NOTES FOR AUTHORS OF ORAL PRESENTATIONS

All speakers have to register for the conference. Please note that your paper will not be published without registration for the conference and the presentation of the poster in its allotted session during the conference. The conference abstracts will be published on CD ROM.

1-Introduction
The guidelines intend to assist authors in preparing oral presentations at the International Conference on Modern Applications of Nanotechnology (IBCN12) 27-29 June 2012, Minsk, Belarus. English is the official language of IBCN12 Belarus. English should be used throughout your presentation including poster materials. No simultaneous interpretation services will be available. The papers have to be prepared and presented in ENGLISH, the official language of the Conference. As standard technical equipment a computer (PC) and beamer.

2-Information for oral presenters
For computer driven presentations please prepare a DVD, CD-ROM or a USB memory stick with your Microsoft PowerPoint presentation. Do not compress (eg.zip) or split your presentation on several media.

The software in use will be Microsoft Windows XP (Service Pack 3) and PowerPoint 2007 (downwards compatible, UK standard, save fonts used in your document). For video and audio files only “MPEG2” and “WAV” data format can be accepted. Your file should be saved as the respective number of your presentation (i.e. “1AP1_1.ppt” or “6BO7_4.ppt”). If your presentation uses digital video or audio files (*,mpg,* .wav) check that they are saved in the same directory as your PowerPoint-fit and adapt the link if needed.

You will not be able to use your own computer for presentations at the parallel sessions. The computers at the venue are equipped with Windows XP, Office 2007. Remember to test your presentation in a windows computer beforehand, to avoid unpleasant surprises!. An additional computer will be available at the presentations desk (Preview room) to check the correct functionality of your presentation prior to the session. Please label your DVD, CD-ROM or USB stick with your name and the number of your presentation as indicated in the program.

3-Opening Hours of Presenters’ Desk
Oral presentations are organized in oral sessions scheduled in specific lecture rooms given in the program together with the time of presentation of each contribution including discussion and change over. Opening Hours of Presenters’ Desk are as follows:

Wednesday, June 27, 2012 17-19
Thursday , June 28, 2012 9-11, 11.30-13.30, 15-17.20
Friday , June 29, 2012 9.30-10.50, 11.30-13.30

4-Other guidelines for Presenters
The computer driven presentations which will be used during your oral presentation must be checked, sorted and handed to the technician at the Presenters’ Desk at least two hours prior to the beginning of the session of your presentation. The presentation will then be transferred to the respective auditorium. No changes will be possible from 30 minutes before the beginning of a session.

Speakers and Chairperson will meet in the auditorium 20 minutes prior to their session to be briefed and to get acquainted with the audiovisual equipment ect. And resolve any problems.

Speakers in Plenary Session will be allotted a time slot of 30 minutes in total (including questions).

Speakers in Oral Sessions will be allotted a time slot of 20 minutes in total (including questions). Please note that the Chairpersons of your session will have strict instructions to
enforce this time limit, so time your lecture carefully, considering approx. **5 minutes for questions.**

Kindly note that advertising material is not allowed to be presented in this scientific Conference. Your presentation may include a maximum of two slides containing information about your organization.

Finally we would like to ask you to help us in preparing a Conference Summary which the Topic Organizers together with the Technical Program Chairman compile at the end of the conference. Therefore we would appreciate to have some highlight material from your presentation. As it might well be that your presentation is considered as such a highlight, we would like to receive your well conceived conclusions out of your presentation file, or any highlight material (e.g. photo, graphs) worthwhile to be brought to the attention of the audience in the Closing Session.

**5-Lecture Room Equipment**

- Beamer;
- Notebook for the upload of presentations (USB Flash Drive, DVD, CD);
- VGA Panel to connect the personal notebook/MacBook with the beamer via a switch (incl. power supply)*;
- Kensington presenter to switch slides incl. laser pointer;
- Necklace speaker microphone;
- Wireless hand-held discussion microphones (larger rooms only).

We look forward to your presentation and to meeting you in Minsk.
NOTES FOR AUTHORS OF VISUAL (POSTER) PRESENTATION

Authors of posters have to register for the conference. Please note that your paper will not be published without registration for the conference and the presentation of the poster in its allotted session during the conference. The conference abstracts will be published on CD ROM.

1-Introduction
The guidelines intend to assist authors in preparing poster presentations at the International Conference on Modern Applications of Nanotechnology (IBCN12) 27-29 June 2012, Minsk, Belarus.
English is the official language of IBCN12 Belarus. English should be used throughout your presentation including poster materials. No simultaneous interpretation services will be available.

2-Information for poster presenters
When preparing the Poster, presenters should have in mind the objective of capturing the interest of attendees to the work that is being presented. The quality of the presentation stimulates the attention from the audience, and improves the overall satisfaction of the community attending the conference.

As visual presentation is a perfect medium for direct two-way communication with all interested delegates on specific topics, objects or programs.
Good design is essential if this important part of the conference is to be a success. Authors are therefore urged to follow closely these instructions together with the instructions for preparation of papers. The poster message should be clear and understandable without oral explanation.
Further, we would like to call the attention of poster presenters to the following items:

- The posters and papers have to be presented in ENGLISH, the official language of the conference.
- Your visual presentation will bear on official number as indicated in the program. This number will also appear on the panel, which has been reserved for you poster presentation.
- The maximum display are on your panel is 0.6 m wide and 1.0 m high. This allows for posters up to A0 format. The boards will be arranged in topic groups and numbered according to the conference program. Double faced adhesive tape will be available to attach your poster on the poster panels.
- The visual presentation has to be headed by the title and the author(s) name(s). A good visual presentation concentrates on the outstanding features of a project, easily grasped by the viewer, with a minimum of text (less than 50% of the total poster area) and readable at a distance of approx. 2 m (use letters at least 10 mm high).
- An envelope will be available on each poster panel to provide space for communication with other participants (exchange of business cards).

3-Set Up Your Poster]
You will have the unique opportunity that all visual poster presentation can be presented on all days from Thursday, June 28 through Friday, Jun 29 in the poster are, which is fully integrated in the conference are. Thus your work and results will enjoy a very high visibility.
4-Schedule of interactive visual presentations
Authors of visual presentations are requested to be present at their posters at least during the times indicated below, in the program booklet and on our web site. This will give all conference delegates the opportunity for questions and discussion, thus fostering information exchange, which is the major objective of this event.

5-Best Poster Awards
Academic Secretariat prepares awards for best posters. International referees will review all posters on display and recommends candidates. The awards will be announced at the closing event on the last day of the conference.

We look forward to your presentation and to meeting you in Minsk.
Session Timing

Wednesday, June 27, 2012

14.00-16.00 - Registration
16.00-16.45 - Welcome Speakers

16.45-17.15 Coffee Break

17.15-19.30 - Keynote Speakers

1. Prof. Sergey V. Gaponenko
   B.I. Stepanov Institute of Physics, National Academy of Sciences of Belarus, Minsk, Belarus
   *Light—Matter Interaction in Nanostructures: From Basic Science to Novel Materials and Devices*

2. Prof. Sergey.A. Chizhik
   A.V. Luikov Heat and Mass Transfer Institute of the National Academy of Sciences of Belarus, Minsk, Belarus
   *Nanomechanics and Nanodiagnostic methods based on Scanning Probe microscopy*

3. Prof. Ali Iranmanesh
   Department of Mathematics, Tarbiat Modares University, Tehran, Iran
   *Some Topological Descriptors of Some Nanostructures*

4. Prof. Nima Taghavinia - Physics Department, Sharif University of Technology, Tehran, Iran
   *Efficiency enhancement strategies for dye solar cells*

5. Prof. Erhan Piskin
   Head of Bioengineering R&D Center-Biyomedtek at Hacettepe University, Ankara, Turkey.
   *Gold Nanoparticles: Synthesis and Selected Medical Applications*

19.15- Free evening
Thursday, June 28, 2012

08.30-9.00 - Registration

09.00-11.00

Section «Nanocomposites»

1. B. Ghanavati\textsuperscript{1,2}, V.A. Kukareko\textsuperscript{1} and A.G. Kononov\textsuperscript{1}
\textsuperscript{1} Joint Institute of Mechanical Engineering, Minsk, Belarus
\textsuperscript{2} Islamic Azad University, Mashahr Branch, Mashahr, Iran

\textit{Effect of ion-beam nitriding on the structure and properties of chromium coatings containing nanosized diamond particles}

2. P.Kuzhir\textsuperscript{1}, A.Paddubskaya\textsuperscript{1}, A. Plyushch\textsuperscript{1}, S. Maksimenko\textsuperscript{1}, S. Bellucci\textsuperscript{2}, L. Coderoni\textsuperscript{2}, F. Micciulla\textsuperscript{2}, V. Fierro\textsuperscript{3} and A. Celzard\textsuperscript{3}
\textsuperscript{1}Research Institute for Nuclear problems of Belarusian State University (INP BSU), Belarus
\textsuperscript{1,2}INFN-Laboratori Nazionali di Frascati, Via E. Fermi 40, 00044, Frascati, Italy
\textsuperscript{3}IJL – UMR CNRS 7198, Université de Lorraine - ENSTIB, France

\textit{Carbon – filled epoxy composites in microwaves}

Materials and Energy Research Centre, Meshkindasht, Iran

\textit{Binary Nanometal Alloy Layer Formation by Laser Induced Dual Plasmas}

Institute General and Inorganic Chemistry of NAS of Belarus, Minsk, Belarus

\textit{Refractory Porous Ceramics with Nanostructured Components}

5. Monireh Ganjali, Mansoureh Ganjali, M. Ganji, M. R. Rahimipour
Materials and Energy Research Center (MERC), Tehran, Iran

\textit{Laser Cladding of Fe – Tic Nano composite on Middle Carbon Steel Substrate}

6. Ulyanova T.M.\textsuperscript{1}, Vitiaz P.A.\textsuperscript{2},Krutko N.P.\textsuperscript{1}, Titova L.V.\textsuperscript{1}, Shevchonok A.A.\textsuperscript{3},
Luchenok A.R.\textsuperscript{3}
\textsuperscript{1}Institute of the General and Inorganic Chemistry of NAS of Belarus, Minsk, Belarus
\textsuperscript{2}Presidium of NAS of Belarus, Minsk, Belarus
\textsuperscript{3}Institute of Powder Metallurgy of NAS of Belarus, Minsk, Belarus

\textit{Nanostructured ZTA and ATZ Fibrous Powders and Ceramic Composites Based on Them}

09.00-11.00

Section «Nanoparticles (synthesis and characterization)»

1. B. Shirkavand Hadavand\textsuperscript{1}, F. Najafi\textsuperscript{1}, A. Mirshokrai\textsuperscript{2}, Z. Oskoui Tabrizi\textsuperscript{2}
\textsuperscript{1}Department of Resin and Additives, Institute for Color Science and Technology, Tehran, Iran;
\textsuperscript{2}Department of Organic Chemistry, Tehran Payamenoor University, Tehran, Iran

\textit{UV-Curable Epoxy Acrylate/ Fe$_3$O$_4$ Nano Hybrid as a Smart Coatings: Synthesis, Characterization and Properties}
2. N.A. Poklonski¹, N.I. Gorbachuk¹, V.K. Ksenevich¹, E.A. Shalaeva¹, V.E. Obukhov², E.A. Tyavlovskaya²
¹Belarusian State University, Minsk, Belarus
²SEC “Plasmoteg” of PTI of NAS of Belarus, Minsk, Belarus
*Electric conduction of diamond-like carbon films modified with argon ions*

3. B.Akbarian, F.Rashidi
Department of Chemical Engineering, Amirkabir University of Technology, Hafez Ave, Tehran, Iran
*Organo Modified Nano Polysiloxane Role in the Enhancement of Water/Crude Oil Emulsion Separation*

4. V. Goncharov, G. Gusakov, M. Puzyrev
Institute of the Applied Physics Problems, Minsk, Belarus
*Characteristics of the nanostructured carbon coats deposed by laser-plasma method*

5. M. Mirzaee, B. Bahramian, A. Amoli, M. Mirebrahimi
Department of Chemistry, Shahrood University of Technology, Iran
*Catalytic Application of Molybdenum Hexa-Carbonyl Supported on Functionalized Nano-Boehmite*

6. A. Klushko¹, E. Chubeno¹, S. Futko², V. Bondarenko¹, K. Dobrego², L. Dolgyi¹
¹Department of Micro- and Nanoelectronics, Belarusian State University of Informatics and Radioelectronics, Minsk, Belarus
²Heat and Mass Transfer Institute, National Academy of Sciences of Belarus, Minsk, Belarus
*Matrix micro-thrusters for nanosatellites*

**11.00-11.30 Coffee Break**

**11.30-13.30**

**Section «Nanocomposites»**

1. Ghazban Zadeh E.
Belarusian National Technical University Minsk, Belarus
*Characteristics and Applications Nanocomposite Tungsten Carbides-Cobalt (WC-10% Co) in Mechanical Industry*

2. O.V. Goncharova
B. I. Stepanov Institute of Physics, National Academy of Sciences, Minsk, Belarus
*The Components for Producing Detectors, Markers, Transformers of Radiation Using Films with Nano-Sized Elements*

3. S.N. Terekhov¹, A.Yu. Panarin¹, I.A. Khodasevich¹, G.G. Gorokh² and V.P. Bondarenko²
¹B.I. Stepanov Institute of Physics of NASB, Minsk, Belarus
²Micro- and Nanoelectronics Department of BSUIR, Minsk, Belarus
*Plasmonic Structures for Surface-Enhanced Raman Scattering Based on Silvered Porous Substrates*

4. M.H. Entezari, T. Soltani
Department of Chemistry, Ferdowsi University of Mashhad, Mashhad, Iran
*Sono-synthesis of Bismuth Ferrite Nanoparticles with High Photocatalytic Activity in Degradation of Rhodamine B under Solar Light Irradiation*
5. G.A. Rusetsky¹, O.Kh. Khasanov¹, N.N. Rubtsova²
¹SSPA “Scientific-Practical Material Research Centre of NAS of Belarus”, Minsk, Belarus
²Institute for Semiconductor Physics Siberian Branch of RAS, Lavrent’eva Ave., Novosibirsk 630090, Russia

Nonstationary optical processes in semiconductor nanostructures

6. V.S. Urbanovich
SSPA “Scientific-Practical Material Research Centre of NAS of Belarus”, Minsk, Belarus

High Pressure Sintering as Advanced Technology of Obtaining of Nanostructured Ceramics Based on High-Melting Point Compounds

11.30-13.30

Section «Nanoparticles (synthesis and characterization)»

1. Gh. Nasiri-Khuzani¹, M. A. Asoodār¹, M. Rahnama¹, H. Sharifnasab²
¹Department of Agricultural Engineering, University of Agriculture and Natural Resources Ramin, Khouzestan Iran; ²Scientific Board of Agricultural Engineering Research Institute, Karaj, Alborz Iran

Tribological Performance of Nano-Diamond as Oil additives used in Massey Ferguson model 399 tractor Engines

2. A. Moosavi, A. Moghimi
Dept. Mech. Eng., Sharif University of Technology, Tehran, Iran

Numerical Study of Pinning of Contact Line on Nanometric Steps

3. S.S. Grabchikov¹, A.V. Trukhanov¹, Ali Bakouie², V.I. Gnedih³, O.E. Kozlov³, V.A. Kotcov³, P.P. Moiseev³ and A.V. Viktorov³
¹SSPA “Scientific-Practical Material Research Centre of NAS of Belarus”, Minsk, Belarus
²Tarbiat Modarres University, Iran
³Space Research Institute, Russian Academy of Sciences, Moscow, Russia

Application of multilayered film electromagnetic screens in space equipment

Faculty of Mathematical Sciences, University of Kashan, Kashan, Iran

The Eccentricity Sequence of Some Carbon Nanotubes

5. R. Ashrafi
Department of Nanocomputing, Institute of Nanoscience and Nanotechnology, University of Kashan, Iran

Symmetry of Fullerenes and Nanotubes

6. A.A. Shokri¹, Sh. Nikzad²
¹Department of Physics, Payame Noor University (PNU), 19395-3697, Tehran, Iran
²Department of Physics, Islamic Azad University, Tehran, Iran
³Computational Physical Sciences Research Laboratory, Department of Nano-Science, Institute for Research in Fundamental Science (IPM), P.O. Box 19395-5531, Tehran, Iran

Effect of Opened and Closed End CNT Leads on Electrical Transport throughC₆₀ Molecule

13.30-15.00 Lunch
15.00-17.20

Section «Nanocomposites»

1. H. Khorasanizadeh, J. Amani, M. Hemmat
Dept. of Mech. Eng., University of Kashan, Kashan, Iran
Numerical Study of Cu-water Nanofluid Mixed Convection and Entropy Generation in an Inclined Square Cavity with Inlet and Outlet Ports

2. F.F. Komarov¹, V.V. Pilko¹, A.D. Pogrebnyak²
¹Institute of the Applied Physics Problems, Minsk, Belarus
²Sumy University, Sumy, Ukraine
Formation of perspective nanocomposite coatings by magnetron deposition

3. Chekan N.M., Bahayeu S.I. Akula I.P., Parshuto A.A.
PLASMOTEG SEC of Physical-Technical Institute of the NAS of Belarus, Minsk, Belarus
Composite nanostructured materials based on alumina ceramic and diamond-like carbon

4. M.A. Britch, K.V. Dobrego and L.I. Krasovskaya
Heat and Mass Transfer Institute, National Academy of Sciences of Belarus, Minsk, Belarus
Modelling of the CNT-polymer nanocomposites

5. N. Refahati¹, A.V. Mudry², A. Karotki³, M.V. Yakushev⁴
¹Department of Mechanical Engineering, Damavand Branch, Islamic Azad University, Damavand, Tehran, Iran
²Scientific-Practical Material Research Centre of the National Academy of Science of Belarus, 220072, Minsk, P.Brovki 19, Belarus
³Department of Physics, Strathclyde University, Glasgow, G4 0NG, UK
Characterisation of ZnO and In2O3:Sn-based nanoscale thin film on polyimide substrates

6. H. Bandarenka, K. Artsemyeva, V. Bondarenko
Department of Micro- and Nanoelectronics, Belarusian State University of Informatics and Radioelectronics, Minsk, Belarus
Copper-porous silicon nanocomposites: formation, properties and applications

7. S. D. Latushkina¹, D. V. Kuis², P. V. Rudak², O. Y. Piskunova², O. I. Gapanovich¹, A. G. Zhizhchenko¹
¹Physical Technical Institute, the Academy of Sciences, the Republic of Belarus, Minsk, Belarus
²The Belarusian State Technological University, Minsk, Belarus
Generation of protective nanostructure vacuum coatings by using separated plasma flows

15.00-17.20

Section «Nanoboitechology»

1. E. Alipour¹, H. Ghouirchian¹ and S. M. Boutorabi²
¹Laboratory of Microanalysis, Institute of Biochemistry & Biophysics, University of Tehran, Tehran, Iran;
²Pishtazteb Medical Company, Tehran, Iran
Gold Nanoparticle Based Capacitive Immunosensor for Detection of Hepatitis B Surface Antigen

2. M. Salouti¹, A. Ahangari², Z. Heidari¹, F. Saghatchi³
¹Biology Research Center, Zanjan Branch, Islamic Azad University, Zanjan, Iran;
2Department of Microbiology, Faculty of Sciences, Zanjan Branch, Islamic Azad University, Zanjan, Iran;  
3Department of Radiology, Faculty of Paramedical and Health, Zanjan University of Medical Sciences, Zanjan, Iran  

GNPs-Gentamicin Conjugate: A Targeting Contrast Agent for X-ray Imaging of Infectious Foci

3. N. Farhadian  
Ferdowsi University of Mashhad, Iran  
Theoretical Study of the Transport Phenomena of Ibuprofen Chiral Molecules Inside Nanopores of Lysozyme Protein Crystal

4.  
1Tcherniaevskaya E.A., 1Saetchnikov V.A., 2Schweiger G., 2Ostendorf A., 1Saetchnikov A.V.  
1Belarusian State University, Minsk, Belarus  
2Ruhr-University Bochum, Germany  
Identification of biological agents and drug products on the basis of optical resonance of whispering gallery modes in dielectric microspheres

5. R. Mehrab1, A. A. Imani Fooladi2, N. Amir Mozafari3, MR. Nourani4  
1Department of Microbiology, Science and Research Branch, Islamic Azad University, Tehran, Iran;  
2Applied Microbiology, Research Center, Baqiyatallah University of Medical Science, Tehran, Iran;  
3Department of Microbiology, Tehran University of Medical Sciences, School of Medicine, Tehran, Iran;  
4Chemical Injury, Research Center (CIRC), Baqiyatallah University of Medical Sciences, Tehran, Iran  
Antibacterial Activity Of Nanosilver Colloidal Solution Against ESBL-Producing Pseudomonas Aeruginosa

6. M. R. Nourani1, A. A. Imani Fooladi2  
1Tissue Engineering Division, Baqiyatallah medical Sciences University, Tehran, Iran  
2Applied microbiology Research Center, Baqiyatallah medical Sciences University, Tehran, Iran  
Application of Nano-Bioglass in Bone Tissue Engineering

Department of Clinical Sciences, School of Veterinary Medicine, Shahrekord University, Shahrekord, Iran.  
Some Physiological Aspects of Nano Selenium Particles in Compare with Sodium Selenite

17.20-17.40 Coffee Break

18.30-21.30 Conference Dinner
09.30-10.50 Section « Nanomagnetism»

1. N.A. Poklonski, S.A. Vyrko, S.V. Ratkevich and E.F. Kislyakov
Belarusian State University, Minsk, Belarus
*Magnetic moments of star and ring conformations of C_{10} molecule*

2. A.V. Trukhanov, S.S. Grabchikov, S.A. Sharko and N.N. Mukhorov
1SSPA “Scientific-Practical Material Research Centre of NAS of Belarus”, Minsk, Belarus.
2B.I. Stepanov Institute of Physics, National Academy of Sciences of Belarus, Minsk, Belarus
*Magnetoresistive properties of Co/Cu and Ni/Cu multilayered nanowires*

3. M. M. Alavi Nigjeh
Department of Chemistry, Faculty of Science, Imam Khomeini International University, Qazvin, Iran
*Magnetic Polyurethane Rigid Foam Nanocomposites Synthesis and Characterization*

SSPA “Scientific-Practical Material Research Centre of NAS of Belarus”, Minsk, Belarus.
*Development and application new composite soft magnetic materials with nanoscale coatings*

09.30-10.50 Section « Nanosensors»

1. S. Nikmanesh, M. M. Doroodmand, M.H. Sheikh
1School of Electrical and Computer engineering, University of Shiraz, Shiraz, Iran
2Nanotechnology Research Institute, University of Shiraz, Shiraz, Iran
3Department of Chemistry, College of Sciences, Shiraz University, Shiraz 71454, Iran
*Fabrication of CH4 Sensor Using Inter-Digitated Electrode, Modified with Tungsten Carbide/Tin Oxide Core-Shell*

2. S.E. Demyanov, E.Yu. Kaniukov and A.V. Petrov
SSPA “Scientific-Practical Material Research Centre of NAS of Belarus”, Minsk, Belarus
*Nano- and Microelectronic Systems Based on Flexible Polymer Films with Swift Heavy Ion Tracks*

3. S.E. Demyanov, N.A. Kalanda and L.V. Kovalev
SSPA “Scientific-Practical Material Research Centre of NAS of Belarus”, Minsk, Belarus
*Devices based on Magnetic Tunnel Junctions of Sr_{2}FeMo_{6-d} Complex Oxides for Spintronic Applications*

4. S.E. Demyanov, E.Yu. Kaniukov and A.V. Petrov
SSPA “Scientific-Practical Material Research Centre of NAS of Belarus”, Minsk, Belarus
*Low-Temperature Magnetic Field Sensors Based on Si/SiO2/Metal Nanostructures*

10.50-11.30 Coffee Break
\textbf{11.30-13.30}

\textbf{Section « Nanophotonics»}

1. M.R. Khanlary\textsuperscript{1*}, A. Hajinorozi\textsuperscript{1}, S. Baghshahi\textsuperscript{2}
\textsuperscript{1}Physics Department, Imam Khomeini International University, Qazvin, Iran
\textsuperscript{2}Material Science Department, Imam Khomeini International University, Qazvin, Iran

\textit{Influence of dopant concentration on the characterization of sole-gel derived ZnO:Ce nanostructures}

2. S.F.Akhtarian far, A.Ramazani – Institute of Nanoscience and Nanotechnology, University of Kashan, Kashan, Iran

\textit{Effect of }$\text{Y}_2\text{O}_3$\textit{ Nanoparticles on Propagation of Ultrashort Pulse in Silica Optical Fibre Made by Solution Doping Technique}

3. E. V. Klyachkovskaya, S.V. Vaschenko, N.D. Strekal, and S.V. Gaponenko
B.I. Stepanov Institute of Physics, National Academy of Sciences of Belarus, Minsk, Belarus

\textit{Nanoplasmonic Enhancement of Raman Scattering from Inorganic Crystallites}

4. O. S. Kulakovich
B.I. Stepanov Institute of Physics, National Academy of Sciences of Belarus, Minsk, Belarus

\textit{Nanoengineering of colloidal structures for ultrasensitive spectral-analytical applications}

5. H.R. Zangeneh\textsuperscript{1}, M. Asadniafard Jahromi\textsuperscript{1}, F. Karimi Moghadam\textsuperscript{1,2}
\textsuperscript{1}Department of photonics, University of Kashan
\textsuperscript{2}Department of Physics, Malayer Branch, Islamic Azad University

\textit{Investigation of Photonic Crystal Slabs by FDTD Method}

6. M. Nikoufard\textsuperscript{1}, A. Mirzaei\textsuperscript{2}, M. Omidi Roozbahani\textsuperscript{2}
\textsuperscript{1}Department of Electrical Engineering, Faculty of Engineering, University of Kashan, Kashan, Iran
\textsuperscript{2}Department of Electrical Engineering, Faculty of Engineering, South Tehran Branch, Islamic Azad University, Tehran, Iran

\textit{Photonic Crystal-Based Polarization Splitter on InP substrate}

\textbf{11.30-13.30}

\textbf{Section « Nanosensors»}

1. A.V. Trukhanov\textsuperscript{1}, A.I. Stognij\textsuperscript{1}, S.V. Trukhanov\textsuperscript{1}, N.N. Novitskij\textsuperscript{1}, A.N. Vasiliev\textsuperscript{2} and V.A. Ketsko\textsuperscript{3}
\textsuperscript{1}SSPA “Scientific-Practical Material Research Centre of NAS of Belarus”, Minsk, Belarus.
\textsuperscript{2}Low temperatures physics and superconductivity department, MSU named after M.V. Lomonosov, Moscow, Russia
\textsuperscript{3}Kurnakov Institute of General and Inorganic Chemistry, Russian Academy of Sciences, Moscow, Russia

\textit{Structure, magnetic and magnetotransport properties of }$\text{Mg(Fe}_{0.8}\text{Ga}_{0.2})_2\text{O}_4$\textit{ thin films on Si substrates}

2. V.V. Khatko\textsuperscript{1}, G.G. Gorokh\textsuperscript{2}, I.A. Taratyn\textsuperscript{1,3} and Yu.M. Pleshkevskij\textsuperscript{1}
\textsuperscript{1}Belarussian National Technical University/Micro- and NanoEngineering Department, Minsk, Belarus
\textsuperscript{2}Belarus State University of Informatics and Radioelectronics/Research Laboratory of Nanotechnology, Minsk, Belarus
\textsuperscript{3}Minsk Research Institute of Radiomaterials/MicroMechanics Department, Minsk, Belarus

\textit{Low-Power Chemical Sensors Based on Nanoporous Anodic Alumina Substrates}
3. L.P. Grakovich, M.I. Rabetsky, D.A. Tulin and L.L. Vasiliev
Heat and Mass Transfer Institute, National Academy of Sciences of Belarus, Minsk, Belarus
*Heat pipe evaporations with nanoporous coating*

4. V. Labunov, B. Shulitski, A. Tymoshchyk, Y. Tamashevich
Belarus State University of Informatics and Radioelectronics, Minsk, Belarus
*Synthesis of aligned carbon nanotubes arrays for field emission application*

13.30-15.00 Lunch

**15.00-16.30 - Interactive Visual Presentations**

**16.30-17.15 - General discussion on closing the conference**
1. Development & Synthesis of Nickle–Nylon Smart Nanocomposites
Ma. Ganjali¹, Mo. Ganjali², A. Naimzad³
¹,²Materials and Energy Research Centre, Nanothechnology and Advanced Materials Department, Meshkindasht, Karaj, Iran
³Tarbiat Modares University, Faculty of Engineering, Jalal Ale Ahmad Highway, Tehran, Iran

2. A Nano-scale Structural Study of Hydrophobic Nanostructured Adsorbents
A. Khosravi¹, A. Golchoobi², M. Moshtaghi³, M. Safdari⁴
¹School of Chemical Engineering, College of Engineering, University of Tehran, Tehran, Iran
²Chemical Engineering Department, Tarbiat Modares University, Tehran, Iran
³Chemical Engineering Department, Islamic Azad University of North Tehran, Tehran, Iran
⁴Chemical Engineering Department, Islamic Azad University of Dashtestan, Borazjan, Iran

3. Production, Evaluation and Usage of Zero-Gel Nano-Composite Cu-SiO₂ by Chemical Methods
A. Sattari, N. Shadanpoor, P. Ashtari
Agriculture, Medicine and Industry Research School, Karaj-Iran

4. Synthesize of ZnO Nanoparticles via a Sonochemical Method
Monireh Ganjali¹, Mansoureh Ganjali¹, A. Hassanjani¹, S. M. Kazemzadeh¹, M. R. Vaezi¹
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5. Preparation of Iron Oxide Ionic Ferrofluid and Investigation Its Properties
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6. Preparation of Polypropylene Nano Composite Containing TiO₂ and Zno and Evaluation of Antibacterial Activity Against Escherichia Coli
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7. Synthesis of TiO₂-Polyaniline Nanocomposite in Core-Shell Structure and Investigation of its Photocatalytic Activity
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Polymer Composite Research Laboratory, Department of Applied Chemistry, Faculty of Chemistry, University of Tabriz, Tabriz, Iran

8. Determination of Trichloroacetic Acid (TCAA) Using CdO Nanoparticles Modified Carbon Paste Electrode
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²Research Laboratory of Inorganic Materials Synthesis, Department of Chemistry, Iran University of Science and Technology, Tehran, Iran
9. Experimental investigation of natural convection heat transfer of CuO/Turbine oil nanofluids in square enclosure
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10. Polyurethane Rigid Foams Nanocomposites Based on Surface Modified Nanosilica
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11. Synthesis and Characterization of UV-Curable Epoxy Acrylate/ZnO Nano Hybrid as an Anti Corrosion Coatings
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12. Effect of nano ZnO on Thermal and Antibacterial Properties of Polyester Powder Coatings
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13. The Effect of Nano Al₂O₃ on Properties of Metallic Bonding Powder Coatings
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15. The Wiener Index of Nanocones
Z. Mohammad-Abadi, A. R. Ashrafi
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16. InP-Based Photonic Crystal Electro-Optic Modulator
M. Nikoufard¹, S. Amadeh²
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²Department of Electrical Engineering, Faculty of Engineering, South Tehran Branch, Islamic Azad University, Tehran, Iran

17. Hydrogen Sensor Based on Carbon Nano-tube Fortified by Palladium
A. Kazemzadeh, A.F. Hessari, M. Kashani, H. Azizi and N. Jafari
Materials & Energy Research center, Tehran, IRAN
18. Synthesis and characterization of MWCNT/CdS nanocomposite
M.R. Khanlary, M.Keshavars
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19. Super Hydrophobic Property of the Nylon Fabric Using Silica Nanoparticles
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20. A Molecular Simulation Study of Stability Behavior of Charged Nanoparticles
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4Chemical Engineering Department, Islamic Azad University of North Tehran, Tehran, Iran

21. Application of Nanotechnology for Activation of Cement Replacement Materials
Azadeh Askarinejad, Ali Reza Pourkhorshidi, Tayebeh Parhizkar
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22. Circuit Model Analysis of Quantum Wire Infrared Photodetectors
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23. Surface plasmon absorption of Iron nanoparticles
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24. Computational Study of Thermodynamical Characteristics and Spectroscopic properties of Nano Bio complexes of Adenineand Nicotinic Acid with Fullerenes
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3Young Researchers Club, Arak Branch, Islamic Azad University, Arak, Iran

25. Quantum Interference Control of Ballistic Magnetoresistance in Magnetic Nanowire Containing two Atomic-Size Domain Walls by Applying a Lateral Gate Potential
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2Laser and Plasma Research Institute, Shahid Beheshti University, Tehran, Iran

26. Effect of GaAs/AlAs Nano Layer in Bragg Mirror on Consecutive Single Edge Diffraction with Helium-Neon Laser
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27. Economic Investigation of Alumina Nanofluid Application in an Industrial Shell and Tube Heat Exchanger  
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28. Synthesis and Characterization of Nano-Sized Hexagonal and Spherical Nanoparticles of Zinc Oxide  
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29. Electromagnetically Induced Transparency of a Two-Dimensional Hexagonal Quantum Dot  
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30. Absorption of Water-Solute Dyes with Ferro-Fluid Modified Sacccharomycescervisiaecells  
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31. Synthesis and Studies of Magnetic Properties of Nickel and Nickel Oxide Nanoparticles  
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32. Hydrostatic Pressure Effects on the Electronic Energy Levels of a Quantum Dot Confined at the Center of a Nano-wire  
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33. Synthesis of Maghemite Nano-particles and Its Application As Radionuclidic Adsorbant to Purify $^{109}$Cd Radionuclide  
M. Sadeghi, P. Sarabadani  
Agricultural, Medical and Industrial Research School, Nuclear Science and Technology Research Institute, Karaj, Iran

34. Influence of Additives on the Structural and Morphological Properties of Zinc Oxide Powders  
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35. Sol-Gel Derived Bioactive Glass Containing SiO$_2$-MgO-CaO-P$_2$O$_5$ As An Anti-Bacterial Scaffold  
¹A A. Imani Fooladi, ¹F. Rahmani, ²HM. Hosseini, ³F. Hafezi, F. Hosseinnejad, ³MR. Nourani
36. Application of Nano-Titanium Sealants to Improve the Operational Performance of Highway Pavements
J. Tanzadeh, F. Vahedi
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37. Experimental Investigation of the Performance of Nano-Modified Hot Mixed Asphalt Mixtures
F. Vahedi, J. Tanzadeh
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38. Electrokinetic manipulation of Nano-sized materials in microfabricated Devices
M. Bayati\(^1\), P.R. Fielden\(^2\), G.H. Markx\(^2\), N.J. Goddard\(^2\), S.R. Mahmoudi\(^1\)
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\(^2\)School of Chemical Engineering and Analytical Science, University of Manchester, UK

39. 3D Numerical study of motion of nanodroplets on wetting Gradients
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\(^1\)Dept. Mech. Eng., Sharif University of Technology, Tehran, Iran

40. New Solid State Sensors for Gas Detection Based on Nano-Carbon Tubes–Fe2O3-ZnO
A. Kazemzadeh and Mansoureh Ganjali
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41. Super Hydrophobic Property of the Polyester Fabric Using Silica Nanoparticles
M. Saeidi\(^1\), R. Khajavi\(^2\), M. E. Yazdanshenas\(^3\)
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42. Magnetic Nanoparticles for Enhancing Immunosensor Sensitivity
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\(^1\)Laboratory of Microanalysis, Institute of Biochemistry and Biophysics, University of Tehran, Tehran, Iran
\(^2\)Pishtazteb Medical Company, Tehran, Iran

43. Synthesis and Functionalize Fe3O4 Nano-Particles with Several Coating Agents
Maleki-Jirsaarei, Nahid\(^1\); Ghane-Motlagh, Bahare\(^1,2\); Ghane-Golmohamadi, Farzin\(^1,3\); Hosseinifar, Rahi\(^1\); Kalantari, Mona\(^1\); Ghane-Motlagh Rayhane\(^1,2\); Hamed, Yalda\(^1,4\); Kabi, Sara\(^1\); Alizadeh, Elahe\(^1,5\)
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44. Synthesis and Characterization of Tin Oxide Nanoparticles by Solid State Chemical Reaction Method  
P. Sarabadani, M. Sadeghi, M. Ghasemi, Z. Asadollahi  
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45. Improving UV Stabilization of Polyamide Nylon 6 Fabrics Using Nano ZnO  
R. Khajavi\textsuperscript{1}, M. Saeidi\textsuperscript{2}, M. E. Yazdanshenas\textsuperscript{3}  
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46. Oxidation Bleaching of Antimicrobial Functionalized Non-Woven Polypropylene Fabrics Containing silver Nanoparticles  
R. Khajavi\textsuperscript{1}, M. Saeidi\textsuperscript{2}, M. E. Yazdanshenas\textsuperscript{3}  
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47. Structural and Optical Properties of Cerium doped Calcium fluoride Nanoparticles prepared by Coprecipitation  
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48. Preparation of ZnAl\textsubscript{2}O\textsubscript{4} Nano-Particle by Hydrothermal-Assisted Sol-gel Processing  
M. Mirzaee, B. Bahramian, S. Mazaheri  
Department of Chemistry, Shahrood University of Technology, Shahrood, I. R. Iran

49. The Use of TiO\textsubscript{2} to Enhance the Efficiency of Si Solar Cells Structures  
M. Moradi, Z. Rajabi  
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50. Zagreb Coincides of Some Nano Structures  
G. H. Fath-Tabar  
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51. Structural and Optical Properties of Cerium doped Calcium fluoride Nanoparticles prepared by Coprecipitation  
M.R. Khanlary\textsuperscript{1}, S. Ghammami\textsuperscript{2}, M. Ghomi Gilvae\textsuperscript{1}  
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\textsuperscript{2}Chemistry department of Imam Khomeini international university, Qazvin, IRAN

52. Research and Elaboration of Ceramic Calcium-phosphate Implant Material for Replacing of Bone tissue  
T.M. Ulyanova, L.V. Titova  
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53. Creating Metallic Nanostructures Using Galvanic, Membrane and Capillary Methods with Atomic Force Microscopy  
S.O. Abetkovskaia, S.A. Chizhik, V.V. Chikunov  
The A. V. Luikov Heat and Mass Transfer Institute of the National Academy of Sciences of Belarus, Minsk, Belarus
54. Defects in graphene: topology and nanophotonics applications
N.A. Poklonski, A.T. Vlassov, S.A. Vyrko and S.V. Ratkevich
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55. Carbon nanotube on silicon substrate as form of p-n junction solar cells
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E.V. Lobyak², A.G. Kurenya², D.V. Gorodetskiy², A.V. Okotrub²
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56. Microstructure of indium sulfide films for thin film solar cells
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57. Peculiarities of nanorelief surface of polycrystalline columnar Pb₁₋ₓSnₓTe films on glass substrates after plasma sputtering
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58. New nanosilica suspensions for chemical-mechanical polishing of monocrystalline silicon wafer
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59. Hydrophilic self-cleaning sol-gel coating based on titanium oxide and silicon
D.L. Kovalenko¹, A.V. Semchenko¹, V.E. Gaishun¹, V.V. Vaskevich¹
¹ F. Skorina Gomel State University, Gomel, Belarus

60. Nanodispersed powders of super hard composite material
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61. Thermomagnetic properties of (Ni-Cu) nanoparticles
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A.A. Baikov Institute of Metallurgy and Material Science RAS, Russia, Moscow

62. One-dimensional nanoscale structures of PbTe – SnTe mixed crystals for optoelectronic and thermoelectric applications
V.G. Leontyev¹, L.D. Ivanova¹, K. Bente², V.F. Gremenok³
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63. Optical and structural characteristics cubic boron nitride with ions Nd
S.V. Leonchik¹, A.V. Karotki ¹
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64. Influence of silicon activation conditions on the morphology of electroless deposited nickel-phosphorus coatings
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65. Effect of Initial Powder Dispersity on the Physical and Mechanical Properties of SiC Ceramics Sintered at High Pressure
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66. Anomalous retroreflection from strongly absorbing nanoporous semiconductors
S. Ya. Prislopski and S.V.Gaponenko
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67. Plasmon-enhanced Fluorescence of Alexa Fluor 488 Molecules near Silver Nanoparticles
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68. Application of sol-gel Sr(BiₓTa₋ₓ)O₉ layers in the non-volatile memory (FRAM)
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69. The use of sol-gel method for the formation of the active ZnO layers of solar cells
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70. Effect of High Pressure Sintering Nanocarbon Conditions on Formation and Fine Structure of Superhard Phase
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71. Metallfullerene Nanocomposites
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72. Compositionally graded BST ceramics: composition, structure and properties
V.N. Shut, S.R. Syrtsov, V.L. Trublovsky
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73. Effect of the Crystallinity of BaTiO₃ Powders on the Properties of PTCR Ceramics
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74. Influence of Excitation Induced Shift on Lasing in Quantum Dot Lasers
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75. Polymer-Organoclay Nanohybrids Carrying Silver Ions: Synthesis and Antibacterial Properties
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76. Dressings Carrying Silver Nanoparticles: Antibacterial Properties and Cytotoxities
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77. Dielectric characteristics of Ba₁₋ₓLaₓTiO₃ ceramics with submicron grain size
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78. SnS-PbS Nanorods Grown on Isochemical Thin Films for Thermoelectric and Photovoltaic Application
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79. Dielectric characteristics of Ba 1-XLaXTiO3 ceramics with submicron grain size
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80. Polymer-Dispersed Liquid Crystal Films: Homogeneous and Inhomogeneous Adhesion of Liquid Crystal Molecules on the Interface Polymer-Liquid Crystal
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1 Stepanov Institute of Physics of the National Academy of Sciences of Belarus, Minsk, Belarus
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Krasnoyarsk, Russia

81. Mononuclear Morphometry as Indicator to Distinguish Between Acute Limphoid and Mieloid Leukemias
G. I. Ruban, N. V. Goncharova, D. V. Marinitch, and V. A. Loiko
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2 Center of Transfusiology and biomedicine technologies, Ministry of Health of Belarus, Minsk, Belarus

82. The Absorption of Light in Solar Cells Based on Multilayer Structures of Dispersed Silicon: Theoretical Analysis
A.A. Miskevich, V.A. Loiko
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83. HEAT PIPE EVAPORATORS WITH NANOPOROUS COATING
L.L. Vasiliev, L.P. Grakovich, M.I. Rabetsky, D.A. Tulin
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84. Electronic and Optical Properties of Doped Titanium Dioxide
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85. Calculation of Electronic Properties of Pure and Defected Molybdenum Disulfide Nanostructure
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Department of Micro- and Nano electronics, Belarusian State University of Informatics and Radioelectronics, Minsk, Belarus

86. Plasmonic Nanostructures Based on Metallized Porous Silicon for SERS
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87. Nanostructured porous silicon in solid-state microreactors
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88. Nickel - porous silicon magnetic nanocomposite
A.L. Dolgiy, S.L. Prischepa, S.V. Redko
Belarusian State University of Informatics and Radioelectronics /Micro- and nanoelectronics department, Minsk, Belarus
89. Hydrothermal deposition of ZnO nanostructures on silicon wafers
E. Chubenko and A. Klyshko
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90. Temperature dependence of resistivity of porous silicon formed on n+ substrates
S.V. Redko, S.L. Prischepa and V.A. Petrovich
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91. Nanostructuralization of Intercalation Compounds with Accounting of Fluctuation
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92. Preparation and Characterization of Nanostructured ZnO Thin Films for Solar Cell Application
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93. Plasmachemical Synthesis of Antibacterial Nanocomposite Coatings
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94. Finite-Difference Time-Domain Simulation of Light Propagation in 2D Periodic and Quasi-Periodic Photonic Structures
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95. Technology for Multichip Modules on Aluminum Substrates with Nanostructured Dielectric Layers
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96. Synthesis of Nanostructured High hard Wear-Resistant Ceramic Coating on the Details of Friction Pairs of Aluminum Alloys
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97. Zagreb Coindices of Some Nano Structures
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98. Surface Plasmon Resonance Effect on the Magneto Optical Kerr Effect Enhancement in Cu/Co/Ag/SnO₂ Structure
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99. Magneto-Thermo-Electro-Elastic Stress Analysis of Smart Nanocomposite Hollow Cylinder Subjected to Complex Loadings
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100. Buckling of a Polymeric Cylindrical Shell Reinforced With CNTs Using Energy Method
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101. Application of Carbon Nanotubes Sensor for Voltammetric Determination of Sulfapyridine by Experimental Design
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102. Synthesis and Characterization of IronChromite (FeCr₂O₄) Nanoparticles Prepared by Hydrothermal Method
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103. Theoretical and Experimental Investigation on Faraday Rotation Measurement in Ferrofluid of Oil-based Cobalt- Ferrite Nanoparticles
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104. The Effect of Current Annealing on the Giant Magneto-impedance Effect in Amorphous Alloy Ribbons
105. Experimental Investigation in Faraday Rotation Measurement on Thin Films of Co-Zn Ferrite Nanoparticles
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106. Nanostructured Electrochemical Sensor for Determination of Norepinephrine, Acetaminophen and Folic acid
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107. Multiwalled Carbon Nanotube Paste Electrode in Simultaneous Determination of Two Antioxidants Using Chemometrics
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108. Numerical Investigation of Nanoparticles Mean Diameter Effect on Mixed Convection of Nanofluid in a Cavity
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109. Study of Fractal Adsorption of Pb(II) and Cd(II) on Graphene Nano Sheets
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110. A Theoretical Kinetic Study of Graphene Synthesis by Kinetic Monte Carlo Simulation
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111. Minimizing the Lasing Threshold in High-Index-Contrast Waveguide
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112. Synthesis and Luminescence characteristics of PEG – 200 mediated NaYF₄: Er/Yb nanostructure
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113. DFT Study of Cobalt Doped in Armchair (5, 0) SWCNT
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114. A New Method in Preparation of Monodisperse Magnetite Nanoparticles from Ferrous Salts in Alkylamines Solution
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115. Direct Analysis of Dopamine in Human Serum After Dispersive Solid Phase Micro-Extraction With Nano-Structured Ni-Al LDH
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116. Synthesis of Silica-Supported Preyssler Nanoparticles and their Applications for Azo Dyes Degradation
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117. Nano Titania-Supported Dawson Heteropolyacid as Green Solid Catalyst for Synthesis of Linear Alkylbenzene
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118. InP-Based Photonic Crystal Electro-Optic Modulator
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119. Hydrothermal Synthesis of Nanorods and Nanosheets Antimony trioxide
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120. Nanostructure Formation of Aromatic Thiol for Corrosion Protection of Copper
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121. Zagreb Coincidence of Some Nano Structures
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122. Functionalization of Multiwalled Carbon Nanobubes through Electrophilic Addition Reactions
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123. Hydrothermal Synthesis and Characterization of Nanosized Cadmium sulfide
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124. Synthesis and thermoluminescence characteristics of CaF$_2$:Dy,Tm nanoparticles
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125. New Simple Method for Oxidation of MultiWalled Carbon Nanotubes Through Radical Reactions
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126. Synthesis of Nanocrystalites YBa$_2$Cu$_3$O$_{6+x}$ by Using Improved Mechanochemical Alloying and Study of Its Microstructures
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127. Surface Stress Effects on the Bending Wave Propagation of Nanobeams Resting on a Pasternak Foundation
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128. Effect of CNTs as Reinforcer on Thermo Nonlinear Vibration of Embedded Pipes Conveying Oil Via DQM
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129. Effect of Elastic Foundation on Nonlocal Vibration of CNTs With Attached Buckyballs at Tip
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130. Nonlocal Terahertz Wave Characteristics of Embedded Single-Walled Boron Nitride Nanotubes
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131. Fabrication of Nanostructured Al/Cu$_p$ Composite by Accumulative Roll Bonding Process
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132. Synthesize Behaviour of Nanostructured Al/Al2O3 Composite Powders Fabricated by Mechanical Alloying Process
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133. Monte carlo Investigation of Breast cancer protein(BRCA)with nano theoretical studies
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134. Nano Theoretical Investigation of Semi-empirical and Molecular mechanics Methods of Alzheimer's disease amyloid beta-peptide
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135. Computational Study on the Sodium and Potassium Channels and Transport properties of Ions in Membrane
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136. Nano-structural studies of human leukemia inhibitory factor (LIF)
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137. Role of Polymeric Surfactants on the Growth of Manganese Ferrite Nanoparticles
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138. Improving UV Stabilization of Polyamide Nylon 6 Fabrics Using Nano ZnO
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139. Super Hydrophobic Property of the Nylon Fabric Using Silica Nanoparticles
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140. Super Hydrophobic Property of the Polyester Fabric Using Silica
Nanoparticles
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141. Oxidation Bleaching of Antimicrobial Functionalized Non-Woven Polypropylene Fabrics Containing silver Nanoparticles
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142. Synthesis of ZnO Nanostructure by Mechanical Milling Process Using Starch as a Template
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143. Synthesis and Characterization of AgInS\textsubscript{2} Nanoparticles by Microwave assisted Chemical Precipitation
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144. Synthesis and Characterization of MgO Nanoparticles Using PEG as a Surface Active Agent
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145. Synthesis and Characterization of the CdO Necklace-like Nanostrands by Using Succinic acid
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146. Monte Carlo Simulations and Experimental Results of Landmine Detection using the Thermal Neutron Analysis
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