

GENERAL INFORMATION

NANOMEETING-2013 is an International Conference traditionally held each two years in Minsk, Belarus. The Conference has arisen from the Belarusian-French initiative and purposes to bring together scientists and engineers from around the world, who work in the fast-developing areas of nanoscience, nanotechnology, nanostructure based electronics and optoelectronics. The meeting addresses the latest results achieved in fabrication, study and application of nanosize structures. It will be in May 28-31, 2013 at the Belarusian State University of Informatics and Radioelectronics in Minsk.

Registration

The registration fee is 130 EURO. It is paid in cash in EURO or equivalently in Belarusian rubles during the registration. The fee includes a copy of the Conference Proceedings, admission to all sessions, coffee breaks, and the city sightseeing bus tour.

Attendees are checked-in at the Conference Registration Desk in the lobby of the second floor of the Building № 1 (P. Browka Str. 6) of the Belarusian State University of Informatics and Radioelectronics. It is easily reached from the subway station "Akademiya Nauk" or by bus number 100 (see the city map at the back cover of the Program). The registration starts on May 28 (Tuesday) at 8:30.

Meeting Activities

The technical program includes invited talks, oral presentations and poster session. Three seminars (special sessions for discussing of results obtained by international teams in the frame of EU-funded projects), namely "Nanoelectromagnetics", "Nanostructured Materials for Electronics and Photonics" (FP7 BELERA No 295043), and "Frontiers of Nanotechnologies and Nanomaterials for Renewable Energy Generation, Conversion and Storage" are organized during the Conference.

All presentations will be in English in the Conference Hall (Building № 1, room 229) and Workshop Room (Building № 1, room 232) of the Belarusian State University of Informatics and Radioelectronics. Oral presentations should be not longer than 30 min for invited speakers and 15-20 min for others including 3-5 min for questions and short discussion. Audio-visual equipment is available for speakers.

The poster session will take place in the lobby nearby the Conference Hall on Wednesday, May 29. Posters may be prepared in any form and will be displayed on poster boards of 1 m × 1.5 m. All posters should be put up on the boards in the morning May 29. That day authors are requested to be present at their posters starting from 17:00. Informal comments and discussion are encouraged during the session.

On May 28 (Tuesday), the Conference participants are invited to the city sightseeing tour just after finishing of the evening session. Conference Banquet is planned to be on May 30 (Thursday).

For further information contact:

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GENERAL SCHEDULE

Tuesday May 28, 2013, Conference Hall

09:00 – 11:00 PLENARY SESSION
11:00 – 11:20 *Coffee Break*
11:20 – 12:50 PLENARY SESSION
12:50 – 14:30 *Lunch*
14:30 – 16:30 PHYSICS OF NANOSTRUCTURES
16:30 – 16:45 *Coffee Break*
16:45 – 18:00 PHYSICS OF NANOSTRUCTURES
18:00 – 20:00 *City Sightseeing Bus Tour*

Wednesday May 29, 2013, Conference Hall

09:00 – 11:10 PHYSICS OF NANOSTRUCTURES
11:10 – 11:30 *Coffee Break*
11:30 – 12:50 PHYSICS OF NANOSTRUCTURES
12:50 – 14:00 *Lunch*
14:00 – 16:00 NANO ELECTROMAGNETICS
16:00 – 16:20 *Coffee Break*
16:20 – 18:00 NANO ELECTROMAGNETICS
18:00 – 19:30 **Poster Session**

Thursday May 30, 2013

	Conference Hall	Workshop Room
09:00 – 11:00	FRONTIERS OF NANOTECHNOLOGIES AND NANOMATERIALS FOR RENEWABLE ENERGY GENERATION, CONVERSION AND STORAGE	NANOSTRUCTURED MATERIALS FOR ELECTRONICS AND PHOTONICS
11:00 – 11:10	<i>Coffee Break</i>	
11:10 – 12:40	FRONTIERS OF NANOTECHNOLOGIES AND NANOMATERIALS FOR RENEWABLE ENERGY GENERATION, CONVERSION AND STORAGE	NANOSTRUCTURED MATERIALS FOR ELECTRONICS AND PHOTONICS
12:40 – 14:00	<i>Lunch</i>	
14:00 – 16:10	CHEMISTRY AND NANOTECHNOLOGY	FP7 BELERA No 295043 WORKSHOP
16:10 – 16:30	<i>Coffee Break</i>	
16:30 – 17:20	CHEMISTRY AND NANOTECHNOLOGY <i>Conference Banquet</i>	

Friday May 31, 2013, Conference Hall

09:00 – 11:30 NANOSTRUCTURE BASED DEVICES
11:30 GENERAL DISCUSSION AND CLOSING OF THE CONFERENCE

PROGRAM

Tuesday May 28, 2013

PLENARY SESSION

- 9:00 1. **Welcome to Nanomeeting-2013**
S. A. Maskevich (Chairman of the National Organizing Committee, Minister of Education of Belarus)
M. Raineri (Ambassador of France in Belarus)
M. P. Batura (Rector of Belarusian State University of Informatics and Radioelectronics)
- 9:30 2. LESSONS OF PHOTOSYNTHESIS FOR NANOTECHNOLOGIES
invited J. N. Sturgis
Laboratoire d'Ingenierie des Systèmes Macromoléculaires (LISM) CNRS and Aix-Marseille University, Marseille, France
- 10:00 3. NANOENGINEERED CARBON BASED TECHNOLOGIES
invited B. K. Tay
Nanyang Technological University, Singapore
- 10:30 4. NANOSTRUCTURED MATERIALS FOR VACUUMNANOELECTRONIC DEVICES
invited G. Müller
University of Wuppertal, Germany
- Coffee Break**
- 11:20 5. NANOPLASMONICS AND SURFACE ENHANCED SPECTROSCOPIES
invited P.-M. Adam
Institut Charles Delaunay - Université de technologie de Troyes, Laboratoire de Nanotechnologie et d'Instrumentation Optique, Troyes, France
- 11:50 6. SURFACE NANOMATERIALS FOR ELECTRONICS AND SPINTRONICS
invited S. Hasegawa
University of Tokyo, Japan
- 12:20 7. FULLERENES INTERACTION WITH Si RECONSTRUCTED SURFACES
invited A. A. Saranin
Institute of Automation and Control Processes and School of Natural Sciences, Far Eastern Federal University, Vladivostok, Russia

Lunch

PHYSICS OF NANOSTRUCTURES

- 14:30 1. FLUX QUANTUM OSCILLATIONS IN GaAs/InAs CORE-SHELL
invited NANOWIRES
D. Grützmacher, Ö. Gül, N. Demarina, M. Lepsa, H. Hardtdegen, T. Rieger,
F. Haas, K. Sladek, Ch. Blömers, H. Lüth, Th. Schäpers
*Peter Grünberg Institute -9, Semiconductor Nanoelectronics,
Forschungszentrum Jülich and Jülich Aachen Research Alliance on
Fundamentals of Future Information Technology (JARA-FIT), Jülich,
Germany*
- 15:00 2. AEROSPACE APPLICATIONS OF NANOCOMPOSITES
invited S. Bellucci
Istituto Nazionale di Fisica Nucleare-Laboratori Nazionali di Frascati, Italy
- 15:30 3. NON-RESONANT ENHANCED RAMAN SCATTERING OF LIGHT BY
ZnO NANOCRYSTALS NEAR SILVER AND GOLD COLLOIDAL
NANOPARTICLES
A. Rumyantseva¹, S. Kostcheev¹, P.-M. Adam¹, S. V. Gaponenko²,
S. V. Vaschenko², O. S. Kulakovich², A. A. Ramanenka², D. Korbutyak³,
V. Dzhagan³, O. Stroyuk⁴, V. Shvalagin⁴
¹*Laboratory of Nanotechnology, Instrumentation and Optics, University of
Technology of Troyes, Troyes, France*
²*B. I. Stepanov Institute of Physics NASB, Minsk, Belarus*
³*V. Ye. Lashkaryov Institute of Semiconductor Physics NASU, Kyiv, Ukraine*
⁴*L. V. Pysarzhevsky Institute of Physical Chemistry NASU, Kyiv, Ukraine*
- 15:45 4. NANOASSEMBLIES BASED ON SEMICONDUCTOR QUANTUM DOTS
AND DYE MOLECULES: SINGLE OBJECTS DETECTION AND
RELATED INTERFACE DYNAMICS
E. Zenkevich¹, C. Von Borczyskowski², D. Kowanko³
¹*Department of Information Technologies and Robotics, Laboratory of
Applied Physics and Informatics, Belarusian National Technical University,
Minsk, Belarus*
²*Center for Nanostructured Materials and Analytics, Institute of Physics,
Chemnitz University of Technology, Chemnitz, Germany*
³*University of Zürich, Institute for Inorganic Chemistry, Zürich, Switzerland*
- 16:00 5. NANOSCALE CHARACTERIZATION OF SELF-ORDERED
METAL-INSULATOR NANOSTRUCTURED MAGNETIC FILMS
J. Fedotova¹, J. Kasiuk¹, M. Milosavljević², J. Przewoznik³, Cz. Kapusta³
¹*NC PHEP, Belarusian State University, Minsk, Belarus*
²*Vinča Institute of Nuclear Science, Belgrade University, Belgrade, Serbia*
³*Faculty of Physics and Applied Computer Science, Department of Solid State
Physics, AGH University of Science and Technology, Krakow, Poland*
- 16:15 6. ELECTRICAL TRANSPORT PROPERTIES OF TELLURIUM
NANOWIRES ARRAYS
V. K. Ksenevich¹, M. Sadoqi², S. Kumar³, T. E. Huber⁴, V. A. Samuilov⁵
¹*Department of Physics, Belarusian State University, Minsk, Belarus*
²*Department of Physics, St. Johns University, Queens, NY, USA*
³*Mechanical and Engineering Department, Poly NYU, NY, USA*
⁴*Department of Chemistry, Howard University DC, Washington, USA*
⁵*Department of Materials Science, Stony Brook University, NY, USA*

Coffee Break

- 16:45 7. ELECTRONIC TRANSPORT IN HIGHLY DOPED RELAXED Si/Si_{1-x}Ge_x QUANTUM HETEROSTRUCTURES
L. K. Orlov^{1,2}, Z. J. Horvath², M. L. Orlov^{1,3}, N. L. Ivina³, V. N. Neverov⁴, A. S. Klepikova⁴
¹*Institute for Physics of Microstructures RAS, Nizhny Novgorod, Russia*
²*Obuda University, Budapest, Hungary*
³*Nizhny Novgorod Alexeev State University, Nizhny Novgorod, Russia*
⁴*Institute for Physics of Metals UB RAS, Ekaterinburg, Russia*
- 17:00 8. OPTICAL PROPERTIES OF WHISPERING GALLERY MODES SPHERICAL MICROCAVITIES WITH J-NANOAGGREGATES AND PLASMONIC HOT SPOTS
D. Savateeva¹, D. Melnikau¹, K. I. Rusakov², A. A. Gladyshchuk², Y. P. Rakovich³
¹*Materials Physics Center (CSIC-UPV/EHU), University of the Basque Country, Donostia-San Sebastian, Spain*
²*Physics Department, Brest State Technical University, Brest, Belarus*
³*Materials Physics Center (CSIC-UPV/EHU), University of the Basque Country, Donostia International Physics Center (DIPC), IKERBASQUE, Basque Foundation for Science, Donostia-San Sebastian, Spain*
- 17:15 9. ENHANCEMENT EFFECTS AT JUNCTIONS OF CROSSED SILVER NANOWIRES WITH J-AGGREGATES
D. Melnikau¹, D. Savateeva¹, N. Weiss², N. Gaponik², Y. P. Rakovich³
¹*Materials Physics Center (CSIC-UPV/EHU), University of the Basque Country, Donostia-San Sebastian, Spain*
²*Physical Chemistry, TU Dresden, Dresden, Germany*
³*Materials Physics Center (CSIC-UPV/EHU), University of the Basque Country, Donostia International Physics Center (DIPC), IKERBASQUE, Basque Foundation for Science, Donostia-San Sebastian, Spain*
- 17:30 10. OPTICAL PROPERTIES OF SILICON LAYERS WITH InSb AND InAs NANOCRYSTALS FORMED BY ION-BEAM SYNTHESIS
F. Komarov¹, L. Vlasukova¹, M. Greben¹, O. Milchanin¹, J. Zuk², W. Wesch³, E. Wendler³, A. Togambaeva⁴
¹*Physical Electronics and Nanotechnologies Department, Belarusian State University, Minsk, Belarus*
²*Maria Curie-Skłodowska University, Lublin, Poland*
³*Institut für Festkörperphysik, Friedrich-Schiller-Universität Jena, Jena, Germany*
⁴*Al-Farabi Kazakh National University, Almaty, Kazakhstan*
- 17:45 11. HYPERFINE INTERACTIONS IN THE CARBON CLUSTER C₂₉₁H₁₇₂NV HOSTING NV CENTER
A. P. Nizovtsev¹, S. Ya. Kilin¹, A. L. Pushkarchuk², V. A. Pushkarchuk³, F. Jelezko⁴
¹*B. I. Stepanov Institute of Physics NASB, Minsk, Belarus*
²*Institute of Physical Organic Chemistry NASB, Minsk, Belarus*
³*Belarusian State University Informatics and Radioelectronics, Minsk, Belarus*
⁴*Institute for Quantum Optics, Ulm University, Ulm, Germany*

City Sightseeing Bus Tour

Wednesday May 29, 2013

PHYSICS OF NANOSTRUCTURES

- 9:00 1. LIGHT FOR THE NANO-WORLD
invited L. Juschkín
RWTH Experimentalphysik, Aachen, Germany
- 9:30 2. SYMMETRY AND CALCULATIONS OF NANOTUBES AND
invited NANOWIRES BASED ON RUTILE AND PEROVSKITE STRUCTURES
R. A. Evarestov, A. V. Bandura
St. Petersburg State University, Petergof, St. Petersburg, Russia
- 10:00 3. PROPERTIES OF OXIDE/METAL AND OXIDE/OXIDE LAYERED
invited STRUCTURES
N. V. Skorodumova
The Royal Institute of Technology, Stockholm, Sweden
- 10:30 4. FIRST PRINCIPLES SIMULATIONS ON DOPED TiO₂ AND SrTiO₃
NANOTUBULAR PHOTOCATALYSTS FOR WATER-SPLITTING
HYDROGEN GENERATION
Yu. F. Zhukovskii, S. Piskunov, O. Lisovski, J. Begens
Institute of Solid State Physics, University of Latvia, Riga, Latvia
- 10:50 5. STRUCTURE OF SINGLE WALL-LIKE TiO₂ NANOTUBES
D. B. Migas
Belarusian State University of Informatics and Radioelectronics, Minsk, Belarus
- Coffee Break**
- 11:30 6. ELECTROMAGNETIC PROPERTIES OF CARBON BLACK BASED
EPOXY RESIN COMPOSITES IN MICROWAVES
D. Bychanok¹, N. Volynets¹, C. Brosseau², F. Micciulla³, G. Amaral-Labat⁴
¹*Institute for Nuclear Problems, Belarus State University, Minsk, Belarus*
²*Lab-STICC, Université de Bretagne Occidentale, Brest, France*
³*Frascati National Laboratory, National Institute of Nuclear Physics, Italy*
⁴*IJL – UMR CNRS 7198 and LERMAB – ENSTIB, Épinal, France*
- 11:50 7. NONLINEAR INTERACTION OF COHERENT RADIATION WITH
BILAYER GRAPHENE AND HIGH HARMONIC GENERATION
H. K. Avetissian¹, G. F. Mkrtchian¹, K. G. Batrakov², S. A. Maksimenko²
¹*Center of Strong Field Physics, Yerevan State University, Yerevan, Armenia*
²*Institute for Nuclear Problems, Belarus State University, Minsk, Belarus*
- 12:10 8. ELECTRICAL CONDUCTIVITY STUDY OF Au AND Na COADSORBED
Si(111)√3×√3 SURFACE
D. A. Tsukanov¹, D. V. Gruznev¹, A. V. Zotov¹, A. A. Saranin¹,
M. V. Ryzhkova², L. V. Bondarenko², E. A. Borisenko²
¹*Institute of Automation and Control Processes FEB RAS, Vladivostok, Russia*
²*School of Natural Sciences, Far Eastern Federal University, Vladivostok, Russia*

- 12:30 9. BESSEL PLASMONS FOR NEAR-FIELD OPTICAL MICROSCOPY
WITH NANOSCALE RESOLUTION
S. Kurilkina, V. Belyi, N. Kazak
*Laboratory for Optical Diagnostics, B. I. Stepanov Institute of Physics NASB,
Minsk, Belarus*

Lunch

NANOELECTROMAGNETICS

- 14:00 1. CHALLENGES AND PERSPECTIVES OF NANOELECTROMAGNETICS
S. Maksimenko
Research Institute for Nuclear Problem, Belarusian State University, Minsk, Belarus
- 14:20 2. QUASI-ONE DIMENSIONAL FULLERENE–NANOTUBE COMPOSITES: STRUCTURE, FORMATION ENERGETICS, AND ELECTRONIC PROPERTIES
L. Chernozatonskii
Emanuel Institute of Biochemical Physics RAS, Moscow
- 14:40 3. PHYSICALLY-CONSISTENT MODELS FOR ELECTRICAL SIGNAL PROPAGATION ALONG GRAPHENE NANO-RIBBONS
A. Maffucci¹, G. Miano²
¹*Department of Electrical and Information Engineering, University of Cassino and Southern Lazio, Cassino, Italy*
²*Department of Electrical Engineering, University of Naples “Federico II”, Naples, Italy*
- 15:00 4. ELECTRONIC STRUCTURE OF A DISORDERED GRAIN BOUNDARY IN GRAPHENE
Ph. Lambin¹, P. Vancso², P. Nemes-Incze², G. Mark², L. P. Biró²
¹*Physics Department, University of Namur, Namur, Belgium*
²*Institute for Technical Physics and Materials Science, Budapest, Hungary*
- 15:20 5. GRAPHENE TUNNELING TRANSIT-TIME DIODES: CONCEPT, CHARACTERISTICS, AND ULTIMATE PERFORMANCE
V. Ryzhii¹, T. Otsuji¹, M. Ryzhii², V. G. Leiman³, V. L. Semenenko³, A. V. Arsenin³, V. Mitin⁴
¹*Research Institute for Electrical Communication, Tohoku University, Sendai, Japan*
²*Computational Nanoelectronics Laboratory, University of Aizu, Aizu-Wakamatsu, Japan*
³*Department of General Physics, Moscow Institute of Physics and Technology, Dolgoprudny, Russia*
⁴*Department of Electrical Engineering, University at Buffalo, Buffalo, NY, USA*
- 15:40 6. MULTILAYERED GRAPHENE IN MICROWAVES
P. Kuzhir¹, N. Volynets¹, S. Maksimenko¹, T. Kaplas², Yu. Svirko²
¹*Research Institute for Nuclear Problems, Belarusian State University, Minsk, Belarus*
²*University of Eastern Finland, Department of Physics and Mathematics, Joensuu, Finland*
- Coffee Break**
- 16:20 7. INORGANIC NANOTUBES AND FULLERENE-LIKE NANOPARTICLES: FROM THE LAB TO THE MARKET PLACE
R. Tenne
Department of Materials and Interfaces, Weizmann Institute, Rehovot, Israel

- 16:40 8. A BROADBAND NANOSTRUCTURED PLASMONIC LIGHT ABSORBER
A. Kukhta¹, A. Hubarevich², H. Wang², X. Sun², H. Demir²
¹Research Institute for Nuclear Problems, Belarusian State University, Minsk, Belarus
²School of Electrical and Electronic Engineering, Nanyang Technological University, Singapore
- 17:00 9. DIELECTRIC PROPERTIES OF EPOXY RESIN COMPOSITES FILLED WITH NANOCARBON INCLUSIONS
J. Macutkevic¹, I. Kranauskaite¹, J. Banys¹, A. Paddubskaya², E. Stefanutti³, A. Cataldo³, F. Micciulla³, A. Celzard⁴, V. Fierro⁴
¹Radiophysics Department, Vilnius University, Vilnius, Lithuania
²Institute of Nuclear Problems of Belarus State University, Minsk, Belarus
³Frascati National Laboratory, National Institute of Nuclear Physics, Italy
⁴IJL – UMR CNRS 7198 ENSTIB, Épinal, France
- 17:20 10. ELECTROMAGNETIC RESPONSE OF FINITE-LENGTH MULTIWALL CARBON NANOTUBES IN SUB-TERAHERTZ RANGE
M. V. Shuba, A. V. Melnikov
Research Institute for Nuclear Problems, Belarusian State University, Minsk, Belarus
- 17:40 11. ELECTROMAGNETIC PROPERTIES OF CNTs AND GNRs BASED NANOSTRUCTURES FOR NANOSENSOR SYSTEMS
Yu. N. Shunin^{1,2}, V. I. Gopeyenko², N. Yu. Burlutskaya², T. D. Lobanova-Shunina², S. Bellucci³
¹Institute of Solid State Physics, University of Latvia, Riga, Latvia
²Information Systems Management Institute, Riga, Latvia
³INFN-Laboratori Nazionali di Frascati, Frascati, Italy

POSTER SESSION

18:00-19:30 – the lobby nearby the Conference Hall

Thursday May 30, 2013

FRONTIERS OF NANOTECHNOLOGIES AND NANOMATERIALS FOR RENEWABLE ENERGY GENERATION, CONVERSION AND STORAGE

(French-Belarusian Seminar)

- 9:00 1. NANOPHOTONICS FOR LIGHT TRAPPING IN SOLAR CELLS, BASIC
invited CONCEPTS AND RECENT ADVANCES
C. Seassal^{1,2}, G. Gomard^{1,2,3}, X. Meng^{1,2,3}, R. Peretti^{1,2}, T. Deschamps^{1,2,3},
A. Fave^{1,3}, E. Drouard^{1,2}
¹Université de Lyon, Institut des Nanotechnologies de Lyon, France
²Ecole Centrale de Lyon, Ecully, France
³INSA de Lyon, Bat. Blaise Pascal, Villeurbanne, France
- 9:30 2. PIEZOELECTRIC NANOSTRUCTURES FOR MECHANICAL ENERGY
invited HARVESTING
G. Ardila, R. Hinchet, L. Montès, M. Mouis
IMEP-LAHC/MINATEC, Grenoble, France
- 10:00 3. PREDICTABLE BEHAVIOR OF ORGANIC PHOTOVOLTAIC CELLS
BY KELVIN PROBE FORCE MICROSCOPY
R. Roche¹, A. L. Lereu², Ph. Dumas¹
¹CINaM; Aix-Marseille Université, Marseille, France
²Institut Fresnel, CNRS, Marseille, France
- 10:15 4. INTERMEDIATE BAND PERFORMANCE OF Al_xGa_{1-y}Sb TYPE-II
QUANTUM DOTS BURIED OUTSIDE OF THE DEPLETION REGION
OF Al_xGa_{1-x}As p-n-JUNCTION
A. Kechiantz¹, A. Afanasev², J.-L. Lazzari³, A. Bhourri⁴, Y. Cuminal⁵,
P. Christol⁵
¹Institute of Radiophysics and Electronics, NAS Armenia
²George Washington University, Washington, DC, USA
³CINaM, Aix-Marseille Université, France
⁴Faculté des Sciences de Monastir, Monastir, Tunisia
⁵Institut d'Electronique du Sud (IES), Université Montpellier, France
- 10:30 5. PHOTOVOLTAICS BASED ON SMALL CONJUGATED MOLECULES
P. Leriche, A. Leliège, E. Ripaud, V. Jeux, D. Demeter, P. Blanchard,
J. Roncali
LUNAM, University of Angers, Group Linear Conjugated Systems, CNRS
MOLTECH-Anjou, Angers, France
- 10:45 6. NANOSTRUCTURED MAGNESIUM HYDRIDE FOR REVERSIBLE
HYDROGEN STORAGE
P. De Rango¹, A. Chaise¹, D. Fruchart¹, S. Miraglia¹, Ph. Marty²
¹NEEL Institute and CRETA, CNRS, Grenoble, France
²LEGI, Université Joseph Fourier, Grenoble, France
- Coffee Break**
- 11:10 7. ORGANIC PHOTOVOLTAICS: A THEORETICAL INSIGHT
P. Marsal
CINaM, Aix-Marseille Université, Marseille, France

- 11:25 8. OPTICAL PROPERTIES OF BIMETALLIC NANOALLOYS FROM TDDFT – ABSORPTION SPECTRA OF 13-ATOM NOBLE METAL CLUSTERS
H.-Ch. Weissker¹, H. Barron², L. Fernandez Seivane², X. Lòpez Lozano²
¹Aix Marseille University, CINaM, Marseille, France
²The University of Texas at San Antonio, San Antonio, USA
- 11:40 9. PHOTOCATALYTIC DECOMPOSITION OF AN ORGANIC DYE BY NANOSTRUCTURED TITANIA DEPOSITED INTO POROUS ANODIC ALUMINA
L. Khoroshko¹, I. Nikolaenko¹, A. Asharif¹, N. Gaponenko¹, E. Krutko², A. Kulak²
¹Belarusian State University of Informatics and Radioelectronics, Minsk, Belarus
²Institute of General and Inorganic Chemistry NASB, Minsk, Belarus
- 11:55 10. COMPOSITION OF CuInSe₂ CRYSTALS SURFACE INFLUENCED BY Xe⁺ ION IRRADIATION
I. S. Tashlykov¹, D. A. Silvanovich¹, V. F. Gremenok²
¹Department of Experimental Physics, Belarusian State Pedagogical University, Minsk, Belarus
²Scientific and Applied Materials Research Center NASB, Minsk, Belarus
- 12:10 11. FABRICATION AND STRUCTURAL FEATURES OF CeO₂-TiO₂ PHOTOCATALYSTS
V. S. Gurin¹, N. M. Bobkova², E. E. Trusova²
¹Research Institute for Physical Chemical Problems, BSU, Minsk, Belarus
²Belarusian State Technological University, Minsk, Belarus
- 12:25 12. NANOSCALE SURFACE MODIFICATION OF POLYCRYSTALLINE TIN SULPHIDE FILMS DURING PLASMA TREATMENT
S. P. Zimin¹, E. S. Gorlachev¹, G. A. Dubov¹, I. I. Amirov², V. V. Naumov², V. F. Gremenok³, V. A. Ivanov³, H. G. Seidi³
¹Microelectronics Department, Yaroslavl State University, Yaroslavl, Russia
²Institute of Physics and Technology RAS, Yaroslavl, Russia
³Scientific-Practical Materials Research Center NASB, Minsk, Belarus
- 12:40 13. APPLICATION OF SEMICONDUCTING TIN SULPHIDES-BASED MATERIALS IN PHOTOVOLTAICS
A. V. Krivosheeva¹, V. L. Shaposhnikov¹, V. E. Borisenko¹, J.-L. Lazzari²
¹Belarusian State University of Informatics and Radioelectronics, Minsk, Belarus
²CINaM, Aix-Marseille Université, France
- 12 :55 14. SOL-GEL ZnO NANOSTRUCTURES FOR SOLAR CELLS
V.B. Zalesskiy, A.V. Semchenko, V.V. Sidsky, V.E. Gaishun, V.V. Malyutina-Bronskaya, A.M. Polikanin
B. I. Stepanov Institute of Physics NASB, Minsk, Belarus

Lunch
CHEMISTRY AND NANOTECHNOLOGY

- 14:00 1. NANOCRYSTALS IN INORGANIC MATRICES: MATERIALS WITH
invited ROBUST PERFORMANCE
T. Otto¹, M. Müller¹, P. Mundra¹, A. Eychmüller¹, N. Gaponik¹,
E. V. Frolova², V. Lesnyak³
¹Physical Chemistry, TU Dresden, Dresden, Germany
²Research Institute for Physical Chemical Problems, BSU, Minsk, Belarus
³Nanochemistry Department, Istituto Italiano di Tecnologia, Genova, Italy
- 14:30 2. HIGH FIELD POROUS ANODIZATION OF ALUMINIUM FILMS WITH
A PHOTOLITHOGRAPHIC MASK
S. K. Lazarouk
Belarusian State University of Informatics and Radioelectronics, Minsk,
Belarus
- 14:50 3. READSORPTION ASSISTED MODEL OF III-V NANOWIRE GROWTH
N. V. Sibirev¹, D. Ercolani², A. Li², L. Lugani², L. Sorba²
¹St. Petersburg Academic University, St. Petersburg, Russia
²Nest, Scuola Normale Superior e Istituto Nanoscienze – CNR, Pisa, Italy
- 15:10 4. PHYSICAL FUNDAMENTALS OF THE NOVEL METHOD OF
NANOPARTICLES PRODUCTION BY LOW PRESSURE SPRAY
PYROLYSIS
S. P. Fisenko, J. A. Khodyko, O. G. Penyazkov, V. I. Saverchenko
A. V. Lykov Heat and Mass Transfer Institute NASB, Minsk, Belarus
- 15:30 5. EFFECT OF LASER PULSE ENERGY ON THE GOLD
NANOPARTICLES PRODUCED BY LASER ABLATION METHOD
D. Dorrnian¹, S. M. Ghamkhari¹, N. Mirghasemzadeh²
¹Laser Lab., Plasma Physics Research Center, Islamic Azad University;
Science and Research Branch, Islamic Azad University, Tehran, Iran
²Physics Department, Science faculty, Islamic Azad University, North Tehran
Branch, Tehran, Iran
- 15:50 6. STRUCTURE AND MAGNETIC PROPERTIES OF NICKEL-CARBON
NANOCOMPOSITES PREPARED BY SOLID-PHASE PYROLYSIS OF
NICKEL PHTHALOCYANINE
A. Manukyan¹, A. Mirzakhanyan¹, R. Khachaturyan¹, E. Sharoyan¹,
E. Kaniukov², L. Lobanovsky²
¹Institute for Physical Research NAS of Armenia, Ashtarak, Armenia
²Scientific and Practical Materials Research Centre NASB, Minsk, Belarus
- Coffee Break**
- 16:30 7. LABORATORY TECHNOLOGY OF VI AND VIII GROUPS METAL
OXIDE ULTRADISPERSED POWDERS
E. A. Trusova, K. V. Kotsareva
A. A. Baikov Institute of Metallurgy and Materials Science RAS, Moscow,
Russia
- 17:00 8. METAL-DIELECTRIC NANOCOMPOSITES: NOVEL MATERIALS FOR
PLASMONICS
V. V. Zhurikhina¹, A. A. Lipovskii¹, O. V. Shustova¹, E. O. Slivina¹,
Yu. Svirko²
¹St.-Petersburg State Polytechnical University, St. Petersburg, Russia
²University of Eastern Finland, Joensuu, Finland

Conference Banquet

Thursday May 30, 2013, Workshop Room

NANOSTRUCTURED MATERIALS FOR ELECTRONICS AND PHOTONICS

FP7 BELERA No 295043 Workshop

- 9:00 1. ENERGY-RELATED APPLICATIONS OF CARBON
invited POLYMORPHS-BASED NANOMATERIALS
V. A. Labunov
Belarusian State University of Informatics and Radioelectronics, Minsk, Belarus
- 9:30 2. STRUCTURAL CHARACTERIZATION OF CARBON NANOTUBE
ARRAYS IMPLANTED WITH IRON IONS
A. Prudnikava¹, S. Prischepa¹, K. Yanushkevich², O. Demidenko²,
F. Le Normand³, D. Muller³, F. Antoni³, A. Basaev⁴
¹*Belarusian State University of Informatics and Radioelectronics, Minsk, Belarus*
²*SSPA "Scientific and Practical Materials Research Center NASB", Minsk, Belarus*
³*Laboratoire ICube – DESSP, Strasbourg, France*
⁴*SMC TC MIET, Moscow, Zelenograd, Russia*
- 9:50 3. OPTICAL, ELECTRIC, AND MAGNETIC PROPERTIES OF THIN
CROSS-LINKED FILMS OF C₆₀ POLYMER SYNTHESIZED USING
ELECTRON-BEAM DISPERSION METHOD WITH FULLERENE ION
ASSISTANCE
I. Razanau¹, V. Kazachenko¹, E. Scopcov², G. Zhavnerko²
¹*Department of Materials Science and Technology, Belarusian State University of Transport, Gomel, Belarus*
²*Institute of Chemistry of New Materials NASB, Minsk, Belarus*
- 10:10 4. SYNTHESIS OF FIELD EMISSION CNT-CATHODES WITH Ni/Al/Mo
LOCALIZED CATALYST
V. Labunov¹, B. Shulitski¹, A. Tymoshchyk¹, I. Kashko¹, G. Muller²,
P. Serbun²
¹*Belarusian State University of Informatics and Radioelectronics, Minsk, Belarus*
²*University of Wuppertal, Wuppertal, Germany*
- 10:30 5. FIELD EMISSION PROPERTIES OF STRUCTURED CATHODE
MATERIALS
P. Serbun
University of Wuppertal, Wuppertal, Germany
- Coffee Break**
- 11:10 6. INTEGRATED SILICON PLATFORM FOR REAL-TIME LOW-COST
BIOSENSING TECHNIQUE
A. Smimov¹, A. Stsiapanau¹, E. Mukha¹, J. Garcia-Ruperez²,
J. Garcia Castello²
¹*Belarusian State University of Informatics and Radioelectronics, Minsk, Belarus*
²*UPVLC, Valencia, Spain*

- 11:30 7. TRANSPARENT CONDUCTIVE AI ELECTRODE AND SPONGE LIKE
NANOPOROUS SILICON FORMATION BY ELECTROCHEMICAL
ANODIZATION FOR INTEGRATED ELECTROLUMINESCENCE
LIGHT EMITTING DEVICES
A. Smirnov, A. Stsiapanau, Y. Mukha, V. Shuboderov
*Belarusian State University of Informatics and Radioelectronics, Minsk,
Belarus*
- 11:50 8. FORMATION AND PROPERTIES OF INTEGRATED OPTICAL
WAVEGUIDES FABRICATED BY POROUS ANODIZING OF SILICON
A. Klushko, L. Dolgyi, V. Bondarenko
*Belarusian State University of Informatics and Radioelectronics, Minsk,
Belarus*

Lunch

- 14:00 BELERA Workshop

Friday May 31, 2013, Conference Hall

NANOSTRUCTURE BASED DEVICES

- 9:00 1. NANO-SCALE GaN HEMTs FOR HIGH FREQUENCY APPLICATIONS
invited Ng Geok Ing
Nanyang Technological University, Singapore
- 9:30 2. NANOSCALE SUPERCONDUCTIVITY: PHYSICS AND APPLICATIONS
invited K. Arutyunov
*University of Jyväskylä, Department of Physics, NanoScience Centre,
Jyväskylä, Finland*
*Moscow State University, Skobeltsyn Institute of Nuclear Physics, Moscow,
Russia*
- 10:00 3. NONVOLATILE SUPERCONDUCTING VALVE ON THE BASE
OF FERROMAGNET/SUPERCONDUCTOR NANOSTRUCTURE
S. L. Prischepa¹, C. Cirillo², C. Attanasio², M. Yu. Kupriyanov³
¹*Belarusian State University of Informatics and Radioelectronics, Minsk,
Belarus*
²*CNR-SPIN Salerno and Dipartimento di Fisica "E.R. Caianiello" Università
degli Studi di Salerno, Fisciano (Sa), Italy*
³*Skobeltsyn Institute of Nuclear Physics, Moscow State University, Moscow,
Russia*

Coffee Break

- 10:30 4. InGaAs/GaAs LIGHT-EMITTING DIODES WITH FERROMAGNETIC
DELTA-DOPED LAYERS
M. V. Dorokhin, E. I. Malysheva, M. M. Prokof'eva, A. V. Zdoroveishev
*Physico-Technical Research Institute of Nizhny Novgorod State University,
Nizhny Novgorod, Russia*
- 10:50 5. FORMATION REGULARITIES OF SERS-ACTIVE SUBSTRATES
BASED ON SILVER-COATED MESOPOROUS SILICON
A. Panarin¹, I. Khodasevich¹, S. Terekhov¹, H. Bandarenka², K. Artsemyeva²,
V. Bondarenko², J. Martinez-Pastor³
¹*B. I. Stepanov Institute of Physics NASB, Minsk, Belarus*
²*Micro- and Nanoelectronics Department, BSUIR, Minsk, Belarus*
³*UMDO - Unidad Asociada a CSIC-IMM, Instituto de Ciencia de los
Materiales, Universidad de Valencia, Valencia, Spain*
- 11:10 6. SINGLE-WALLED CARBON NANOTUBE FILM BASED
POLARIZATION ANALYZER
R. G. Zonov¹, G. M. Mikheev¹, V. M. Styapshin¹, A. G. Nasibulin²,
A. Kaskela², E. I. Kauppinen²
¹*Institute of Mechanics UB RAS, Izhevsk, Russia*
²*NanoMaterials Group, Department of Applied Physics and Center for New
Materials Aalto University, Espoo, Finland*
- 11:30 **General Discussion and Closing of the Conference**

POSTERS

1. Up-conversion properties of Er³⁺:PbF₂-containing nanophase glass-ceramics
N. A. Skoptsov¹, P. A. Loiko¹, K. V. Yumashev¹, G. E. Rachkovskaya², G. B. Zakharevich²
¹Center for Optical Materials and Technologies, Belarusian National Technical University, Minsk, Belarus
²Glass and Ceramics Technology Department, Belarusian State Technological University, Minsk, Belarus
2. INFLUENCE OF HEAT TREATMENT AND Ce(III) CONCENTRATION ON THE LUMINESCENT PROPERTIES OF Lu₃Al₅O₁₂:Ce(III) NANOPOWDERS
E. V. Tretyak¹, G. P. Shevchenko¹, S. E. Kichanov²
¹Research Institute for Physical Chemical Problems, Belarusian State University, Minsk, Belarus
²Joint Institute for Nuclear Research, Dubna, Russia
3. SYNTHESIS AND PROPERTIES OF GOLD NANOPARTICLES STABILIZED BY SODIUM FOLATE
I. A. Milevich, S. A. Vorobyova
Research Institute for Physical Chemical Problems, Belarusian State University, Minsk, Belarus
4. COMPOSITION-DEPENDENT LUMINESCENT PROPERTIES OF GeO₂-Eu₂O₃-Ag FILMS
Yu. V. Bokshyts
Research Institute for Physical Chemical Problems, Belarusian State University, Minsk, Belarus
5. EFFECT OF STRUCTURE AND SURFACE STATE OF NANOCRYSTALLINE TIN DIOXIDE ON ITS GAS SENSING PROPERTIES
E. Ovodok¹, M. Ivanovskaya¹, D. Kotsikau², I. Azarko², V. Kormosh³, I. Alyaksev³
¹Research Institute for Physical Chemical Problems, Belarusian State University, Minsk, Belarus
²Belarusian State University, Minsk, Belarus
³Research Institute of Analytical Technique of Uzhgorod National University, Uzhgorod, Ukraine
6. HELIUM ADSORPTION ON CARBON NANOTUBE BUNDLES WITH DIFFERENT DIAMETERS: MOLECULAR DYNAMICS SIMULATION
R. Majidi, A. R. Karami
Shahid Rajaei Teacher Training University, Lavizan, Tehran, Iran
7. TRANSFORMATION OF THE BAND STRUCTURE AND ANISOTROPY PHENOMENA IN 2D HOLE GAS AT GaAs/AlGaAs HETEROINTERFACE UNDER UNIAXIAL COMPRESSION
E. V. Bogdanov, K. I. Kolokolov, N. Ya. Minina
Physics Department, M. V. Lomonosov Moscow State University, Moscow, Russia
8. ABSORPTION AND LUMINESCENCE OF NOVEL PbS-QUANTUM-DOT-DOPED ALKALI-SILICATE GLASSES
P. A. Loiko¹, K. V. Yumashev¹, G. E. Rachkovskaya², G. B. Zakharevich²
¹Center for Optical Materials and Technologies, Belarusian National Technical University, Minsk, Belarus
²Glass and Ceramics Technology Department, Belarusian State Technological University, Minsk, Belarus

9. GROUP I ELEMENT-DOPED ZnO NANOWIRE ARRAYS: STRUCTURAL CHARACTERISTICS
Jin Pyo Hong
Department of Physics, Novel Functional Material and Device Lab., Hanyang University, Seoul, Korea
10. ION-SELECTIVE DETECTION WITH GLASS NANOPIPETTE FOR LIVING CELLS
T. Takami, J. W. Son, E. J. Kang, X. L. Deng, T. Kawai, S.-W. Lee, B. H. Park
Department of Physics, Konkuk University, Seoul, Korea
11. DIRECTED DIFFRACTION IN ONE-DIMENSIONAL PHOTONIC CRYSTALS
S. Kurilkina¹, V. Belyi¹, N. Mukhurov¹, A. Min'ko²
¹*Laboratory for Optical Diagnostic, B. I. Stepanov Institute of Physics NASB, Minsk, Belarus*
²*Department of Physical Optics, Belarusian State University, Minsk, Belarus*
12. PbS nanoparticles in mesoporous TiO₂ films: monitoring by potentiodynamic electrochemical impedance spectroscopy
P. V. Chulkin¹, S. M. Rabchynski¹, E. A. Streltsov¹, G. A. Ragoisha², O. L. Stroyuk³, S. Y. Kuchmiy³
¹*Chemistry Department, Belarusian State University, Minsk, Belarus*
²*Research Institute for Physical Chemical Problems, Belarusian State University, Minsk, Belarus*
³*L. V. Piszarshevsky Institute of Physical Chemistry NASU, Kyiv, Ukraine*
13. DIELECTRIC PROPERTIES OF NANOPOROUS METAL ORGANIC FRAMEWORK MATERIALS IN THE MILLIMETER-WAVE BAND
V. V. Meriakri¹, I. P. Nikitin¹, M. P. Parkhomenko¹, N. A. Fedoseev¹, Lu Kuang-Lieh²
¹*Kotel'nikov Institute of Radio Engineering and Electronics RAS, Fryazino, Moscow region, Russia*
²*Institute of Chemistry, Academia Sinica, Taipei, Taiwan; Department of Chemistry, National Changhua University of Education, Changhua, Taiwan*
14. LATERAL GROWTH AND SHAPE OF SEMICONDUCTOR NANOWIRES
A. D. Bolshakov¹, M. A. Timofeeva¹, M. Tchernycheva²
¹*St. Petersburg Academic University, St. Petersburg, Russia*
²*Institut d'Electronique Fondamentale, Universite Paris-Sud, Orsay, France*
15. MORPHOLOGY INFLUENCE ON WATER WETTABILITY OF Mo BACK CONTACT OF SOLAR CELLS
A. Turavets, I. Tashlykov
Belarusian State Pedagogical University, Minsk, Belarus
16. DIELECTRIC PROPERTIES OF ONION LIKE CARBON COMPOSITES
J. Macutkevicius¹, R. Grigalaitis¹, J. Banys¹, S. Hens², V. Borjanovic², O. Shenderova², V. Kuznetsov³, S. Moseenkov³
¹*Radiophysics Department, Vilnius University, Vilnius, Lithuania*
²*International Technology Center, Raleigh, NC, USA*
³*Borisevsk Institute of Catalysis SB RAS, Novosibirsk, Russia*
17. NANO-LIKE EFFECTS IN CRYSTALLINE THERMOELECTRIC MATERIALS AT HIGH TEMPERATURES
M. A. Korzhuev¹, I. V. Katin²
¹*Laboratory of Semiconductor Material, A. A. Baikov Institute of Metallurgy and Material Science RAS, Moscow, Russia*
²*Laboratory of Durability and Plasticity of Metals, Composites and Nano-structures, A. A. Baikov Institute of Metallurgy and Material Science RAS, Moscow, Russia*

18. FORMATION AND OPTICAL PROPERTIES OF THICK Ca_2Si AND Ca_3Si_4 ON Si SUBSTRATES
N. G. Galkin¹, D. A. Bezbabny¹, K. N. Galkin¹, S. A. Dotsenko¹, E. Zielony², R. Kudrawiec², J. Misiewicz²
¹*Institute of Automation and Control Processes of FEB RAS, Vladivostok, Russia*
²*Wroclaw University of Technology, Wroclaw, Poland*
19. SILVER NANOISLAND FILMS FABRICATED BY OUT-DIFFUSION FROM A GLASS SUBSTRATE
S. Chervinskii, N. Kapralov, A. Red'kov, I. Reduto, V. Sevriuk, A. Lipovskii, V. Zhurikhina
Department of Physics and Technology of Nanostructures, St. Petersburg State Polytechnical University, St. Petersburg, Russia
20. PHOTOINDUCED ENERGY AND ELECTRON TRANSFER PROCESSES IN SELF-ASSEMBLING COMPLEXES OF CdSe/ZnS WATER-SOLUBLE NANOCRYSTALS AND CATIONIC PORPHYRINS
N. V. Ivashin, E. E. Shchupak, E. I. Sagun
B. I. Stepanov Institute of Physics NASB, Minsk, Belarus
21. MODIFIED SOL-GEL TECHNIQUE AS A COST-EFFECTIVE METHOD OF ULTRADISPERSED METAL OXIDE POWDERS PRODUCTION
K. V. Vokhmintsev, O. V. Konstantinov, V. V. Belousov
A. A. Baikov Institute of Metallurgy and Material Science RAS, Moscow, Russia
22. FABRICATION OF HIGH QUALITY MULTI-LAYER GRAPHENE
A. V. Alaferdov^{1,2}, S. A. Moshkalev¹, M. A. Canesqui¹, Y. A. Danilov³
¹*Center for Semiconductor Components, State University of Campinas, Campinas, Sao Paulo, Brazil*
²*Lobachevsky State University of Nizhny Novgorod, Nizhny Novgorod, Russia*
³*Physico-Technical Research Institute of Nizhny Novgorod State University, Nizhny Novgorod, Russia*
23. NANOMECHANICAL PROPERTIES OF EPOXY COMPOSITES WITH CARBON FILLERS
E. Ivanov¹, R. Kotsilkova¹, A. Paddubskaya², A. Pliushch², E. Stefanutti³, A. Cataldo³, A. Celzard⁴, V. Fierro⁴
¹*Open Laboratory of Experimental Mechanics, Institute of Mechanics, Bulgarian Academy of Sciences, Sofia, Bulgaria*
²*Institute of Nuclear Problems of Belarus State University, Minsk, Belarus*
³*INFN-Laboratori Nazionali di Frascati, Frascati, Italy*
⁴*IJL – UMR CNRS, ENSTIB, Épinal, France*
24. HIGHLY ORDERED TiO_2 NANOTUBES FILLED BY HYDROXYAPATITE NANOPARTICLES FOR BIOMEDICAL APPLICATIONS
S. A. Ulasevich¹, S. K. Poznyak², E. V. Skorb³, A. I. Kulak¹
¹*Institute of General and Inorganic Chemistry NASB, Minsk, Belarus*
²*Research Institute for Physical Chemical Problems, Belarusian State University, Minsk, Belarus*
³*Chemistry Department, Belarusian State University, Minsk, Belarus*
25. MESOPOROUS INDIUM OXIDE FILMS SENSITIZED WITH CADMIUM SULPHIDE FOR SOLAR CELLS APPLICATION
M. V. Malashchonak¹, E. A. Streltsov¹, S. K. Poznyak², A. V. Mazanik³, A. K. Fedotov³
¹*Chemistry Department, Belarusian State University, Minsk, Belarus*
²*Research Institute for Physical Chemical Problems, Belarusian State University, Minsk, Belarus*
³*Physical Department, Belarusian State University, Minsk, Belarus*

26. TiO₂:MoO₃ NANOCOMPOSITE MATERIALS: INTERPLAY OF GAS-SENSING PROPERTIES AND STRUCTURAL FEATURES
N. Boboriko, D. Mychko
Chemistry Department, Belarusian State University, Minsk, Belarus
27. REDUCTION OF PLASMON-POLARITON PHASE VELOCITY IN A DOUBLE-LAYER GRAPHENE
V. Saroka
Research Institute for Nuclear Problems, Belarusian State University, Minsk, Belarus
28. FORMATION OF MEMBRANE LAYERS BY ROLL-TO-ROLL TECHNOLOGY
I. V. Paribok¹, G. K. Zhavnerko¹, V. E. Agabekov¹, N. A. Kurilenok², V. V. Chikunov², S. A. Chizhik²
¹*Institute of Chemistry of New Materials NASB, Minsk, Belarus*
²*A. V. Lykov Institute of Heat and Mass Transfer NASB, Minsk, Belarus*
29. MECHANICAL PROPERTIES OF COMPOSITE MONOLAYERS OF TRIACONTANOIC ACID WITH MOLYBDENUM DISULFIDE AND SILICON DIOXIDE
A. E. Salamianski, V. E. Agabekov
Institute of Chemistry of New Materials NASB, Minsk, Belarus
30. NANO-SIZED SPHERICAL CLUSTERS OF TANTALUM SILICIDE FORMED BY COMPRESSION PLASMA FLOW
A. H. Sari¹, V. M. Astashynski¹, A. M. Kuzmitski¹, Yu. A. Petukhou², V. V. Uglov³
¹*B. I. Stepanov Institute of Physics, NASB, Minsk, Belarus*
²*Belarusian State University of Informatics and Radioelectronics, Minsk, Belarus*
³*Belarusian State University, Minsk, Belarus*
31. DISTRIBUTION OF IMPLANTED XENON IN NANOCRYSTALLINE Ti-Zr-N COATINGS
V. V. Uglov¹, S. V. Zlotski¹, I. A. Saladukhin¹, A. Y. Rovbut¹, S. S. Leshkevich¹, G. Abadias²
¹*Department of Solid State Physics, Belarusian State University, Minsk, Belarus*
²*Institut P', Département Physique et Mécanique des Matériaux, Université de Poitiers-CNRS-ENSMA, SP2MI, Chasseneuil Futuroscope, France*
32. PECULIARITIES OF MANIFESTATION OF SPIN-DEPENDENT EFFECTS IN THE FERROMAGNETIC QUANTUM CONFINED GaAs STRUCTURES
A. Kudrin, M. Dorokhin, O. Vikhrova, Yu. Danilov, I. Kalent'eva
University of Nizhny Novgorod, Nizhny Novgorod, Russia
33. IONIC LIQUID CATALYZED ELECTROLYTE FOR ELECTROCHEMICAL POLYANILINE SUPERCAPACITORS
A. I. Inamdar¹, Hyunsik Im¹, Woong Jung¹, Hyungsang Kim¹, Byungchul Kim², Kook-Hyun Yu², Jin-Sang Kim³, Sung-Min Hwang⁴
¹*Department of Physics and Semiconductor Science, Dongguk University, Seoul, Korea*
²*Department of Chemistry, Dongguk University, Seoul, Korea*
³*Electronic Materials Research Center, Korea Institute of Science and Technology, Seoul, Korea*
⁴*Korea Electronics Technology Institute (KETI), Gyeonggi-do, Korea*
34. EFFECT OF LASER PULSE ENERGY ON THE CHARACTERISTICS OF SILVER NANOPARTICLES PRODUCED BY LASER ABLATION
S. Tajmir, D. Dorrnian, F. Khazanehfar
Laser Lab., Plasma Physics Research Center, Science and Research Branch, Islamic Azad University, Tehran, Iran

35. SUPERCRITICAL STATES OF SUPERCONDUCTIVITY IN THE SUPERCONDUCTOR/
FERROMAGNET MULTILAYERED NANOSTRUCTURES
V. N. Kushnir¹, C. Cirillo², C. Attanasio²
¹Belarusian State University of Informatics and Radioelectronics, Minsk, Belarus
²CNR/INFN Laboratorio Regionale SuperMat and Dipartimento di Fisica "E.R. Caianiello"
Università degli Studi di Salerno, Baronissi (Sa), Italy
36. THE EFFECT OF SILICON NANOCLUSTERS WITH ACTIVE SURFACE ON POINT
MUTATIONS OF DNA: QUANTUM CHEMICAL SIMULATION
J. Guskova¹, V. Gusakov²
¹EPAM Systems, Kuprevicha 1, 220141 Minsk, Belarus
²SSPA "Scientific and Practical Materials Research Centre NASB", Minsk, Belarus
37. MORPHOLOGY EFFECT ON THE ORIENTATION-SENSITIVE PHOTOVOLTAIC
SIGNAL IN NANOGRAPHITE FILMS
V. M. Styapshin¹, G. M. Mikheev¹, R. G. Zonov¹, A. N. Obratsov²
¹Institute of Mechanics UB RAS, Izhevsk, Russia
²Department of Physics, Moscow State University, Moscow, Russia
38. PREPARATION OF BaHfO₃:Ce³⁺ FINE POWDERS BY CO-PRECIPIATION METHOD
E. V. Tretyak, A. V. Antanovich
Research Institute for Physical Chemical Problems, Belarusian State University, Minsk,
Belarus
39. NOVEL SILVER NANOSTRUCTURES FOR SURFACE ENHANCED RAMAN
SPECTROSCOPY
V. A. Sivakov¹, S. Zierbock¹, D. Cialla¹, A. Bochmann², A. V. Petrov³, E. Yu. Kaniukov³,
S. E. Demyanov³, C. Trautmann⁴
¹Institute of Photonic Technology, Jena, Germany
²Ernst Abbe Fachhochschule, Jena, Germany
³SSPA "Scientific and Practical Materials Research Center NASB", Minsk, Belarus
⁴Gesellschaft für Schwerionenforschung (GSI), Darmstadt, Germany
40. SURFACE PLASMON RESONANCE OF ABSORPTION AT DENSELY PACKED
PLASMONIC NANOCOMPOSITES
A. N. Ponyavina, E. E. Tselesh, A. D. Zamkovets
B. I. Stepanov Institute of Physics NASB, Minsk, Belarus
41. INCORPORATION OF Ni NANOFILAMENT INSIDE CARBON NANOTUBES: DFT
CALCULATIONS
S. Piskunov¹, J. Kazerovskis¹, Yu. F. Zhukovskii¹, P. N. D'yachkov², S. Bellucci³
¹Institute of Solid State Physics, University of Latvia, Riga, Latvia
²Kurnakov Institute of General and Inorganic Chemistry RAS, Moscow, Russia
³INFN-Laboratori Nazionali di Frascati, Frascati, Italy
42. DOPED AND UNDOPED ZINC OXIDE NANOSTRUCTURES ON SILICON WAFERS
E. Chubenko, V. Bondarenko
Belarusian State University of Informatics and Radioelectronics, Minsk, Belarus
43. INFLUENCE OF EXCITATION INDUCED DEPHASING ON LASING IN QUANTUM
DOT LASERS
O. Kh. Khasanov¹, G. A. Rusetsky¹, V. V. Samartsev²
¹SSPA "Scientific and Practical Materials Research Centre NASB", Minsk, Belarus
²Zavoisky Physical-Technical Institute, Kazan', Russia

44. SYNTHESIS AND RESONANCE ENERGY TRANSFER IN CONJUGATES OF LUMINESCENT CADMIUM SELENIDE QUANTUM DOTS AND CHLORIN $\epsilon 6$ MOLECULES
A. A. Fedosyuk, M. V. Artemyev
Research Institute for Physical Chemical Problems, Belarusian State University, Minsk, Belarus
45. ELECTRIC FIELD EFFECT ON OPTICAL ABSORPTION OF QUANTUM CONFINED CdSe NANOPATELETS
M. V. Artemyev¹, A. V. Prudnikau¹, M. V. Ermolenko², L. I. Gurinovich², S. V. Gaponenko²
¹*Research Institute for Physical Chemical Problems, Belarusian State University, Minsk, Belarus*
²*B. I. Stepanov Institute of Physics NASB, Minsk, Belarus*
46. FROM NANOVOIDS TO BLISTERS IN HYDROGENATED AMORPHOUS SILICON
C. Frigeri¹, L. Nasi¹, M. Serényi², N. Q. Khánh², Zs. Szekrényes³, K. Kamarás³, A. Csik⁴
¹*CNR-IMEM Institute, Parma, Italy*
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47. TEMPLATED NANOORDERED SnS LAYER STRUCTURES FOR SOLAR CELLS
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48. MAGNETIC PROPERTIES OF Ni NANOWIRES GROWN IN MESOPOROUS SILICON TEMPLATES
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49. NOVEL BIMETALLIC PLASMONIC NANOVOIDS FOR SERS
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50. MAGNETIC PROPERTIES OF Co/Si/Co THIN-FILM SYSTEMS
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51. TUNNELING CURRENT BETWEEN GRAPHENE LAYERS
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52. INDUCTON: SOLITON-LIKE MOTION OF ONE ELECTRON IN ONE-DIMENSIONAL WIRE WITH INDUCTANCE OF ENVIRONMENT
N. A. Poklonski, A. T. Vlassov, S. A. Vyrko, E. F. Kislyakov, S. V. Ratkevich, A. I. Siahlo
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53. EFFECT OF HIGH PRESSURE SINTERING TEMPERATURE ON THE PROPERTIES OF MICRO- AND NANOCRYSTALLINE MATERIALS BASED ON SiC
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54. INFLUENCE OF THE MORPHOLOGY OF POROUS ANODIC ALUMINA FILMS ON PHOTOCATALYTIC ACTIVITY OF TITANIA SOL-GEL DERIVED INSIDE THEM
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55. QUANTUM-CHEMISTRY PROJECTING OF THE RADIO-NUCLIDE CARBORANE AND FULLERENE NANO-CLUSTER AGENTS FOR ONCOLOGICAL DIAGNOSTICS AND THERAPY
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56. NEW BIOACTIVE COMPOSITE NANOMATERIALS BASED ON FULLERENE DERIVATIVES
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57. HYDROGENATION OF CARBON NANOTUBES
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58. Effect of van der Waals interactions on dynamical properties of carbon nanotube arrays
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59. OPTICAL PROPERTIES OF POLYMER DISPERSED LIQUID CRYSTALS, CONTAINING DROPLETS WITH NANOSIZED SURFACTANT SHELL
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60. THE EFFECT OF MAGNETIC FIELD ON IMPACT IONIZATION IN SEMICONDUCTORS
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61. SURFACE PROPERTIES OF POLY(ϵ -CAPROLACTONE)/GRAPHITE OXIDE COMPOSITE
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62. ELASTIC ENERGY RELAXATION AND CRITICAL THICKNESS FOR PLASTIC DEFORMATION IN CORE-SHELL InGaAs/GaAs NANOPILLARS
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63. PHYSICAL PROCESSES IN NITRIDE-BASED LIGHT EMITTING NANOSTRUCTURE IN A WIDE RANGE OF TEMPERATURES AND CURRENTS
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64. ELECTRONIC AND OPTICAL PROPERTIES OF TWO-DIMENSIONAL MoS₂, WS₂, and Mo_{0.5}W_{0.5}S₂ FROM FIRST-PRINCIPLES
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65. SIMULATION OF MAGNETIC RESONANCE IN AN ARRAY OF NANOPARTICLES
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66. EXTRAORDINARY TRANSMISSION OF THIN METAL FILMS DOPED WITH DENSELY-PACKED DIELECTRIC NANOSPHERES
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67. FAST LONG-WAVELENGTH LASER-INDUCED BLEACHING OF SILVER NANOCOLLOIDS CONTAINING THE COMPLEXONS OF CARBOXYALKYLATED AMINES FAMILY
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68. LOCAL POLARIZATION IN POLYMER NANOCOMPOSITES WITH DIFFERENT CRYSTALLINE FERROELECTRIC INCLUSIONS
M. V. Silibin¹, S. A. Gavrilov¹, A. V. Solnyshkin¹, D. A. Kiselev², M. D. Malinkovich², Yu. N. Parkhomenko², M. L. Zheludkevich³, V. V. Shvartsman⁴, D. C. Lupascu⁴
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69. CHARGE ACCUMULATION AND EDGE STATE TRANSPORT IN GRAPHENE NANORIBBONS
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70. A SIMULATION OF THE CLUSTER STRUCTURES IN Ge-Se VITREOUS CHALCOGENIDE SEMICONDUCTORS
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71. JOULE HEATING OF ALUMINA BARRIER LAYER DURING ANODIZATION OF ALUMINUM
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72. END-TO-END WELDING OF IRON FILLED CARBON NANOTUBES
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73. IMPROVING EFFICIENCY OF LAYER-BY-LAYER COATING ON NANOSIZED PARTICLES WITH NON-WASHING ASSEMBLY TECHNIQUE
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74. ADSORPTION OF AN ORGANIC MOLECULE ON A CORRUGATED BN/Rh(111) "NANOMESH": ATOMISTIC SIMULATION USING DENSITY FUNCTIONAL THEORY
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75. 5-MERCAPTOTETRAZOLE-1-ACETIC ACID AS A NOVEL CAPPING LIGAND FOR STABILIZATION OF METAL NANOPARTICLES IN WATER
M. N. Nichick, S. V. Voitekhovich, V. E. Matulis, D. N. Komsa, A. I. Lesnikovich, O. A. Ivashkevich
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76. IRON-PALLADIUM COMPOSITE NANOPARTICLES
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77. NANOCRYSTALLINE MgZn FERRITE OBTAINED BY SPRAY PYROLYSIS
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78. THE EFFECT OF ELECTRON BEAM ON PHASE FORMATION IN NANOMATERIALS
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79. DOUBLE-WALLED TITANIA NANOTUBES
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80. TECHNOLOGICAL APPROACH FOR BARRIER LAYER REMOVAL OF NANOSTRUCTURED ANODIC ALUMINA
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81. NANOPOROUS ALUMINA MEMBRANE STRUCTURES FOR RELATIVE HUMIDITY SENSING ELEMENTS
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82. MULTILAYER STRUCTURE OF DENSE ANODIC ALUMINA FILMS
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83. FORMATION OF NANOSTRUCTURED SILICON BY MAGNETRON SPUTTERING OF AN Al+Si COMPOSITE TARGET
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84. LASER INDUCED MODIFICATION OF NANOPARTICLES IN SOLUTIONS
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85. CORRELATION BETWEEN THE SIZE OF THREE DIMENSIONAL NANOCCLUSERS AND C-V CHARACTERISTICS
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86. AN EFFICIENT MICROELECTROMECHANICAL SYSTEM BASED ON COMBUSTION OF NANOPOROUS SILICON
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87. OXYGEN SENSING OF NANOCOMPOSITES CONSISTING OF PEDOT:PSS AND FUNCTIONALIZED GOLD NANOPARTICLES
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88. MICROWAVE ABSORPTION IN PYROLYTIC CARBON NANOFILMS: EXPERIMENT AND MODELLING
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89. MODELING OF NITRIDE NANOWIRES GROWTH. SCALING GROWTH OF GaN NANOWIRES
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90. FORMATION AND POROUS ANODIZATION OF INTERMETALLIC TiAl₂ COMPOUND
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91. LOW-PRESSURE NO-FLOW CVD SYNTHESIS OF GRAPHENE FILMS
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92. THE FEATURES OF CARBON NANOTUBES GROWN IN HIGH ISOSTATIC PRESSURE APPARATUS FROM THE NANODIAMOND POWDER
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93. SILVER NANOPARTICLES SYNTHESIZED BY LASER ABLATION IN LIQUIDS AND APPLICATION FOR SURFACE-ENHANCED RAMAN SCATTERING
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94. ELECTROKINETIC PROPERTIES OF ALUMINUM NANOPOWDERS IN CITRIC ACID SOLUTION
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95. POWDERED HEXAGONAL BORON NITRIDE REDUCING NANOSCALE WEAR
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96. MAGNETIC PROPERTIES OF Sr₂FeMoO₆ NANO- AND MICRO- POWDERS PRODUCED BY DIFFERENT METHODS
E. A. Trusova¹, K. V. Vokhmintsev¹, V. P. Korneev¹, N. A. Kalanda², S. E. Demyanov², A. V. Petrov², L. V. Kovalev², G. G. Gorokh³
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97. ELECTROLUMINESCENCE OF (Pb_{0.91}La_{0.09})(Zr_{0.65}Ti_{0.35})O₃ RELAXOR CERAMICS
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98. MODEL OF β-FeSi₂ NANOCRYSTALLITE "EMERSION" PROCESS DURING SILICON LAYER OVERGROWTH
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99. NANOSTRUCTURED BIOPOLYMER SYSTEMS FOR OPTICAL SENSING APPLICATIONS
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100. PLASMONIC ABSORPTION ENHANCEMENT IN SILICON WIRE ARRAYS FOR OPTOELECTRONIC DEVICE APPLICATIONS
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101. NANOPOROUS ALUMINA SUBSTRATES FOR LOW-POWER CHEMICAL SENSORS
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102. A NOVEL APPROACH FOR SYNTHESIS OF COLLOIDAL CuInSe₂ NANOPARTICLES BY ELECTRICAL SPARK DISCHARGE
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103. QUANTUM HALL EFFECT IN SEMICONDUCTOR NANOSTRUCTURES AT FINITE TEMPERATURES: MODELLING OF ELECTRON-PHONON INTERACTION
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104. FABRICATION AND STUDY OF ELECTRO- AND PHOTOLUMINESCENCE OF ALUMINIUM/NANOPOROUS SILICON STRUCTURES
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105. LIGHT EMISSION MECHANISM IN COMBINED Al-NANOPOROUS Si SCHOTTKY STRUCTURES
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106. FORMATION AND PHYSICAL CHARACTERIZATION OF NANOPOROUS Si WITH IMPROVED OPTICAL FEATURES PREPARED BY METAL-ASSISTED CHEMICAL ETCHING
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107. SPECIFIC DNA DETECTION USING LIGHT ASSISTED BIO-FUNCTIONALIZED RING RESONATORS
J. Garcia-Ruperez, J. Garcia Castello, J. Escorihuela, M. J. Bañuls, A. Maquieira
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108. SYNTHESIS OF ZnS:Ni NANOCRYSTALS (NCs) USING A THERMOCHEMICAL APPROACH AND INVESTIGATION OF THE PHOTOLUMINESCENCE PROPERTIES
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109. AN EFFECT OF ANNEALING ON SHIELDING PROPERTIES OF SHUNGITE
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