impurity
- TN.04o *N.P. Stepina*, E.C. Koptev, A.V. Nenashev, A.V. Dvurechenskii and A.I. Nikiforov
The effect of long-range Coulomb interaction on slow relaxation of excess conductance in two-dimensional array of tunnel-coupled Ge/Si quantum dots
- TN.05o *D.A. Tsukanov*, M.V. Ryzhkova, D.G. Lar'kovich, D.V. Gruznev, O.A. Utas, V.G. Kotlyar, A.V. Zotov and A.A. Saranin
Electrical conductance of Cu nanowires on Si(111)
-

Lasers and Optoelectronic Devices – 3

11:00 – 12:10

Chairman: *V. Haisler*

- LOED.08i *A. Kovsh*, A. Gubenko, I. Krestnikov, D. Livshits, S. Mikhrin, J. Weimert, L. West, G. Wojcik, D. Yin, C. Bornholdt, N. Grote, M.V. Maximov and A. Zhukov
Quantum Dot Comb-Laser as a light source for Optical Interconnect technologies
- LOED.09o *V.Ya. Aleshkin*, A.A. Biryukov, V.I. Gavrilenko, A.A. Dubinov, V.I. Kocharovskiy, K.V. Maremyanin, S.V. Morozov, S.M. Nekorkin and B.N. Zvonkov
Intracavity difference-frequency generation in butt-joint diode lasers
- LOED.10o *A.A. Kovalyov*, N.V. Kuleshov, V.E. Kisel, S.V. Kurilchik, O.P. Pchelyakov, V.V. Preobrazhenskii, M.A. Putyato, N.N. Rubtsova and T.S. Shamirzaev
Semiconductor nanostructure mirror for ultrashort-pulse

Technical Session

12:20 – 14:20

Chairman: *A. Saranin*

- TS.01i *V.A. Bykov*
Possibilities of Modern Scanning Probe Microscopy for investigation and modification of biological nanostructures
- TS.02i *G.T. Mikaelyan* and S.N. Sokolov
Heterostructure Nanolayer Diode Laser Bars and Arrays
- TS.03i *S. Pokrant* High Resolution Spectroscopy and Energy Filtered Imaging: In-column filter, monochromator technology and corrector integration in the Libra 200 MC
- TS.04i *W. Heichler* Specialized and customized ultrahigh vacuum systems for Surface Analysis
-

Closing Plenary Session

15:30 – 17:30

Chairman: *Zh. Alferov*

- CPS.01pl *Xiaomin Ren*, Qi Wang, Hui Huang, Yongqing Huang, Aiguang Ren, Deping Xiong, Shiwei Cai, Xia Zhang and Peida Ye
Theory and experimental investigations on boron-incorporated III- V materials for relevant heterostructures
- CPS.02pl *Ming-Wei Wu*
Spin dynamics in semiconductor nanostructures
- CPS.03pl *V.I. Konov*
Single wall carbon nanotubes – a new photonic material
-

Aixtron Young Scientist Award Ceremony

17:50 – 18:10

Chairman: *Zh. Alferov*

Closing Remarks

18:10 - 18:30

Poster Session -1

- **A.N. Chibisov**
Institute of Geology and Nature Management of FEB RAS,
Blagoveshchensk, Russia
“ATOMIC AND ELECTRONIC STRUCTURE OF $(\text{TiO}_2)_n$ (N=1-3)
NANOPARTICLES”
- **S.A. Dotsenko*, N.G. Galkin, K.N. Galkin**
Institute for Automation and Control Processes of FEB RAS,
Vladivostok, Russia
“METHOD FOR CALCULATION OF DESORPTION PARAMETERS
USING REFLECTANCE SPECTRA”
- **K.N. Galkin*, S.A. Dotsenko**
Institute for Automation and Control Processes of FEB RAS,
Vladivostok, Russia
“INITIAL STAGES OF SILICON GROWTH ATOP MAGNESIUM
SILICIDE PHASE $\text{Si}(111) - 2/3\sqrt{3}\text{-R}30^0$ ”
- **E.A. Dovolnov*, V.G. Mirgorod, S.N. Sharangovich**
Tomsk State University of Control System and Radioelectronics,
Tomsk, Russia
“NONLINEAR HOLOGRAPHIC RECORD OF PHOTONIC QUASI
CRYSTALS IN PHOTOPOLYMER BASED COMPOSITES”
- **A.V. Gaisler*, D.V. Sheglov, A.V. Latyshev**
Institute of Semiconductor Physics of SB RAS, Novosibirsk, Russia
“NANOPATTERNING OF OXIDE THIN FILMS USING ATOMIC
FORCE MICROSCOPY LOCAL ANODIC OXIDATION”
- **A.A. Gnidenko**
Institute for Materials Science, KhSC FEB RAS, Khabarovsk, Russia
“*Ab initio* SIMULATION OF SILICON NANOCCLUSERS
EMBEDDED INTO SiO_2 β -CRISTOBALITE”
- **A.S. Gouralnik*, D.L. Goroshko, N.G. Galkin**
Institute for Automation and Control Processes of FEB RAS,
Vladivostok, Russia
“CORRELATION OF ELECTRICAL AND MAGNETIC
PROPERTIES OF THIN IRON FILMS ON SILICON”
- **D.V. Gulyaev*, K.S. Zhuravlev**
Institute of semiconductor physics, SB of RAS, Novosibirsk, Russia
“THE EFFECT OF THE SURFACE ACOUSTIC WAVE ELECTRIC
FIELD ON THE PHOTOLUMINESCENCE KINETICS OF TYPE II
GaAs/AlAs SUPERLATTICES AND QUANTUM WIRES”
- **N.I.Plusnin*, V.M.Ilyashenko**
Institute for Automation and Control Processes of FEB RAS,
Vladivostok, Russia
“INFLUENCE OF PROCEDURE FAST RE-EVAPORATION ON
THE GROWTH 3-D METAL NANOLAYERS ON $\text{Si}(111)\text{-}7\times 7$ ”

- **P.V. Seredin^{1*}, E.P. Domashevskaya¹, N.N. Gordienko¹, A.V. Glotov¹, I.N. Arsent'ev², M.V. Shishkov²**
¹ Voronezh State University, Universitetskaya pl., 1 394006, Voronezh, Russia
² Ioffe Physical and Technical Institute, Polytekhnicheskaya, 26, 194021, St-Petersburg, Russia
 “ROLE OF THE BUFFER POROUS LAYER AND DYSPROSIUM DOPING IN GaInP:Dy/POR-GaAs/GaAs(100) HETEROSTRUCTURE”

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- **S.A. Dotsenko*, N.G. Galkin, E.A. Chusovitin**
 Institute for Automation and Control Processes of FEB RAS, Vladivostok, Russia
 “UNUSUAL CHANGE OF REFLECTANCE FOR FILM DURING 2D->3D PHASE TRANSITION”
- **K.N. Galkin^{*1}, V.V. Korobtsov¹, Mahesh Kumar², Govind², S.M. Shivaprasad², N.G. Galkin¹**
¹Institute for Automation and Control Processes of FEB RAS, Vladivostok, Russia
²Surface Physics and Nanostructures Group, National Physical Laboratory Dr. K.S. Krishnan Road, New Delhi, India
 “THE MODEL OF THE MAGNESIUM SILICIDE PHASE ON Si(111): 2/3√3-R30⁰”
- **Yu.P. Ivanov^{1*}, A.V. Ognev^{1,2}, A.I. Ilin¹, K.S. Ermakov¹, L.A. Chebotkevich^{1,2}**
¹Far-Eastern National University, Vladivostok, Russia
²Institute for Automation and Control Processes of FEB RAS, Vladivostok, Russia
 “MAGNETIC PROPERTIES Fe FILMS WITH Pd AND Ge INTERLAYERS”
- **T.S. Kachinskaya^{1*}, M.M. Melnichenko², M.F. Starodub³, O.M. Shmyryeva¹, E.P. Yurevich²**
¹Kiev National Technical University of Ukraine “KPI”, Ukraine
²Taras Shevchenko Kiev National University, Ukraine
³Institute of Biochemical of NASU, Ukraine
 “POSSIBILITY OF USE OF NANOSTRUCTURED SILICON IN BIOSENSOR CONTROLS”
- **A. A. Lyamkina^{1,2,*}, S. P. Moshchenko¹, V. A. Haisler¹, Yu. G. Galitsyn¹ and A. I. Toropov¹**
¹ Institute of Semiconductor Physics, Novosibirsk, Russia
² Novosibirsk State University, Novosibirsk, Russia
 “CASTLE-LIKE QUANTUM DOT SETS FORMED BY INDIUM DROPLET EPITAXY ON (001)GaAs SUBSTRATE”
- **A.V. Popov**
 Altai State Technical University after I.I. Polzunov, Barnaul, Russia
 “AGGREGATION OF CARBON ATOMS”

- **S.A. Rogov***, **V.G. Zavodinsky**, **S.A. Pyachin**
Institute of Materials Science, Khabarovsk, Russia
“ELECTRIC ARC USING TO PRODUCE CARBON FILMS ON COPPER SUBSTRATE”
- **P.V. Seredin¹**, **E.P. Domashevskaya¹**, **N.N. Gordienko¹**, **N.A. Rumyantseva¹**, **B.L. Agapov¹**, **I.N. Arsent’ev²**, **I.S. Tarasov²**
¹ Voronezh State University, Universitetskaya pl., 1 394006, Voronezh, Russia
² Ioffe Physical and Technical Institute, Polytekhnicheskaya, 26, 194021, St-Petersburg, Russia
“COMPOSITION AND PARAMETERS OF DOMAINS FORMED AS A RESULT OF SPINODAL DECOMPOSITION OF QUATERNARY ALLOYS IN THE EPITAXIAL GaInP/InGaAsP/GaInP/GaAs(001) HETERO-STRUCTURES”
- **O.A. Utas^{1,*}**, **N.V. Denisov²**, **V.G. Kotlyar¹**, **A.V. Zotov^{1,2,3}**, **A.A. Saranin^{1,2}**, **M.Y. Lai⁴**, **C.M. Wei⁴**, **Y.L. Wang⁴**
¹Institute of Automation and Control Processes of FEB RAS, Vladivostok, Russia
²Faculty of Physics and Engineering, Far Eastern State University, Vladivostok, Russia
³Department of Electronics, Vladivostok State University of Economics and Service, Vladivostok, Russia
⁴Institute of Atomic and Molecular Sciences, Academia Sinica, P.O. 23-166, Taipei, Taiwan, R.O.C.
“INTERACTION BETWEEN CLUSTERS OF THE Si(100)4×3-IN RE-CONSTRUCTION”
- **A.V. Visikovskiy**, **M. Yoshimura**, **K.Ueda**
Nano High-Tech Research Center, Toyota Technological Institute, Nagoya, Japan
“*In situ* HYDROGENATION OF Si(110) SURFACE STUDIED BY STM”