The Sixth Asian School-Conference on Physics and Technology of Nanostructured Materials

ASCO-NANOMAT 2022

PROGRAMME

Institute of Automation and Control Processes FEB RAS

Far Eastern Federal University

Vladivostok
2022

General information

Plenary talk – 40 minutes including questions
Invited talk – 30 minutes including questions
Ordinary talk – 15 minutes including questions
Coffee break – 30 minutes
Lunch – 60 minutes

Organizers

Institute of Automation and Control Processes FEB RAS

Far Eastern Federal University

The School-Conference is sponsored by

Sunday, 24 April

09:00 – 20:00 Participants arrival at the airport of Vladivostok, transportation and accommodation

Monday, 25 April

08:30 – 09:00 Participants registration in hotel
09:00 – 12:00 Master class sections for students
12:00 – 13:00 *Lunch*
12:00 – 13:00 Participants registration

MIDDLE HALL

13:00 – 13:20 Opening remarks
13:30 – 16:30 Physics of nanostructures and interfaces, self-organization processes, two-dimensional materials
16:30 – 17:00 *Coffee break*
17:00 – 17:30 Sponsor session
17:30 – 19:30 Plenary session

COLUMNED HALL

13:30 – 16:30 Ferromagnetic and ferroelectric materials, including nanomaterials, and spintronics

Tuesday, 26 April

09:00 – 12:00 Master class sections for students
12:00 – 13:00 *Lunch*

MIDDLE HALL

13:00 – 15:00 Laser nanofabrication, all-dielectric materials, nanomaterials: fundamentals and applications
15:00 – 15:15 *technical break*
15:15 – 17:00 Laser nanofabrication, all-dielectric materials, nanomaterials: fundamentals and applications
17:00 – 17:30 *Coffee break*
17:30 – 19:30 Plenary session

COLUMNED HALL

13:00 – 14:30 Physics of semiconducting nanostructures and heterostructures, including silicide, 4th group material's alloy, A3B5 and A2B6 heterostructures: experiment, calculations and technology
14:30 – 14:45 *technical break*
14:45 – 16:45 Photonic and electronic devices: integrated circuits, solar cells, nanophotonics, biophotonics

Wednesday, 27 April

09:00 – 10:00 Transportation to Primorsky Safari Park
10:00 – 12:00 Primorsky Safari Park tour
12:00 – 12:30 Transportation to Art-park Shtykovsky ponds
13:00 – 15:00 Symposium lunch
15:00 – 19:00 Free time in Art-park
19:00 – 20:00 Transportation to FEFU Campus

Thursday, 28 April

09:00 – 12:00 Master class sections for students
12:00 – 13:00 *Lunch*

MIDDLE HALL

13:00 – 16:30 Laser nanofabrication, all-dielectric materials, nanomaterials: fundamentals and applications
16:30 – 17:30 *Poster session and coffee break*
17:30 – 19:30 Plenary session

COLUMNED HALL

13:00 – 16:30 Nanostructured coverages, nanocomposites, functional hybrid materials: formation, structure and properties

Friday, 29 April

09:00 – 12:00 Master class sections for students
12:00 – 13:00 *Lunch*

MIDDLE HALL

13:00 – 15:45 Physics of semiconducting nanostructures and heterostructures, including silicide, 4th group material's alloy, A3B5 and A2B6 heterostructures: experiment, calculations and technology
15:45 – 16:20 *coffee break*
16:20 – 17:40 Plenary session
17:40 – 18:00 Award ceremony and closing remarks

COLUMNED HALL

13:00 – 15:45 Nanostructured coverages, nanocomposites, functional hybrid materials: formation, structure and properties

Saturday, 30 April

09:00 – 22:00 Participants departure

Programme of the Sixth Asian School-Conference on Physics and Technology of Nanostructured Materials ASCO-NANOMAT 2022

SUNDAY, 24 APRIL

09:00 – 20:00 Participants arrival at the airport of Vladivostok, transportation and accommodation

MONDAY, 25 APRIL

Participants registration in hotel **08:30 – 09:00**

Master class sections for students **09:00 – 12:00**

Lunch ***12:00 – 13:00***

Participants registration **12:00 – 13:00**

MIDDLE HALL

Opening remarks **13:00 – 13:20**

Physics of nanostructures and interfaces, self-organization processes, two-dimensional materials Chairman: *A.A. Saranin* **13:30 – 16:30**

I.i.01 **D.V. Gruznev,** L.V. Bondarenko, A.Y Tupchaya, Y.E. Vekovshinin, A.N. Mihalyuk, A.V. Zotov, A.A. Saranin
Institute for Automation and Control Processes FEB RAS, Vladivostok, Russia
Pb-based low-dimensional structures on silicon

I.i.02 **Mahesh Kumar,** Prince Sharma, Saurabh K. Siani, V.P. S. Awana
CSIR-National Physical Laboratory, New Delhi, INDIA
Ultrafast Charge Carrier dynamics of topological insulators

I.i.03 **L.V. Bondarenko,** A.Y. Tupchaya, Yu.E. Vekovshinin, D.A. Olyanich, A.V. Matetskiy, N. V. Denisov, S.V. Eremeev, A.N. Mihalyuk, Yu.P. Ivanov, D.V. Gruznev, A.V. Zotov, A.A. Saranin
Institute for Automation and Control Processes FEB RAS, Vladivostok, Russia
Single layer nickel disilicide on surface and as embedded layer

I.o.01 **A.S. Petrov,** A.I. Vergules, D.I. Rogilo, D.V. Sheglov, A.V. Latyshev
Rzhanov Institute of Semiconductor Physics of SB RAS, Novosibirsk, Russia
Morphological transformations on Si(111) surface induced by (√3×√3)-Sn reconstruction formation

I.o.02 **D.A. Tsukanov,** M.V. Ryzhkova
Institute for Automation and Control Processes FEB RAS, Vladivostok, Russia
Surface conductivity study of ultrathin Li layers on the reconstructed Si(111) surface

I.o.03 A. Korol, A. Rybin, D. Kapitan, E. Vasiliev, M. Padalko, A. Perzhu, R. Volotovskiy, A. Makarov, Yu. Shevchenko, K. Soldatov, **V. Kapitan,** K. Nefedev
Far Eastern Federal University, Vladivostok, Russia
Application of Convolutional Neural Networks for the Study of Spin Models

I.o.04 **M.A. Padalko,** K.V. Nefedev
Institute of Applied Mathematics of FEB RAS, Vladivostok, Russia
The Axial Next-Nearest Neighbor 2D Ising Model Polynomial Solution

I.o.05 S.A. Ponomarev, **D.I. Rogilo**, N.N. Kurus, L.S. Basalaeva, K.A. Kokh, A.G. Milekhin, D.V. Sheglov, A.V. Latyshev
Rzhanov Institute of Semiconductor Physics SB RAS, Novosibirsk, Russia
In situ imaging of van der Waals epitaxy and sublimation of the Bi_2Se_3(0001) surface

I.o.06 V. Kravtsov, T. Ivanova, A.N. Abramov, P.V. Shilina, P.O. Kapralov, D.N. Krizhanovskii, V.N. Berzhansky, V.I. Belotelov, I.A. Shelykh, **A.I. Chernov**, I.V. Iorsh
Moscow Institute of Physics and Technology, Dolgoprudny, Russia
Valley polarization of trions in TMDC interfaced with iron garnet

Coffee break ***16:30 – 17:00***

Chairman: *N.G. Galkin*

Sponsor session **17:00 – 17:30**

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Chairman: *N.G. Galkin*

Plenary session **17:30 – 19:30**

Plenary 01 **Shuji Hasegawa**
The University of Tokyo, Tokyo, Japan
Two-dimensional atomic-layer materials

Plenary 02 **Bela Pecz**
Institute for Technical Physics and Materials Science (MFA), Hungrian Academy of Science, Budapest, Hungary
2D nitrides grown in the confined space of graphene/SiC by intercalation and seen in the electron microscope

Plenary 03 **Davor Pavuna**
École Polytechnique Fédérale de Lausanne, Lausanne, Switzerland
Physics of artificial nanostructures and interfaces: The self-organization processes and quantum functionality

COLUMNED HALL

Ferromagnetic and ferroelectric materials, including nanomaterials and spintronics Chairman: *A.V. Ognev* **13:30 – 16:30**

III.o.01 **A.Yu. Samardak** Y.S. Jeon, A.G. Kozlov, K.A. Rogachev, A.V. Ognev, E. Jeong, G.W. Kim, M.J. Ko, A.S. Samardak, Y.K. Kim
Far Eastern Federal University, Vladivostok, Russia
Complex magnetostatic interactions in Fe-Au barcode nanowire arrays

III.o.02 **R.G. Burkovsky**, G.A. Lityagin, A.F. Vakulenko, A.E. Ganzha, R. Gao, A. Dasgupta, Bin Xu, A.V. Filimonov, L.W. Martin
Peter the Great Saint-Petersubrg Polytechnic University, St.-Petersburg, Russia
Field-induced heterophase state in $PbZrO_3$ thin films

III.o.03 **A.E. Klimov**, I.O. Akhundov, V.A. Golyashov, D.V. Gorshkov, D.V. Ishchenko, N.S. Pashchin, G.Yu. Sidorov, S.P. Suprun, A.S. Tarasov, E.V. Fedosenko, O.E. Tereshchenko
Rzhanov Institute of Semiconductor Physics of SB RAS, Novosibirsk, Russia
Magnetoresistance of MIS structure based on PbSnTe:In crystalline topological insulator film

III.o.04 A.V. Davydenko, **N.N. Chernousov**, A.A. Turpak, A.G. Kozlov, A.S. Samardak
Far Eastern Federal University, Vladivostok, Russia
Dependence of the Dzyaloshinskii-Moriya interaction and chiral damping effect on the roughness of the lower Pd layer in the Pd/Co/Pd system

III.o.05 **T.V. Mikhailova**, S.D. Lyashko, E.V. Skorokhodov, S.V. Osmanov, A.V. Karavainikov, A.L. Kudryashov, A.S. Nedviga, S.A. Gusev, A.N. Shaposhnikov
V.I. Vernadsky Crimean Federal University, Simferopol, Russia
Magnetoplasmonic structures with nanostructured layers of bismuth-substituted iron garnets

III.o.06 **R.D. Ivantsov**, M.M. Mikhailov, I.S. Edelman, G.Y. Yurkin
Kirensky Institute of Physics SB RAS, Krasnoyarsk, Russia
Features of magnetic and magneto-optical properties of lanthanum manganite microparticles

III.o.07 **Zh.Zh. Namsaraev,** M.A. Bazrov, M.E. Letushev, M.E. Stebliy
Far Eastern Federal University, Vladivostok, Russia
Investigation of the dependence of current induced magnetization switching in the W-CoTb-Ru structure

III.o.08 **A.N, Kotelnikova**, T.I. Zubar, T.I Usovich, M.I. Panasyuk, V.A. Fed'kin, O.D. Kanafiev, A.V. Trukhanov
SO "SPC NAS of Belarus for Materials Science", Minsk, Belarus
Effects of constant, pulse and pulse-reverse current modes on the electrodeposition of NiFe films

III.o.09 **G.S. Suslin**, O.E. Ayanitov, E.V. Tarasov, A.V. Davydenko, D.O. Yushchenko, P.S. Nazarova, A.S. Samardak, A.V. Ognev, A.G. Kozlov
Far Eastern Federal University, Vladivostok, Russia
Magnetic properties of epitaxial Pd/Co(d)/CoO/Pd structures promising for spin-orbitronics

III.o.10 **D.O. Ignatyeva**, D.M. Krichevsky, P.E. Zimnyakova, S. Xia, L. Bi, V.I. Belotelov
Vernadsky Crimean Federal University, Simferopol, Russia
All-dielectric metasurface with tunable magneto-optical response

III.o.11 **S.D. Khanin**
S.M. Budienny Military Telecommunications Academy; Saint-Petersburg, Russia
Factor of nanohomogeneity in the formation and application of electronic properties of structurally disordered metal oxide materials

III.o.12 **N.I. Plusnin**, E.V. Blinkova
Institute for Automation and Control Processes FEB RAS, Vladivostok, Russia
Effect of Si(001)2×1 surface wetting by Cu monolayers on granulation process and ferromagnetic properties of nanofilms consisting of Cu, Co and/or Fe layers

TUESDAY, 26 APRIL

Master class sections for students **09:00 – 12:00**

Lunch ***12:00 – 13:00***

MIDDLE HALL

Laser nanofabrication, all-dielectric materials, nanomaterials: fundamentals and applications Chairman: *A. Bogdanov* **13:00 – 15:00**

V.i.01 **Sergei Kulinich**
Tokai University, Hiratsuka, Japan
Laser- Prepared Nanomaterials for Gas Sensing

V.i.02 K. Bronnikov, S. Gladkikh, K. Okotrub, A. Simanchuk, A. Zhizhchenko, A. Kuchmizhak and **A. Dostovalov**
Institute of Automation and Electrometry of the SB RAS, Novosibirsk, Russia
Highly regular Laser-Induced Periodic Surface Structures Formed on Metals and Semiconductors

V.i.03 **S.V. Zabotnov,** A.V. Kolchin, D.V. Shuleiko, D.E. Presnov, M.N. Martyshov, P.K. Kashkarov, P.I. Lazarenko, V.B. Glukhenkaya, T.S. Kunkel, S.A. Kozyukhin
Lomonosov Moscow State University, Moscow, Russia
Femtosecond laser modification of GST225 thin films: ripples fabrication and reversible phase transitions

V.i.04 A.A. Vasileva, D.V. Mamonova, **A.A. Manshina**
Saint-Petersburg State University, Saint-Petersburg, Russia
Precision laser chemistry for functional metal and hybrid metal-carbon nanostructures

Technical break ***15:00 – 15:15***

Laser nanofabrication, all-dielectric materials, nanomaterials: fundamentals and applications Chairman: *A. Dostovalov* **15:15 – 17:00**

V.o.01 **G.I. Tselikov,** A.V. Syuy, D.A. Panova, A.V. Arsenin,V.S. Volkov
Moscow Institute of Physics and Technology, Dolgoprudny, Russia
Optical properties of transition metal dichalcogenide nanoparticles synthesized by laser ablation

V.o.02 E.M. Khairullina, D.I. Gordeichuk, L. Logunov, A.Yu. Shishov, A.S. Levshakova, **I.I. Tumkin**
Saint Petersburg University, St. Petersburg, Russia
Direct laser metallization from deep eutectic solvents: optimization of chemical and physical parameters

V.o.03 **Yu.M. Borodaenko**, S.O. Gurbatov, E.M. Khairullina, A.A. Kuchmizhak
Institute for Automation and Control Processes FEB RAS, Vladivostok, Russia
Deep-subwavelength plasmon nanoparticle-embedded laser-induced periodic surface structures on silicon

V.o.04 **E.V. Zharkova**, A.V. Averchenko, I.A. Salimon, O.A. Abbas, P.J.A. Sazio, P.G. Lagoudakis, S. and S. Mailis
Skolkovo Institute of Science and Technology, Moscow, Russia
Photoelectrical characteristics of laser-printed transition metal dichalcogenides alloy

V.o.05 Z.P. Fedorovich, O.A. Reutova, **E.D. Fakhrutdinova**, V.A. Svetlichnyi
Tomsk State University, Tomsk, Russia
Effect of laser treatment of TiO_2 on optical and photocatalytic properties

V.i.05 **E.D. Sheremet**
Tomsk Polytechnic University, Tomsk, Russia
Laser-induced nanomaterial-polymer composites: properties, mechanisms and applications

Coffee break ***17:00 – 17:30***

Chairman: *S.V. Makarov*

Plenary session **17:30 – 19:30**

Plenary 04 **Takashi Suemasu**
University of Tsukuba, Tsukuba, Japan
Formation of high-photoresponsivity $BaSi_2$ films on glass substrate by sputtering for thin-film solar cell applications

Plenary 05 **D.V. Shtansky**
National University of Science and Technology MISIS, Moscow, Russia
Nanostructured materials for fighting bacterial and fungal infections

Plenary 06 K. Koshelev, S. Kruk, E. Melik-Gaykazyan, Jae-Hyuck Choi, **A. Bogdanov**, Hong-Gyu Park, Yu. Kivshar
ITMO University, St. Petersburg, Russia
Linear and nonlinear physics of bound states in the continuum

COLUMNED HALL

Physics of semiconducting nanostructures and heterostructures, including silicide, 4th group material's alloy, A3B5 and A2B6 heterostructures: experiment, calculations and technology Chairman: *S.V. Ovchinnikov*

13:00 – 14:30

II.i.01 **T.S. Shamirzaev**
Rzhanov Institute of Semiconductor Physics SB RAS, Novosibirsk, Russia
Dynamic electron spin polarization

II.o.01 A.V. Pavlikov, A.M. Sharafutdinova, I. M. Gavrilin, V.B. Zaytsev, **A.A. Dronov**, S.A. Gavrilov
National Research University of Electronic Technology – MIET, Zelenograd, Russia
Structure and optical properties of germanium nanowires subjected to thermal post-treatment

II.o.02 **Yu.V. Luniakov**
Institute for Automation and Control Processes FEB RAS, Vladivostok, Russia
Pressure induced Mg_2Ge symmetry modifications — DFT evolutionary search results

II.o.03 V.N. Bessolov**, E.V. Konenkova**, S.N. Rodin
Ioffe Institute, St. Petersburg, Russia
Semipolar GaN layers on nanostructured silicon: the technology, the properties

II.o.04 **S.A. Ponomarev**, D.I. Rogilo, A.Y. Mironov, N.N. Kurus, A.G. Milekhin, D.V. Sheglov, A.V. Latyshev
Rzhanov Institute of Semiconductor Physics SB RAS, Novosibirsk, Russia
Low-temperature hysteresis of β⇔β' phase transition in In_2Se_3/Si(111) films

Technical break ***14:30 – 14:45***

Photonic and electronic devices: integrated circuits, solar cells, nanophotonics, biophotonics Chairman: *T.S. Shamirzaev* **14:45 – 16:45**

VI.i.01 **Haruhiko Udono**
Ibaraki University, Ibaraki, Japan
Development of single crystalline Mg_2Si substrate for Mg_2Si SWIR sensor

VI.o.01 **P. Lazarenko**, V. Kovaluyk, P. An, A. Prokhodtsov, V. Glukhenkaya, T. Kulevoy, A. Yakubov, A. Sherchenkov, S. Kozyukhin, G. Goltsman
National Research University of Electronic Technology – MIET, Zelenograd, Russia
Chalcogenide thin films for reconfigurable optical waveguide application

VI.o.02 **A.V. Shevlyagin,** V.M. Il'yaschenko, A.V. Amosov
Institute for Automation and Control Processes, 5 Radio St., Vladivostok 690041, Russia
Semimetal $CaSi_2$ thin film: a nontrivial transparent conducting material for VIS-MIR applications

VI.o.03 **D. Sapori,** S. Makarov
ITMO University, Saint Petersburg, Russia
CuSCN as hole transport material for perovskite solar cells

VI.o.04 **N.W. Aung,** M.A. Pugachevskii, A.P. Kuzmenko
Southwest State University, Kursk, Russia
Studies on sensor properties of composite CuO/CNPs nanofilms obtained by electrophoretic synthesis

VI.i.02 **Osman Adiguzel**
Firat University, Elazığ, Turkey
Shape Reversibility and Thermoresponsive Reactions in Shape Memory Alloys

WHENSDAY, 27 APRIL

Transportation to Primorsky Safari Park	***09:00 – 10:00***
Primorsky Safari Park tour	***10:00 – 12:00***
Transportation to Art-park Shtykovsky ponds	***12:00 – 12:30***
Symposium lunch	***13:00 – 15:00***
Free time in Art-park	***15:00 – 19:00***
Transportation to FEFU Campus	***19:00 – 20:00***

THURSDAY, 28 APRIL

Master class sections for students **09:00 – 12:00**

Lunch ***12:00 – 13:00***

MIDDLE HALL

Laser nanofabrication, all-dielectric materials, nanomaterials: fundamentals and applications Chairman: *A.A. Kuchmizhak* **13:00 – 16:30**

V.i.06 **Dmitry Zuev**
ITMO University, St. Petersburg, Russia
Laser-assisted nanofabrication of nanophotonic security labels

V.i.07 **Vladimir Lazarev**
Bauman Moscow State Technical University, Moscow, Russia
Ultrawideband antireflection microstructures for optical surfaces in the mid-infrared range

V.o.06 **A.V. Shelaev**, Y.M. Sgibnev, S.L. Efremova, P.N. Tananaev, and A.V. Baryshev
Dukhov Automatics Research Institute (VNIIA), Moscow, Russia
Local crystallization of Bi:YIG thin films by laser annealing in a controlled atmosphere

V.o.07 **S.A. Syubaev**, A.A. Kuchmizhak
Institute for Automation and Control Processes FEB RAS, Vladivostok, Russia
Laser printing of c-Si hemispherical Mie-nanoresonators toward implicit anti-counterfeit labels

V.o.08 **V.B. Glukhenkaya**, N.M. Tolkach, P.I. Lazarenko, A.V. Romashkin, A.A. Sherchenkov, E.A. Lebedev
National Research University of Electronic Technology – MIET, Zelenograd, Russia
CW laser crystallization of GST thin films in multilayered conductive substrate for reflective display application

V.o.09 **S.V. Starinskiy**, A.A. Rodionov, Yu.G. Shukhov, A.V. Bulgakov
S.S. Kutateladze Institute of Thermophysics SB RAS, Novosibirsk, Russia
Dependence of nanosecond laser damage threshold of metal immersed into water on dynamic of liquid boiling

V.o.10 **A.B. Cherepekhin**, A.Y. Zhizhchenko, A.P. Porfirev, A.P. Pushkarev, S.V. Makarov, A.A. Kuchmizhak
Institute for Automation and Control Processes FEB RAS, Vladivostok, Russia
Direct femtosecond-laser imprinting of diffraction-optical elements in $CsPbBr_3$ perovskite microcrystals

V.o.11 **G.P. Pavliuk**, A.Y. Zhizhchenko, O.B. Vitrik
Far Eastern Federal University, Vladivostok, Russia
Electrically-controlled deposition onto a hybrid superhydrophobic/superhydrophilic surface

V.o.12 **A.A. Sergeev**, D.V. Pavlov, K.A. Sergeeva, A.A. Kuchmizhak
Institute for Automation and Control Processes FEB RAS, Vladivostok, Russia
Boosting photoluminescence of infrared-emitting quantum dots coupled to plasmonic nanoarrays

V.o.13 **M. Tarabrin**
Bauman Moscow State Technical University, Moscow, Russia
Cr:ZnS laser with depressed-cladding waveguide and the AR-microstructures

V.i.08 **Sergey Kudryashov**
Lebedev Physical Institute, Moscow, Russia
Stealth scripts: photoluminescent microcoding in bulk diamonds by ultrashort laser pules

Poster session ***16:30 – 17:30***

Chairman: *D.G. Gromov*

Plenary session **17:30 – 19:30**

Plenary 07 **S.V. Makarov**
ITMO University, Saint Petersburg, Russia
Halide perovskite based nanophotonics: from fundamentals to applications

Plenary 08 **Yoshiaki Nakamura**
Osaka University, Toyonaka, Japan
Nanostructure design for thermoelectrics

Plenary 09 **A.V. Dvurechenskii,** A. Yakimov, A. Zinovieva, V. Zinovyev, A. Bloshkin, A. Nenashev, V.Kirienko
Rzhanov Institute of Semiconductor Physics SB RAS, Novosibirsk, Russia
Collective effects in Si based quantum dot nanomaterials to tune functionality of nano nanoelectronic and nanophotonic components

COLUMNED HALL

Nanostructured coverages, nanocomposites, functional hybrid materials: formation, structure and properties Chairman: *S.V. Gnedenkov* **13:00 – 16:30**

IV.o.01 A.E. Sokolov, V.A.Dudnikov, Yu.S.Orlov, N.P.Shestakov, **S.G. Ovchinnikov**
Kirensky Institute of Physics, Federal Research Center KSC SB RAS, Krasnoyarsk, Russia
Anomalous optical and magnetic properties in nanocrystalline $LaCoO_3$ and $GdCoO_3$

IV.o.02 **D.G. Gromov**, S.V. Dubkov, S.A. Gavrilov
National Research University of Electronic Technology, Zelenograd, Russia
Features of the Formation of Nanoparticles and Binary Nanoalloys during Thermal Evaporation and Condensation on an Inert Surface in Vacuum

IV.o.03 **A.I. Neumoin,** D.P. Opra, S.L. Sinebryukhov, A.B. Podgorbunsky, S.V. Gnedenkov
Institute of Chemistry FEB RAS, Vladivostok, Russia
Mesoporous $Na_2Ti_3O_7$ materials with a coral-like hierarchical architecture constructed by nanotubes: Synthesis and properties

IV.o.04 M.S. Gurin, M.D. Ostrikov, D.V. Gritcuk, A.O. Lembikov, M.I. Balanov, **D.S. Shtarev**
Far Eastern Federal University, Vladivostok, Russia
On the issue of obtaining heterostructures based on copper molybdates by solid-phase synthesis

IV.o.05 **A.I. Pleshkova**, M.A. Piatkova, K.V. Nadaraia, A.B Podgorbunsky, S.L. Sinebrykhov, S. V Gnedenkov
Institute of Chemistry FEB RAS, Vladivostok, Russia
Influence of phenol red in Earl's solution on the corrosion properties of coated and uncoated Mg alloy

IV.o.06 M.E. Shiryaev, A.V. Sysa, R.M. Ryazanov, **E.A. Lebedev**
National Research University of Electronic Technology, Zelenograd, Moscow, Russia
Thermal management to control the combustion behavior of Al-CuO multilayer thermites

IV.o.07 **A.D. Nomerovskii,** A.S. Gnedenkov, S.L. Sinebryukhov, S. V. Gnedenkov
Institute of Chemistry FEB RAS, Vladivostok, Russia
Modification of the PEO-coating on MA8 Mg alloy using layered double hydroxide: electrochemical behavior, protective properties

IV.o.08 **A.E. Sokolov**, O.S. Ivanova, E.S. Svetlitsky, K.A. Lukyanenko, A.V. Shabanov, N.P. Shestakov, Ying-Zhen Chen, Yaw-Teng Tseng, Chun-Rong Lin
Kirensky Institute of Physics, Federal Research Center KSC SB RAS, Krasnoyarsk, Russia
Core-shell Fe_3O_4@C nanoparticles for magneto-mechanical destroy of Ehrlich ascites carcinoma cells

IV.o.09 **I.A. Voloshchuk**, D.Yu. Terekhov, A.V. Babich, A.O. Yakubov, A.A. Sherchenkov
National Research University of Electronic Technology, Moscow, Zelenograd, Russia
Technology for the fabrication of thermoelectric legs by screen printing

IV.o.10 **D.I. Tishkevich**
SSPA "Scientific and Practical Materials Research Centre of NAS of Belarus", Minsk, Belarus
Electrodeposited functional Bi films for shielding applications against ionizing radiation

IV.i.01 **Alexander Vakhrushev**
Udmurt Federal Research Center of the Ural Branch of RAS, Izhevsk, Russia
Modeling the formation processes of multilayer nanosystems

IV.i.02 **Evgeny Modin**
CIC Nanogune BRTA, San Sebastian, Spain
3D electron microscopy of nanomaterials

FRIDAY, 29 APRIL

Master class sections for students **09:00 – 12:00**

Lunch ***12:00 – 13:00***

MIDDLE HALL

Physics of semiconducting nanostructures and heterostructures, including silicide, 4th group material's alloy, A3B5 and A2B6 heterostructures: experiment, calculations and technology Chairman: *D.L. Goroshko* **13:00 – 15:45**

II.i.02 **Yoshikazu Terai**
Kyushu Institute of Technology, Kitakyushu, Japan
Growth and optical properties of ternary iron silicides

II.o.05 **A.V. Shevlyagin**, V.M. Il'yaschenko, A.A. Kuchmizhak, E.V. Mitsai, D.V. Pavlov, A.V. Gerasimenko
Institute for Automation and Control Processes FEB RAS, Vladivostok, Russia
Black magnesium germanide: from Ge surface texturing to optical properties evaluation

II.o.06 **M.V. Lebedev**, T.V. Lvova, A.N. Smirnov, V.Yu. Davydov, A.V. Koroleva, E.V. Zhizhin, S.V. Lebedev
Ioffe Institute, St. Petersgurg, Russia
Coordination of atomic and electronic structure at chemically passivated n-InP(100) surfaces

II.o.07 **A. El-Khouly,** A.M. Adam, I. Serhiienko, E. Chernyshova, A. Ivanova, V.L. Kurichenko, A. Sedegov, D. Karpenkov, A. Novitskii, A. Voronin, V. Khovaylo
National University of Science and Technology MISIS, Moscow, Russian Federation.
Transport and thermoelectric properties of FeVSb-based half-Heusler alloys

II.o.08 **I.L. Tkhorzhevskiy**, P.S. Demchenko, A.S. Tukmakova, A.D. Sedinin, A.V. Asach., A.V. Novotelnova, M.K. Khodzitskiy
Tydex LLC St. Petersburg, Russia
Thermoreflectance method for thermal conductivity measurements of low dimensional objects

II.o.09 **A.Yu. Egorov**, S.A. Blokhin, A.A. Blokhin, E.V. Pirogov, D.V. Denisov, L.Ya. Karachinsky, A.V. Babichev, I.I. Novikov, A.G. Gladyshev, E.S. Kolodeznyi, S.S. Rochas, V.N. Nevedomskii K.O. Voropaev, V.E. Bougrov, V.M. Ustinov
Alferov University, St. Petersburg, Russia
InGaAs/InGaAlAs and InGaAs/GaAsN superlattice based long wavelength VCSEL

II.i.03 A. Y. Alekseev, **D. B. Migas**, A. B. Filonov, N.V. Skorodumova
Belarusian State University of Informatics and Radioelectronics, Minsk, Belarus
Structural features and quantum confinement effects in thin films of Mg_2Si and Ca_2Si

II.i.04 **H. Tatsuoka,** S. Ito, K. Tanaka and Y. Shimura
Shizuoka University, Hamamatsu, Japan
Synthesis of Si-based nanostructures from $CaSi_2$ crystals using metal chloride powder, vapor and aqueous solution

Coffee break ***15:45 – 16:20***

Chairman: *N.G. Galkin*

Plenary session **16:20 – 17:40**

Plenary 10 I.A. Tarasov**,** I.A. Yakovlev, M. Visotin, M.V. Rautskii, A.S. Tarasov, S.A. Lyaschenko, O.A. Maksimova, **S.N. Varnakov**, T.A. Andryushchenko, S.G. Ovchinnikov
Kirensky Institute of Physics, Federal Research Center KSC SB RAS, Krasnoyarsk, Russia
New ternary magnetic films of MAX phases

Plenary 11 F. Muntyanu, V. Chistol, E. Condrea1 and **A. Sidorenko**
Institute of Electronic Engineering and Nanotechnologies, Chisinau, Moldova
Topological features of quantum magnetotransport in Bi1-xSbx ($0 \le x \le 0.2$) bicrystals

Award ceremony and closing remarks **17:40 – 18:00**

COLUMNED HALL

Nanostructured coverages, nanocomposites, functional hybrid materials: formation, structure and properties Chairman: *D.S. Shtarev* **13:00 – 15:45**

IV.i.03 **S.A. Gavrilov**
National Research University of Electronic Technology, Moscow, Zelenograd, Russia
The role of low-dimensional effects in electrochemical synthesis of nanomaterials

IV.o.11 **V.P. Polishchuk**, A.M. Ziatdinov
Institute of Chemistry FEB RAS, Vladivostok, Russia
Electron paramagnetic resonance of zinc ferricyanide and their polyethylenimin-based nanocomposites

IV.o.12 **D.S. Dilla,** E.V. Pustovalov, A.N. Fedorets
Far Eastern Federal University, Vladivostok, Russia
Cluster analysis of atomic structures in amorphous alloys

IV.o.13 **I.M. Imshinetskiy**, V.V. Kashepa, K.V. Nadaraia, D.V. Mashtalyar, S.L. Sinebryukhov, S.V. Gnedenkov.
Institute of Chemistry FEB RAS, Vladivostok, Russia
Influence of halloysite nanotubes incorporation on the properties of PEO layers formed on MA8 alloy

IV.o.14 **Yu. Nazarkina,** V. Benu, E. Grigoryeva, E. Eganova
National Research University of Electronic Technology (MIET), Zelenograd, Moscow, Russia
Effect of tungsten disc electrode rotation rate on the growth of anodic WO_x and its photocatalytic properties

IV.o.15 **T.I. Zubar**
SSPA "Scientific and Practical Materials Research Centre of NAS of Belarus", Minsk, Belarus
Structure and mechanical properties of electrodeposited nanostructured Ni-Fe films

IV.o.16 **A.A. Sokolov,** D.P. Opra, S.L. Sinebryukhov, V.V. Zheleznov, A.B. Podgorbunsky S.V. Gnedenkov
Institute of Chemistry FEB RAS, Vladivostok, Russia
Effects of group IV–VII elements doping on TiO_2 electrochemical lithium storage performance

IV.o.17 K. Girel, A. Burko, S. Zavatski, S. Dubkov, E. Grinakovskiy, D. Gromov, D. Novikov, **H. Bandarenka**
Belarusian State University of Informatics and Radioelectronics, Minsk, Belarus
Effect of a metal oxides interlayers on the properties of silver nanoparticles in porous silicon for SERS spectroscopy

IV.i.04 **Y. Shimura,** M. Okado, J. Utsumi and H. Tatsuoka
Shizuoka University, Hamamatsu, Japan
Formation of Group-IV polycrystalline alloys by crystallization control

SATURDAY, 30 APRIL

Participants departure **09:00 – 22:00**

POSTER SESSION, 28 APRIL

Section I.

Physics of nanostructures and interfaces, self-organization processes, two-dimensional materials

I.p.01 **M.S. Aleshin,** A.N. Chibisov
Pacific National University, Khabarovsk, Russia
DFT study of the hole states charge density in Ge/Si structures

I.p.02 **M.A. Chesnokov,** I.N. Nalivaiko, K.S. Soldatov, V.S. Strongin, K.V. Nefedev
Far Eastern Federal University, Vladivostok, Russia
Dipole superspin ice on a trimerized triangular lattice

I.p.03 **M.A. Chesnokov,** I.N. Nalivaiko, K.S. Soldatov, V.S. Strongin, K.V. Nefedev
Far Eastern Federal University, Vladivostok, Russia
Low energy and ground states of trimerized dipole spin ice

I.p.04 **D.A. Dronova**, A.S. Gavrilov, A.A. Dronov
National Research University of Electronic Technology, Zelenograd, Russia
Investigation of changes in the composition of anodic TiO_2 nanotubes at different stages of formation by AES and ToF SIMS methods

I.p.05 **K. S. Ermakov,** V.N. Kharitonov, A. V. Davydenko, A. V. Ognev, A.S. Samardak
Far Eastern Federal University, Vladivostok, Russia
Crystal structure of cobalt films and nanostrips grown on a stepped Si(111)-5.55×5.55-Cu surface

I.p.06 **A.V. Goncharov,** A.N. Chibisov
Pacific National University, Khabarovsk, Russia
External pressure effect on the structure and magnetization of 2D Ge with hole qubits

I.p.07 **D.Yu. Kapitan,** P.D. Andriushchenko, A.E. Rybin, A.O. Korol, E.V. Vasiliev, M.A. Padalko, A.V. Perzhu, R.A. Volotovskiy, A.G. Makarov, Yu.A. Shevchenko, K.S. Soldatov, V.Yu. Kapitan, K.V. Nefedev
Far Eastern Federal University, Vladivostok, Russia
A neural networks approach to the thermodynamic averages calculation of the Edwards-Anderson spin glass model

I.p.08 A. Perzhu**,** E. Vasiliev, M. Padalko, A. Korol, A. Rybin, D. Kapitan, R. Volotovskiy, A. Makarov, Yu. Shevchenko, K. Soldatov, **V. Kapitan**, K. Nefedev
Far Eastern Federal University, Vladivostok, Russia
Monte Carlo Simulation of Magnetic Skyrmions

I.p.09 **V.V. Mararov,** T.V. Utas, L.V. Bondarenko, A.Y. Tupchaya, Y.E. Vekovshinin, D.V. Gruznev, A.N. Mihalyuk, A.V. Zotov, A.A. Saranin
Institute for Automation and Control Processes FEB RAS, Vladivostok, Russia
Self-assembled growth of C60 monomolecular layers at Tl/$NiSi_2$ atomic sandwich on Si(111)

I.p.10 **I.N. Nalivaiko,** M.A. Chesnokov, K.S. Soldatov, V.S. Strongin, K.V. Nefedev
Far Eastern Federal University, Vladivostok, Russia
Trident macrospin ice

I.p.11 **G.M. Poletaev,** I.V. Karakulova, R.Yu. Rakitin
Polzunov Altai State Technical University, Barnaul, Russia
Molecular dynamics study of the influence of free volume and orientation of the crystallization front on its velocity in nickel

I.p.12 **A.V. Prokhorenko**, A.A. Gnidenko, A.N. Chibisov, M.A. Chibisova
Pacific National University, Khabarovsk, Russia
Quantum-mechanical study of the substitution and adsorption of P atoms on silicene

I.p.13 **D.I. Rogilo,** S.V. Sitnikov, S.A. Ponomarev, D.V. Sheglov, L.I. Fedina, A.V. Latyshev
Rzhanov Institute of Semiconductor Physics SB RAS, Novosibirsk, Russia
Silicon growth and etching by oxygen and selenium: evolution of Si(111)-7×7 surface structure and morphology

I.p.14 **A.E. Rybin,** D.Yu. Kapitan, K.V. Nefedev, E.V. Vasiliev, M.A. Padalko, A.V. Perzhu, R.A. Volotovskiy, A.G. Makarov, Yu.A. Shevchenko, A.O. Korol, K.S. Soldatov, V.Yu. Kapitan, P.D. Andriushchenko
Institute of Applied Mathematics FEB RAS, Vladivostok, Russia
Parallel hybrid multispin Monte-Carlo method for the Edwards-Anderson spin glass model

I.p.15 **M.V. Ryzhkova**, D.A. Tsukanov
Institute for Automation and Control Processes FEB RAS, Vladivostok, Russia
Structures and electrical conductance at the initial stages of magnesium growth on Si(111)-Pb surface

I.p.16 **A.V. Slyshkin,** D.V. Gruznev, A.Y. Tupchaya, L.V. Bondarenko, A.N. Mihalyuk, A.V. Zotov, A. A. Saranin
Institute for Automation and Control Processes FEB RAS, Vladivostok, Russia
High-quality GaSb(111) film on the Si(111)$\sqrt{3}\times\sqrt{3}$-B surface

I.p.17 A.N. Mihalyuk, V.G. Kotlyar, O.A. Utas, T.V. Utas, L.V. Bondarenko, **A.Y. Tupchaya**, D.V. Gruznev, A.V. Zotov, A.A. Saranin
Institute for Automation and Control Processes FEB RAS, Vladivostok, Russia
Solving a long-standing problem regarding atomic structure of Si(100)2×3-Ag

I.p.18 **E.V. Vasiliev**, A.V. Perzhu, A.O. Korol, D.Yu. Kapitan, A.E. Rybin, M.A. Padalko, R.A. Volotovskiy, A.G. Makarov, Yu.A. Shevchenko, K.S. Soldatov, V.Yu. Kapitan, K.V. Nefedev
Far Eastern Federal University, Vladivostok, Russia
Investigation a possibility of modeling skyrmions using the Monte Carlo method in flat lattices with various geometries

I.p.19 **Y.E. Vekovshinin**, L.V. Bondarenko, A.Y. Tupchaya, A.N. Mihalyuk, A.V. Zotov, A.A. Saranin
Institute for Automation and Control Processes FEB RAS, Vladivostok, Russia
Nanoscale patterns in the mixed Pb and Tl atomic layer on $NiSi_2$/Si(111)

I.p.20 **R.A. Volotovskiy,** Yu.A. Shevchenko, E.V. Vasiliev, D.Yu. Kapitan, A.E. Rybin, M.A. Padalko, A.G. Makarov, K.S. Soldatov, K.V. Nefedev, A.V. Perzhu
Institute of Applied Mathematics FEB RAS, Vladivostok, Russia
Modeling of thermodynamic properties of spin ice on a rhombic lattice

I.p.21 **I.A. Yakovlev,** I.A. Tarasov
Kirensky Institute of Physics, Federal Research Center KSC SB RAS, Krasnoyarsk, Russia
Epitaxial growth of Mn_5Ge_3 on Si(111)

I.p.22 **V.S. Zhdanov,** D.A. Olyanich, T.V. Utas, A.N. Mikhalyuk, N.V. Denisov, A.V. Matetskiy, A.V. Zotov, A.A. Saranin
Institute for Automation and Control Processes FEB RAS, Vladivostok, Russia
Investigation of the Ga films grown on Si(111)-√3x√3-Ga reconstruction.

Section II.

Physics of semiconducting nanostructures and heterostructures, including silicide, 4th group material's alloy, A3B5 and A2B6 heterostructures: experiment, calculations and technology

II.p.01 A.V. Babich, **A.S.Bozhedomova,** A.A. Sherchenkov, D. D. Glebova
National Research University of Electronic Technology – MIET, Zelenograd, Moscow, Russia
Investigation of thermal properties and crystallization kinetics of chalcogenide semiconductors compounds for the phase change memory application

II.p.02 **S.A. Dotsenko,** K.N. Galkin, E.Yu. Subbotin, O.V. Kropachev, and N.G. Galkin
Institute for Automation and Control Processes FEB RAS, Vladivostok, Russia
Formation and models of Mg_2Si seed layers on Si with (111), (100), and (110) orientations for Ca_2Si sacrificial epitaxy

II.p.03 V.B. Bondarenko, **A.V.Filimonov**, E.Yu.Koroleva, Ravi Kumar
Peter the Great St. Petersburg Polytechnic University, St. Petersburg, Russia
Chaotic potential of charged dislocations in III-nitride heterojunctions at high temperatures

II.p.04 **D.V. Fomin**, I.A. Astapov, A.V. Polykov
Amur State University, Blagoveshchensk, Russia
Formation of thin films of Mg_2Si on Si (111) and investigation of their electronic properties

II.p.05 **K.N. Galkin**, O.V. Kropachev, A.M. Maslov, I.M. Chernev, E.Yu. Subbotin, N.G. Galkin, A.Yu. Alekseev and D.B. Migas
Institute for Automation and Control Processes FEB RAS, Vladivostok, Russia
The electronic structure and optical properties of Ca_2Si films grown on silicon different oriented substrates and calculated from first principles

II.p.06 **N.G. Galkin,** K.N. Galkin, O.V. Kropachev, I.M. Chernev, D.L. Goroshko, E.Yu. Subbotin and S.A. Dotsenko
Institute for Automation and Control Processes FEB RAS, Vladivostok, Russia
Comparison of the crystal structure and electronic interband transitions of Ca_2Si thin semiconductor films on Al_2O_3(0001) and Si(111) substrates

II.p.07 **D.L. Goroshko,** K.N. Galkin, I.M. Chernev, O.V. Kropachev, A.B. Cherepakhin and N.G. Galkin
Institute for Automation and Control Processes FEB RAS, Vladivostok, Russia
Formation, structure and photoelectric properties of Ca_2Si/Si-n and Ca_2Si/Si-p diode structures

II.p.08 **D.L. Goroshko**, E.A. Chusovitin, A.A. Dronov, I.M. Gavrilin
Institute for Automation and Control Processes FEB RAS, Vladivostok, Russia
Raman and photoluminescence investigation of temperature stability of germanium nanowires obtained by electrochemical deposition

II.p.09 **S.A. Kitan,** S.A. Dotsenko, D.L. Goroshko, K.N. Galkin, E.A. Chusovitin, N.G. Galkin
Institute for Automation and Control Processes FEB RAS, Vladivostok, Russia
Raman investigation of amorphous and polycrystalline SiSn alloys

II.p.10 **A.V. Kochura**, Zaw Htet Aung, V.S. Zakhvalinsky, E.A. Pilyuk
South West State University, Kursk, Russia
Structural Properties of Cadmium Arsenide Magnetron Films on Different Substrates

II.p.11 K.N. Galkin, **O.V. Kropachev**, I.M. Chernev, A.M. Maslov, E.Yu. Subbotin, N.G. Galkin, A.Yu. Alekseev and D.B. Migas
Institute for Automation and Control Processes FEB RAS, Vladivostok, Russia
Formation, structure, and optical properties of textured CaSi and epitaxial $CaSi_2$ films on silicon substrates grown by MBE and RDE methods

Section III.

Ferromagnetic and ferroelectric materials, including nanomaterials, and spintronics

III.p.01 **M.V. Adigamova,** I.V. Lukiyanchuk, V.P. Morozova, I.A.Tkachenko
Institute of Chemistry FEB RAS, Vladivostok, Russia
Structure and magnetic properties of Fe-, Co-enriched composite titania coatings

III.p.02 **A.K. Chepak**, L.L. Afremov
Far Eastern Federal University, Vladivostok, Russia
Field dependence of the Griffith phase in a dilute ferromagnet

III.p.03 V.I. Belokon, **O.I. Dyachenko**, R.V. Lapenkov
Far Eastern Federal University, Vladivostok, Russia
Magnetic properties of amorphous alloys in a random field model

III.p.04 **A.M. Frolov**, T.A. Pisarenko, G.S. Kraynova, N.V. Ilin, A.Yu. Ralin
Far Eastern Federal University, Vladivostok, Russia
The effect of high-speed nonequilibrium on morphologic and magnetic properties of melt-spun $Co_{58}Ni_{10}Fe_5Si_{11}B_{16}$ alloys

III.p.05 L.L. Afremov, **I.G. Iliushin**
Far Eastern Federal University, Vladivostok, Russia
Dependence the metastability magnetic states of core/shell nanoparticles from interfacial exchange interaction

III.p.06 **V.N. Kharitonov**, A.Yu. Samardak, M.Yu. Pavliuk, E.V. Tepnin, A.V. Ognev, D.R. Khairetdinova, I. M. Doludenko.
Far Eastern Federal University, Vladivostok, Russia
Tuning of magnetic behavior of Cu/Co barcode nanowires for 3D-memory applications

III.p.07 **M.A. Kuznetsova,** P.S. Nazarova, A.F. Shishelov, G.S. Suslin and A.G. Kozlov
Far Eastern Federal University, Vladivostok, Russia
Magnetic anisotropy and Dzyaloshinskii-Moriya interaction in ultrathin Pd/Co/Ta films

III.p.08 **A.G. Makarov**, K.V. Makarova, Yu.A. Shevchenko, V.Yu. Kapitan, K.S. Soldatov, K.V. Nefedev
Far Eastern Federal University, Vladivostok, Russia
Magnetic susceptibility and other properties of artificial dipole ice on a hexagonal lattice

III.p.09 **K.V. Makarova**, A.G. Makarov, Yu.A. Shevchenko, V.Yu. Kapitan, K.S. Soldatov, K.V. Nefedev
Far Eastern Federal University, Vladivostok, Russia
Magnetic susceptibility and other properties of artificial dipole ice on the Cairo lattice

III.p.10 **O.A. Maximova**, S.A. Lyaschenko, S.N. Varnakov, S.G. Ovchinnikov
Kirensky Institute of Physics, Federal Research Center KSC SB RAS, Krasnoyarsk, Russia
Magneto-ellipsometry for optically anisotropic structures

III.p.11 **D.A. Petrov**, A. Thakur, P. Thakur, S.M. Zharkov, A.L. Suhachev, I.S. Edelman
Kirensky Institute of Physics, Krasnoyarsk, Russia
Magnetic properties and MCD spectroscopy of $Co_xZn_{1-x}Fe_2O_4$ nanoparticles synthesized with a citrate precursor method

III.p.12 **A.Yu. Ralin**, P.V. Kharitonskii, N.A. Zolotov, K.G. Gareev, Yu.A. Anikieva
Far Eastern Federal University, Vladivostok, Russia
Micromagnetic Modeling of the Superparamagnetic Fraction of Composites Fe_3O_4–$Fe_{3-x}Ti_xO_4$

III.p.13 **K.A. Rogachev**, A.Yu. Samardak, A.G. Kozlov, V.N. Kharitonov, M.E. Stebliy, M.E. Letushev, M.A. Bazrov, Y.S. Jeon, E. Jeong, A.V. Ognev, A.S. Samardak, Y.K. Kim
Far Eastern Federal University, Vladivostok, Russia
Magnetic properties of CoFe alloy nanosprings depending on the coil thickness

III.p.14 **V.Yu. Samardak,** V.N. Kharitonov, A.A. Belov, O.O. Shichalin, E.K. Papynov, A.S. Samardak, A.V. Ognev
Far Eastern Federal University, Vladivostok, Russia
Structure and magnetic properties of Nd-(Fe,Co)-B hard magnetic powders with and without Cu doping

III.p.15 **V.S. Shatilov,** G.S. Suslin, E.V. Tarasov, K.L. Karimov, A.V. Ognev, A.G. Kozlov and A.S. Samardak
Far Eastern Federal University, Vladivostok, Russia
Magnetic properties of $[Pd/Co/CoO]_n$ superlattices

III.p.16 **M.I. Sobirov,** A.Yu. Samardak, S. A. Azon, A.S. Samardak, A.V. Ognev
Far Eastern Federal University, Vladivostok, Russia
Synthesis and magnetic properties of electrodeposited Ni nanowires with a high aspect ratio

III.p.17 **E.V. Tarasov**, H.S. Suslin, A.V. Gerasimenko, I.A. Tkachenko, A.G. Kozlov
Far Eastern Federal University, Vladivostok, Russia
Temperature studies of magnetic properties of Pd/Co/CoO epitaxial films

Section IV.

Nanostructured coverages, nanocomposites, functional hybrid materials: formation, structure and properties

IV.p.01 **T.A. Andryushchenko**, S.A. Lyaschenko, I.A. Tarasov, S.N. Varnakov
Reshetnev Siberian State University of Science and Technology, Krasnoyarsk, Russia
Electron spectroscopy for in-situ analysis of MAX-phases

IV.p.02 **E.V. Antonov**, N.D. Prasolov, I.M. Sosnin, L.M. Dorogin
ITMO University, St.Petersburg, Russia
Special methods for catalysis of molecular crosslinking of composite materials based on polydimethylsiloxane

IV.p.03 **O.D. Arefieva**, M.S. Vasilyeva, V.V. Tkachev
Far Eastern Federal University, Vladivostok, Russia
Sol-gel preparation and study photocatalysts ZnS-modified biogenic silica

IV.p.04 **D.V. Balatskiy**, Yu.B. Budnikova, M.S. Vasilyeva, I.V. Lukiyanchuk
Institute of Chemistry FEB RAS, Vladivostok, Russia
Application of Mössbauer spectroscopy to characterize iron-containing oxide coatings formed on titanium by plasma electrolytic oxidation

IV.p.05 K. Girel1, K. Litvinova, A. Burko, S. Dubkov, A. Savitsky, D. Novikov, A. Tarasov, **H. Bandarenka**
Belarusian State University of Informatics and Radioelectronics, Minsk, Belarus
A thin-layer hafnium oxide as auxiliary layer obtained by atomic layer deposition onto macroporous silicon for SERS

IV.p.06 **E.A. Belov**, K.V. Nadaraia, D.V. Mashtalyar, S. L. Sinebryukhov, S.V. Gnedenkov
Institute of Chemistry FEB RAS, Vladivostok, Russia
Anti-icing fluoropolymer-containing composite coatings on titanium alloys

IV.p.07 **A.N. Dudin**, V.I. Iurina, V.V. Neshchimenko, Li Chundong
Amur State University, Blagoveshchensk, Russia
Radiation Induced Defects of Zinc Oxide Particles Star and Flower Shapes

IV.p.08 **I.V. Egelskii,** M.A. Pugachevskii, A.P. Kuzmenko
The Southwest State University, Kursk, Russia
Characterization of titanium dioxide nanoparticles synthesized by hydrothermal method depending on subsequent cleaning approaches

IV.p.09 **V.S. Filonina,** A.S. Gnedenkov, S.L. Sinebryukhov, A.N. Minaev, S.V. Gnedenkov
Institute of Chemistry FEB RAS, Vladivostok, Russia
In vitro corrosion performance of bioresorbable Mg-Ca alloy with hydroxyapatite-containing protective coating

IV.p.10 **I.M. Gavrilin**, A.A. Dronov, N. Grevtsov, A. Pavlikov, A. Dronov, E. Chubenko, V. Bondarenko
National Research University of Electronic Technology (MIET), Zelenograd, Russia
Effect of heat treatment on the morphology and composition of Silicon-Germanium nanocomposite

IV.p.11 **A.A. Gnidenko**, P.G. Chigrin
Khabarovsk Federal Research Center Institute of Materials Science of FEB RAS, Khabarovsk, Russia
Atomic and Electronic Structure of the $YFeO_3$ Surface with Oxygen Vacancies

IV.p.12 **E. Grinakovskiy**, E. Lebedev, S. Dubkov, I. Mikhailov, D. Gromov
National Research University of Electronic Technology "MIET", Moscow, Russia
Structural and physical properties of NbO_x thin films deposited by reactive magnetron sputtering

IV.p.13 **Mohamed Asran Hassan**, A. El-Khouly, I. Serhiienko, E.A. Argunov, A. Sedegov, D. Karpenkov, D. Pashkova, M. Gorshenkov, A. Novitskii, A. Voronin, V. Kostishyn, V. Khovaylo
National University of Science and Technology MISIS, Moscow, Russia
Enhancing Transport and thermoelectric properties of Heusler based alloys

IV.p.14 **O.S. Ivanova**, I.S. Edelman, A.E. Sokolov, E.S. Svetlitsky, Chun-Rong Lin, Ying-Zhen Chen, Yaw-Teng Tseng
Kirensky Institute of Physics, FRC KSC SB RAS, Krasnoyarsk, Russia
Selective adsorption capacity of Fe_3O_4@C nanoparticles with respect to organic cationic dyes

IV.p.15 U.V. Kharchenko, L.A. Zemnukhova, S.B. Yarusova, I.A. Beleneva, V.S. Egorkin, N.V. Chi, I.E. Vyaliy , **N.V. Izotov**, S.L. Sinebryukhov, S.V. Gnedenkov
Institute of Chemistry FEB RAS, Vladivostok, Russia
Development of eco-friendly self-polishing antifouling coatings

IV.p.16 V.S. Egorkin, **N.V. Izotov**, U.V. Kharchenko, I.E. Vyaliy, A.N. Minaev, S.L. Sinebryukhov, S.V. Gnedenkov
Institute of Chemistry FEB RAS, Vladivostok, Russia
Influence of SPTFE on the Corrosion Behavior of Composite Coatings during Salt-Spray Test

IV.p.17 Yu.I. Kakovkina, S.S. Isakjanov, R.M. Ryazanov, E.A. Lebedev, **E.P. Kitsyuk**
Scientific-Manufacturing Complex "Technological Centre", Zelenograd, Moscow, Russia
Influence of an electrolyte on the electrophysical properties of RuO-carbon nanomaterials based supercapacitors

IV.p.18 **Ya.I. Kononenko,** A.S. Gnedenkov, S.L. Sinebryukhov, V.S. Filonina, I.E. Vyaliy, S.V. Gnedenkov
Institute of Chemistry of FEB RAS, Vladivostok, Russia
Composite triazole-containing PEO-coatings as the effective way of corrosion protection of AMg3 aluminum alloy

IV.p.19 **N.S. Markin**, S.I. Ivannikov, A.V. Ognev, L.L. Afremov, A.S. Samardak
Far Eastern Federal University, Vladivostok, Russia,
Applicability assessment of Fe_3O_4-SiO_2-Au nanoparticles for the radiotherapy for cancer

IV.p.20 **I.K. Martynova,** I.M. Gavrilin
National Research University of Electronic Technology (MIET), Zelenograd, Moscow, Russia
Effect of thermal annealing on the composition of Ge-Co nanostructure obtained by electrochemical deposition

IV.p.21 D.G. Gromov, P.Y. Kopylov, Af.A. Bestavashvili, S.V. Dubkov, **D.V. Novikov**, H. Bandarenka, E.V. Latipov, A.I. Savitskiy
National Research University of Electronic Technology (MIET), Moscow, Russia
Development of a technique for studying trimethylamine oxide solutions using planar SERS structures

IV.p.22 **D.P. Opra**, S.V. Gnedenkov, S.L. Sinebryukhov, A.A. Sokolov, A.B. Podgorbunsky, A.M. Ziatdinov
Institute of Chemistry FEB RAS, Vladivostok, Russia
Tuning TiO_2(B) nanobelts through Ni-doping using a hydrothermal approach for metal-ion batteries

IV.p.23 **S.V. Osmanov,** T.V. Mikhailova, A.L. Kudryashov, S.D. Lyashko, A.V. Karavainikov, A.S. Nedviga and A.N. Shaposhnikov
V.I. Vernadsky Crimean Federal University, Simferopol, Russia
Composite (SiO_2-Au) films for magnetophotonics

IV.p.24 S. Dubkov, **A. Overchenko**, D. Novikov, V. Kolgmogorov, L. Volkova, E. Latipov, T. Grishin
National Research University of Electronic Technology "MIET", Moscow, Russia
Plasmonic nanopipette for scanning ion-conducting microscopy

IV.p.25 **M.I. Panasyuk**, T.I. Zubar, T.I. Usovich, V.A. Fedkin, O.D. Kanafiev, A.N. Kotelnikova, A.V. Trukhanov.
SSPA "Scientific and practical materials research centre of NAS of Belarus", Minsk, Belarus
Optimization of electrolytic deposition modes of the CoNiP alloy

IV.p.26 **O.V. Pinchuk,** T.P. Savchuk, M.F. Kamaleev, A.A. Dronov, I.I. Tsiniaikin, A.V. Pavlikov
National Research University of Electronic Technology (MIET), Zelenograd, Moscow, Russia
Anodic TiO2 nanotube arrays SILAR modified by Ag_xO for visible light photocatalytic applications

IV.p.27 **A.I. Pisartseva**, O.D. Arefieva, M.S. Vasilyeva, P.I. Mitkina, V.V. Tkachev
Far Eastern Federal University, Vladivostok, Russia
Mechanochemical synthesis, characterization and photocatalytic properties of Bi_2WO_6/SiO_2 modified biogenic silica

IV.p.28 **A.B. Podgorbunsky**, M.V. Sidorova, M.S. Gerasimenko, S.L. Sinebrukhov, S.V. Gnedenkov
Institute of Chemistry FEB RAS, Vladivostok, Russia
Bioresorbable composite materials with controlled resorption rate for bone tissue bioengineering

IV.p.29 **A.B. Podgorbunsky,** D.P. Opra, V.V. Zheleznov, A.M. Ziatdinov, S.L. Sinebryukhov, S.V. Gnedenkov
Institute of Chemistry FEB RAS, Vladivostok, Russia
Synthesis, structural and electrical properties of nanotubular Ni-doped $Na_2Ti_3O_7$ as a novel functional material

IV.p.30 **N.S. Saenko**, V.V. Zheleznov, D.P. Opra
Institute of Chemistry FEB RAS, Vladivostok, Russia
Structure and electrochemical sodium storage properties of hard carbon doped with molybdenum

IV.p.31 **D.A. Saritsky**, A.M. Ziatdinov, D.P. Opra, A.A. Sokolov, S.L. Sinebryukhov, S.V. Gnedenkov
Institute of Chemistry FEB RAS, Vladivostok, Russia
Electron paramagnetic resonance of nanocrystalline manganese-incorporated bronze titanium dioxide

IV.p.32 N.B. Kondrikov, P.L. Titov, **S.A. Shchegoleva**, V.V. Korochentcev, I.V. Stepanov
Far Eastern Federal University, Vladivostok, Russia
Estimation of Local and Long-Range Ordering of the Structure of TiO_2 Nanotubes

IV.p.33 **M.G. Shelyapina**, D. Nefedov, R. Yocupicio-Gaxiola, V. Petranovskii, S. Fuentes
Saint Petersburg State University, Saint Petersburg, Russia
Dynamics of guest molecules in pillared zeolites studied by NMR

IV.p.34 **M.G. Shelyapina**, R. Yocupicio-Gaxiola, U. Caudillo-Flores, A. Urtaza, V. Petranovskii
Saint Petersburg State University, Saint Petersburg, Russia
TiO_2-2D mordenite nanocomposites for photocatalytic applications

IV.p.35 **M.V. Sidorova,** A.B. Podgorbunsky, M.S. Gerasimenko, S.L. Sinebrukhov, S.V. Gnedenkov
Institute of Chemistry FEB RAS, Vladivostok, Russia
Calcium phosphate oxide coatings formed on a composite resorbable substrate

IV.p.36 **V.E. Silant'ev**, L.A. Zemskova, L.A. Fatkullina, R.A. Shatilov, V.S. Egorkin, S.V. Gnedenkov, V.V. Kumeiko.
Far Eastern Federal University, Vladivostok, Russia
Polysaccharide micro- and nanoparticles for drug delivery purposes in cancer therapy

IV.p.37 **M.V. Silibin**, D.V. Karpinsky, D.V. Zhaludkevich, S.I. Latushka, V.A. Khomchenko, Yu.P. Shaman, A.V. Sysa, V.V. Sikolenko
National Research University of Electronic Technology "MIET", Moscow, Russia
Temperature and concentration driven phase transitions in $BiMnO_3$-based ceramics

IV.p.38 A.V. Cvetkov, S.D. Khanin, Yu.A. Kumzerov, N.I. Puchkov, **V.G. Solovyev**, A.I. Vanin, M.V. Yanikov
S.M. Budienny Military Telecommunications Academy, Saint Petersburg, Russia
Excitation of surface plasmon-polaritons in metal-dielectric structures based on opals

IV.p.39 **L.I. Sorokina**, A. Kedziora, O. Shtyka, S.V. Dubkov, P.I. Lazarenko, M. Szynkowska-Jozwik, D.G. Gromov
National Research University of Electronic Technology "MIET", Moscow, Russia
Electrophoretic deposition of TiO_2-based photocatalysts with different CuO_x particle contents for CO_2 reduction

IV.p.40 A.S. Chekadanov, M.A. Pugachevskii, Kyaw Aung Hein, A.P. Kuzmenko, **A.M. Storozhenko**
The Southwest State University, Kursk, Russia
How do thermal annealing options influence on size and phase changes in magnetron TiO_2 films

IV.p.41 S.V. Baryshnikov, A.Yu. Milinskiy, **E.V. Stukova**, E.V. Charnaya
Amur State University, Blagoveshchensk, Russia
Dielectric and thermal studies of rubidium nitrate embedded in the aluminum oxide pores

IV.p.42 **S.N. Suchkov**, K.V. Nadaraia, I.M. Imshinetskiy, D.V. Mashtalyar, S.L. Sinebrukhov, S.V. Gnedenkov
Institute of Chemistry FEB RAS, Vladivostok, Russia
Evaluation of surface free energy of bioactive coatings on magnesium and titanium alloys

IV.p.43 **V.V. Tkachev**, A.N. Fedorets, D.A. Polyanski, E.A. Gridasova, A.M. Frolov, G.S. Kraynova, S.V. Dolzhikov, V.S. Plotnikov
Far Eastern Federal University, Vladivostok, Russia
Correlation of structure and strength characteristics of rapidly quenched iron-based alloys

IV.p.44 **V.V. Tkachev**, A.N. Fedorets, E.V. Pustovalov, A.M. Frolov, G.S. Kraynova, V.S. Plotnikov, A.L. Vasiliev
Far Eastern Federal University, Vladivostok, Russia
Fe-Cu-Nb-Si-B amorphous metallic alloys nanostructure

IV.p.45 **V. Trukhin**, K. Nefedev
Far Eastern Federal University, Vladivostok, Russia
Exact solution Cairo lattice for nearest neighbors

IV.p.46 **M.S. Vasilyeva**, I.V. Lukiyanchuk, A.A. Rybalka, Yu.B. Budnikova, V.G. Kuryavy
Far Eastern Federal University, Vladivostok, Russia
Preparation and study of TiO_2-WO_3-$ZnWO_4$ film heterostructures on titanium

IV.p.47 **O V Volovlikova**, S A Gavrilov, G O Silakov, E.N. Lazorkina
National Research University of Electronic Technology – MIET, Zelenograd, Moscow, Russia
The investigation of the porous silicon powder formed by the Pd-assisted chemical etching with different temperatures

IV.p.48 **I.E. Vyaliy**, V.S. Egorkin, N.V. Izotov, U.V. Kharchenko, A.N. Minaev, S.L. Sinebryukhov, S.V. Gnedenkov
Institute of Chemistry FEB RAS, Vladivostok, Russia
Evolution of tribological properties of the composite coatings on AMg3 aluminum alloy after atmospheric exposure

IV.p.49 **I.E. Vyaliy**, V.S. Egorkin, N.V. Izotov, U.V. Kharchenko, A.N. Minaev, S.L. Sinebryukhov, S.V. Gnedenkov
Institute of Chemistry FEB RAS, Vladivostok, Russia
Changes in barrier properties of protective composite coatings on aluminum alloy during climatic testing

IV.p.50 **A.N. Zakharov**, I.M. Gavrilin
National Research University of Electronic Technology – MIET, Zelenograd, Moscow, Russia
Electrochemical formation of germanium nanostructures using low-melting-point metal particles

IV.p.51 **V.S. Zakhvalinskii**, A.V. Borisenko, T.B. Nikulicheva, A.V. Kochura, Aung Zaw Htet, E.A.Pilyuk
Belgorod State University, Belgorod, Russia
Properties of the solid solution $(Cd_{0.69}Zn_{0.31})_3As_2$

IV.p.52 I.A. Strelnikov, **E.A. Zubova**
N.N. Semenov Federal Research Center for Chemical Physics of RAS, Moscow, Russia
Nanoscale kinetics of phase transitions in crystalline polyethylene

Section V.

Laser nanofabrication, all-dielectric materials, nanomaterials: fundamentals and applications

V.p.01 **Yu.M. Borodaenko**, S.O. Gurbatov, A.Yu. Mironenko, M.V. Tutov, A.A. Kuchmizhak
Institute for Automation and Control Processes FEB RAS, Vladivostok, Russia
Black silicon with functional luminescent organic monolayer enabled by direct femtosecond-laser printing

V.p.02 **A. Bushunov**
Bauman Moscow State Technical University, Moscow, Russia
AR-microstructures in the mid-infrared range for nonlinear crystals

V.p.03 **S. Gladkikh**, K. Bronnikov, K. Okotrub, A. Simanchuk, A. Zhizhchenko, A. Kuchmizhak and A. Dostovalov
Institute of Automation and Electrometry of the SB RAS, Novosibirsk, Russia
Influence of Femtosecond Laser Wavelength and Ambient Environment on Morphology and Chemical Composition of Laser-Induced Periodic Structures on metal Films

V.p.04 **Yu.V. Klunnikova**, M.V. Anikeev, U. Nackenhorst, A.V. Filimonov
Southern Federal University, Taganrog, Russia
Study of the thermal stresses during TiO_2 laser annealing on sapphire substrate

V.p.05 **E. Koroleva,** I. Reshetov, E. Babich, S.B. Vakhrushev, D. Tagantsev, A. Lipovskii
Ioffe Institute, St. Petersburg, Russia
Electric properties of polarized layer in alkaline silicate glasses

V.p.06 **D. Krichevsky**, D. Ignatyeva, D. Karki, A. Kolosvetov, A. Chernov, A. Shaposhnikov, V. Berzhansky, M. Levy, V. Belotelov
Moscow Institute of Physics and Technology (MIPT), Dolgoprudny, Russia
Optically induced localized spin wave states in all-dielectric nanopillars

V.p.07 V.S. Lapidas, A.Yu. Zhizhchenko, **A.A. Kuchmizhak**
Institute for Automation and Control Processes FEB RAS, Vladivostok, Russia
Structural coloring and anti-counterfeiting enabled by direct femtosecond-laser printing

V.p.08 **A.S. Levshakova,** E.M. Khairullina, D.I. Gordeichuk, A. Yu. Shishov, I.I. Tumkin
Saint Petersburg State University, St. Petersburg, Russia
Laser-assisted fabrication of electrode materials for non-enzymatic sensors using deep eutectic solvents

V.p.09 **V.A. Mamontov,** A.Yu. Ryzhenkova, M.A. Pugachevskii
The Southwest State University, Kursk, Russia
Band gap and antioxidant properties of cerium dioxide nanoparticles

V.p.10 **A.Yu. Mironenko**, M.V. Tutov, A.K. Chepak, A.A. Kuchmizhak
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Surface enhanced fluorescence on nanostructured dielectric surfaces

V.p.11 **V.A. Puzikov**, S.O. Gurbatov, A.A. Kuchmizhak
Institute for Automation and Control Processes FEB RAS, Vladivostok, Russia
Hybrid Au@Si microspheres produced via laser irradiation in liquid

V.p.12 **S.V. Starinskiy**, Yu.G. Shukhov, A.A. Rodionov, A.V. Bulgakov, A.I. Safonov, I. Malakhov, V.S. Serdykov, A.S. Surtaev
S.S. Kutateladze Institute of Thermophysics SB RAS, Novosibirsk, Russia
Superhydrophilic surfaces obtained by nanosecond laser treatment to enhance nucleate pool boiling heat transfer

V.p.13 **A. Teslenko**
Bauman Moscow State Technical University, Moscow, Russia
Fabrication of an antireflection microstructure on AgClBr polycrystalline fiber

Section VI.

Photonic and electronic devices: integrated circuits, solar cells, nanophotonics, biophotonics

VI.p.01 K.N. Galkin, D.T. Yan, **I.M. Chernev**, A.B. Cherepakhin, N.G. Galkin
Institute for Automation and Control Processes of FEB RAS, Vladivostok, Russia
The current-voltage and photoelectric properties of por-Si/Si-p/Si-n diodes with different porous layer's thickness

VI.p.02 L. Sorokina, A. Savitskiy, O. Shtyka, T. Maniecki, M. Szynkowska-Jozwik, A. Trifonov, E. Pershina, I. Mikhaylov, **S. Dubkov**, D. Gromov
National Research University of Electronic Technology, Zelenograd, Russia
Photocatalytic reduction of CO_2 over Cu-Rh/TiO_2 catalyst in visible spectra

VI.p.03 **Yu.O. Fedorova,** N.N. Schavelev, R.M. Ryazanov, E.P. Kitsyuk
Scientific-Manufacturing Complex "Technological Centre", Zelenograd, Moscow, Russia
Spectral sensitivity of photovoltaic cells based on carbon nanotube arrays

VI.p.04 **I.V. Krasnikov**, A.Y. Seteikin, B.Roth
Immanuel Kant Baltic Federal University, Kaliningrad, Russia
Monte Carlo method and approaches to simulation of radiation transfer in turbid biological tissues

VI.p.05 **T.A. Pisarenko**, V.V. Korobtsov, A.A. Dimitriev, V.V. Balashev
Institute for Automation and Control Processes of FEB RAS, Vladivostok, Russia
A Comparative Study of the Transient Lateral Photovoltaic Effect in the Hybrid T/SiO_2/Si (T = Fe, Fe_3O_4, TiO_2) Structures

VI.p.06 **T.A. Pisarenko**, V.V. Korobtsov, A.A. Dimitriev, V.V. Balashev, V.V. Zheleznov
Institute for Automation and Control Processes of FEB RAS, Vladivostok, Russia
Giant Lateral Photovoltaic Effect in The TiO_2/SiO_2/p-Si Heterostructure

VI.p.07 **K.A. Sergeeva,** A.A. Sergeev
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Numerical simulations and experimental observation of photonic nanojets generated by TiO_2 microparticles

VI.p.08 **A. Tarasov,** S. Dubkov, D. Gromov, R. Ryazanov, L. Volkova
National Research University of Electronic Technology "MIET", Moscow, Russia
Facile fabrication of a TiO2 NW-based glucose sensor by direct ink writing

VI.p.09 K.N. Galkin, **D.T. Yan**, A.V. Nepomnyashchiy, N.G. Galkin
Far Eastern State Transport University, Khabarovsk, Russia
Influence of current density, anodization time and illumination on the thickness of porous silicon in wafers with built-in p-n junction and its photoluminescence

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