International Conference
"Functional Materials"

ICFM-2009

PROGRAM

Ukraine, Crimea, Partenit
October 5 – 10, 2009

International Conference *"Functional Materials"*

Organizers:

Ministry of Education and Science of Ukraine

Taurida National V.I. Vernadsky University

Institute of Magnetism of NASU&MESU

STC "Institute for Single Crystals" of NASU

Donetsk Phys&Techn. Institute of NASU

Fundamental Researches State Fund of Ukraine

National Technical University of Ukraine "KPI"

International Laboratory «LEMAC»

Crimean Scientific Center of NASU&MESU

Ukrainian Physical Society

with cooperation

Taurida Humanitarian & Ecological Institute

Health Centre "Krym",

"Zdravnitsy Yuga"

ICFM' 2009. The conference will address aspects relevant to the physics, technology and applications of new materials and structures with the determined functional properties

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Address of the Organizing Committee
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http://www.icfm.crimea.edu/

Information for participants

LOCATION
The conference will be held in Partenit. Partenit is a small city on the Southern Coast of Crimea. Accommodation will be available at the Health Centre “Krym".

CONFERENCE SESSIONS will be held in the Cinema of the “Krym” Health-Resort. Information about possible amendments in the Conference Program will be available through the announcements at the Organizing Committee information desk. For more detailed info please contact the Local Organizing Committee.

PRESENTATIONS
Lecture - 30 min, Oral Presentation -15 min.

LANGUAGE
English.

CONFERENCE PROCEEDINGS
Participants are solicited to submit full papers of their accepted contribution to publish in the special issue of the "Functional Materials" journal as regular papers. One issue of the journal will include up to 40 papers of 6-8 pages (in sum with illustrations). The Program Committee will execute the preliminary selection of papers.

TRANSPORT.
The main net of public transport is available in Simferopol. The railway station, the airport is also concentrated there. So, to reach the railway station you can use a bus from Partenit to Simferopol. For seeing the nearest places of interest (Yalta, Livadiya) you can get a taxi. Nearby the main entrance of the “Krym” Health-Resort there is a taxi stop. If you have a problem with getting your return tickets inform the Organizing Committee in time.

CULTURE PROGRAM
Monday, October 5, at 20.00 – Welcome party
Tuesday, October 6 at 20.00 – Concert
Wednesday, October 7, at 14.30 – Tasting of Crimean Vine collection (Yalta).
Thursday, October 8, at 20.00 – Concert.
Friday, October 9, at 20.30 – Conference Dinner
For additional information about excursions (Crimea is known by it is history, landscapes, etc.) please contact the Local Organizing Committee.

TIME-TABLE OF THE DINNING-HALL:
8.00-9.00 – breakfast
14.00-15.00 – dinner
19.00-20.00 – supper

Table of Contents

The Note: A, B, C, D, F - Oral Sessions; P, Q, R, S - Poster Sessions

Schedule of Conference

Date	Time		Oral presentations (Hall)	Poster presentations (Foyer)
Monday, October 5	12.00-14.00	Session AA	Opening. Plenary I	
	15.00-19.00	Session AB	Section 1. Fundamental Physics of Functional Materials	
	15.00-19.00	Session AP		Section 10. Materials for Medical and Environmental Applications. Biosensors
	20.00-21.30	Culture program	**Welcome party**	
Tuesday, October 6	9.00-11.00	Session BA	Plenary II	
	11.15-13.30	Session BB	Section 5. Piezoelectric and Magnetoelectric Materials	
	9.00-14.00	Session BP		Section 9. Nanophysics for Functional Materials
	15.00-17.00	Session BC	Section 6. Magnetoelastic and Adaptive Materials	
	17.00-19.00	Session BD	Section 10. Materials for Medical and Environmental Applications. Biosensors	
	17.00-18.00	Session BF	Memory Session. 100-th Anniversaries of N.N.Bogolyubov and L.V.Kirensky	
	15.00-19.00	Session BQ		Section 3. Materials for Spin Electronics. Transport phenomena
	20.00-21.30	Culture program	**Concert**	
Wednesday, October 7	9.00-12.45	Session CA	Section 3. Materials for Spin Electronics. Transport Phenomena	
	9.00-14.00	Session CP		Section 6. Magnetoelastic and Adaptive Materials
		Session CQ		Section 5. Piezoelectric and Magnetoelectric Materials
	15.00-18.00	Culture program	**Wine Tasting (Yalta)**	

Date	Time		Oral presentations (Hall)	Poster presentations (Foyer)
Thursday, October 8	9.00-11.45	Session DA	Section 7. Microwave Materials and Metamaterials	
	12.00-13.30	Session DB	Section 2. Soft and Hard Materials	
	9.00-14.00	Session DP		Section 1. Fundamental Physics of Functional Materials
	15.00-18.45	Session DC	Section 10. . Nanophysics for Functional Materials	
	15.00-19.00	Session DQ		Section 2. Soft and Hard Magnetic Materials
		Culture program	**Concert**	
Friday, October 9	9.00-12.15	Session EA	Section 4. Electrooptic and Magnetooptic Materials	
	12.15-13.30	Session EB	Section 11. Instrumental and Measurement Technique	
	9.00-14-00	Session EP		Section 7. Microwave Materials and Metamaterials
	9.00-14-00	Session EQ		Section 8. Ionizing Radiation Sensing Materials
	15.00-17.15	Session ED	Section 8. Ionizing Radiation Sensing Materials	
	15.00-19.00	Session ER		Section 11. Instrumental and Measurement Technique
	19.00	**Closing**		
	20.30-23.00	**Conference dinner**		

Monday, October 5

12.00-14.00 Session AA.
Opening.

The greetings from National Academy of Sciences of Ukraine, Russian Academy of Sciences, Taurida National V.I. Vernadsky University

Plenary I

Chairmen: Aleksandrov K.S., Baryakhtar V.G., Berzhansky V.N.

AA-L1 **Materials and Processes for Next-Generation Innovative Devices (invited)**
Sato Katsuaki[1]
Graduate School of Engineering, Tokyo University of Agriculture and Technology, Koganei, Tokyo, Japan
Research Supervisor, PRESTO Project, Japan Science and Technology Agency, Sambancho, Chiyodaku, Tokyo, Japan

AA-L2 **Advances in Functional Materials for Sensing Bio-medical Magnetic Fields (invited)**
Mapps D.J.
Faculty of Science and Technology, University of Plymouth, UK

15.00-19.00 Oral Session AB.
Section 1. Fundamental Physics of Functional Materials

Chairmen: Gorobets Yu.I., Ovchinnikov S.G.

AB-1L/1 **Interplay of Rare Earth and Iron magnetic order in RFeAsO (invited)**
Pashkevich Yu.G.[1], Luetkens H.[2], Maeter H.[3], Kwadrin A.[3], Khasanov R.[2], Amato A.[2], Gusev A.[1], Lamonova K.[1], Chervinskii D.[1], Klingeler R.[4], Hess C.[4], Behr G.[4], Buchner B.[4], Klauss H.–H.[3]
[1]A. A. Galkin Donetsk Phystech NASU, Donetsk, Ukraine
[2]Lab. for Muon–Spin Spectr., Paul Scherrer Institut, Switzerland
[3]Institut fur Festkorperphysik, TU Dresden, Dresden, Germany
[4]Leibniz–Institut fur Festkorper und Werkstoffforschung (IFW), Dresden, Germany

AB-1L/2 **Effect of Lifshitz quantum phase transitions on the normal and superconducting states in cuprates (invited)**
Ovchinnikov S.G.[1,2], Korshunov M.M.[1], Shneyder E.I.[1,3]
[1]L.V. Kirensky Institute of Physics, Krasnoyarsk, Russia
[2]Siberian Federal University, Krasnoyarsk, Russia
[3]Siberian Aerospace University, Krasnoyarsk, Russia

AB-1O/1 **Dissipative function of magnet media**
Baryakhtar V.G., Danilevich A.G.
Institute of Magnetism NAS of Ukraine, Kiev, Ukraine

AB-1O/2 **The analogy of two phenomena: the parametric resonance and the electron motion in a crystal**

Baryakhtar V.G., Samar A.V.
[1]*Institute of Magnetism NAS of Ukraine, Kiev, Ukraine*
[2]*National Technical University of Ukraine "KPI", Kiev, Ukraine*

AB-1O/3 **Spin-induced nonlinear optical phenomena in europium chalcogenides EuTe and EuSe**

Kaminski B.[1], Lafrentz M.[1], Pisarev R.V.[2], Yakovlev D.R.[1,2], Pavlov V.V.[2], Lukoshkin V.A.[2], Henriques A.B.[3], Springholz G.[4], Bauer G.[4], Abramof E.[5], Rappl P.H.O.[5] and Bayer M.[1]
[1]*Experimentelle Physik II, Technische Universität Dortmund, Dortmund, Germany*
[2]*Ioffe Physical-Technical Institute, Russian Academy of Sciences, Russia*
[3]*Instituto de Fisica, Universidade de Sao Paulo, Sao Paulo, Brazil*
[4]*Institut für Halbleiter- und Festkörperphysik, Johannes Kepler Universität Linz, Austria*
[5]*LAS-INPE, Sao Jose dos Campos, Brazil*

AB-1O/4 **Investigation of the gyroscopic quasirelativistic dynamics of magtetic vortices on the domain wall of yttrium orthoferrite**

Chetkin M.V., Kurbatova Yu.N., Shapaeva T.B.
Faculty of Physics M.V.Lomonosov Moscow State University, Russia

AB-1O/5 **Magnetic structure in pyroxene $NaFeGe_2O_6$**

Drokina T.[1], Petrakovskii G.[1], Keller L.[2] and Schefer J.[2]
[1]*L.V. Kirensky Institute of Physics, Siberian Branch of Russian Academy of Science Krasnoyarsk, Russia*
[2]*Laboratory for Neutron Scattering, ETH Zürich and Paul Scherrer Institut, CH-5232 Villigen PSI, Switzerland*

AB-1O/6 **Domain structure formation and evolution in epitaxial exchange-biased Co and NiFe films with dislocation slip planes**

Gornakov V.S.[1], Nikitenko V.I.[1] and Lee C.G.[2]
[1]*Institute of Solid State Physics RAS, Chernogolovka, Russia*
[2]*Changwon National University, Changwon, Gyeongnam, South Korea*

AB-1O/7 **Features of $Mn_{2-x}Fe_xAs_{0.5}P_{0.5}$ magnetic phase diagram**

Varyukhin D.V.
Donetsk Institute for physics and engineering, Donetsk, Ukraine

AB-1O/8 **Some aspects of nucleation processes during spin reorientation in real magnets**

Vakhitov R.M., Gareyeva Ye.R., Vakhitova M.M., Yumaguzin A.R.
Bashkir State University, Ufa, Russia
Ufa Branch of Orenburg State University, Ufa, Russia

AB-1O/9 **"Spin-state switching" in Fe^{2+}-based coordination polymers**

Babkin R.Yu., Lamonova K.V., Orel S.M., Pashkevich Yu.G.
A. A. Gawking Donetsk Institute for Physics and Engineering of NASU, Donetsk, Ukraine

AB-1O/10 **Properties of Superconductor/Ferromagnet Heterostructures in Presence of Zero and Pi Coupling**

Prischepa S.L.[1], Kushnir V.N.[1], Cirillo C.[2], Vecchione A.[2], Attanasio C.[2], Kupriyanov M.Yu.[3], Aarts J.[4]

[1]*Belarus State University of Informatics and RadioElectronics, Minsk, Belarus*

[2]*CNR/INFM Laboratorio Regionale SuperMat and Dipartimento di Fisica "E.R. Caianiello", Università degli Studi di Salerno, Baronissi (Sa), Italy*

[3]*Nuclear Physics Institute, Moscow State University, Moscow, Russia*

[4]*Kamerlingh Onnes Laboratory, Leiden University, Leiden, The Netherlands*

15.00-19.00 Poster Session AP. Section 10. Materials for Medical and Environmental Applications. Biosensors

Chairmen: Gorobets S.V., Kulish M.P.

AP-10P/1 **Effect of structure and optical characteristic on the photocatalytic activity of titanium dioxide sol-gel functional materials**

Kulish M.P.[1], Dmytrenko O.P.[1], Busko T.O.[1], Prylutskyy Yu.I.[1], Vityuk N.V.[2], Eremenko A.M.[2], Smirnova N.P.[2], Shokhovets S.V.[3], Ritter U.[3], Scharff P.[3]

[1]*Kiev National Shevchenko University, Kiev, Ukraine*

[2]*Institute of Surface Chemistry of NUAS, Kiev, Ukraine*

[3]*Technical University of Ilmenau, Institute of Physics, Ilmenau, Germany*

AP-10P/2 **Analyzing of low frequency noise in flicker noise gas sensors for selective gas detection**

Makoviychuk M.I.

Yaroslavl Branch of the Institute of Physics and Technology of RAS, Yaroslavl, Russia

AP-10P/3 **Properties of functional DNA:PEDOT layers**

Kažukauskas V.[1], Arlauskas A.[1], Pranaitis M.[1], Krupka O.[2], Kajzar F.[2], Essaidi Z.[2], Sahraoui B.[2]

[1]*Semiconductor Physics Department of Vilnius University, Vilnius, Lithuania*

[2]*Laboratory POMA CNRS FRE 2988, Angers University, Angers, France*

AP-10P/4 **Paramagnetic characteristics of a pathogenic bone fabric of the person**

Lemesheva S.A.[1], Golovanova O.A.[1], Votyakov S.L.[2]

[1]*Omsk State University name after F.M. Dostoevsky, Omsk, Russia*

[2]*Institute Geology and Geochemistry name after Academician A. N. Zavaritsky URO of the Russian Academy of Science, Ekaterinburg, Russia*

AP-10P/5 **Magnetic materials based on $La_{1-x}Ag_yMnO_{3+\delta}$ solid states for application in localized hyperthermia**

Markelova M.N.[1], Kushnir A.E.[1], Kaul A.R.[1], Demidov V.V.[2], Atsarkin V.A.[2], Odintsov B.M.[3], Soto C.[3], Roy E.J.[3]

[1]*Moscow State University, Moscow, Russia*

[2]*Institute of Radio-engineering and Electronics of RAS, Russia*

[3]*University of Illinois at Urbana-Champaign, USA*

AP-10P/6 **Research of the chiral adsorption effect of atoms and molecules on carbon nanotube surface**

Shamina E.N.[1], Lebedev N.G.[2]
[1]*Volgograd State Medical University, Volgograd, Russia*
[2]*Volgograd State University, University Avenue, Russia*

AP-10P/7 **Magnetism and structure of nano spinel $Zn_{0.4}Fe_{2.6}O_4$ for medical application**

Beznosov A.[1], Fertman E[1]., Desnenko V.[1], Baumer V.N.[2], Koval A.[3]
[1]*B. Verkin Institute for Low Temperature Physics & Engineering, NASU, Kharkov, Ukraine*
[2]*SSI «Institute for single crystals», NAS of Ukraine, Kharkov, Ukraine*
[3]*National University of Pharmacy*, *Ministry of Health of Ukraine*, *Kharkov, Ukraine*

AP-10P/8 **Multibiosensor for ecological monitoring**

Soldatkin O.O.[1], Pavluchenko O.S.[2], Kukla O.L.[2], Peshkova V.M.[1], Dzyadevych S.V.[1], Soldatkin A.P.[1]
[1]*Laboratory of Biomolecular Electronics, Institute of Molecular Biology and Genetics, National Academy of Sciences of Ukraine, Kyiv, Ukraine*
[2]*Department of Functional Optoelectronics, Institute of Semiconductor Physics of National Academy of Sciences of Ukraine, Kyiv, Ukraine*

AP-10P/9 **Solid sulfideconductive electrolytes at the heart of sensors for the analyses sulfur-containing gases**

Kalinina L.A., Ushakova Ju.N., Ananchenko B.A., Kibeshev A.M., Shirokova G.I.
SEI OF HPE «Vyatka State University», Kirov, Russia

AP-10P/10 **Application of biosensor based on creatininedeiminase and ISFET for detection of creatinine in real samples**

Marchenko S.V.[1], Nazarenko E.A.[1], Kukla O.L.[2], Pavlyuchenko O.S.[2], Arkhypova V.N.[1], Soldatkin A.P.[1]
[1]*Institute of Molecular Biology and Genetics, NAS of Ukraine, Kyiv, Ukraine*
[2]*V.E. Lashkaryov Institute of Semiconductor Physics, NAS of Ukraine, Kiyv*

AP-10P/11 **Catalytic molecularly imprinted polymer membranes. development of the biomimetic sensor for phenols detection.**

Sergeyeva T.A.[1], Slinchenko O.A.[2], Gorbach L.A.[2], Matyushov V.F.[2], Brovko O.O.[2], Piletsky S.A.[3], Sergeeva L.M.[2], Elska G.V.[1]
[1]*Institute of Molecular Biology and Genetics, NAS Ukraine, Kiev, Ukraine*
[2]*Institute of Macromolecular Chemistry, NAS Ukraine, Kiev, Ukraine*
[3]*Cranfield University, Great Britain*

AP-10P/13 **Hemocompatibility Fluorinated Poly(urethane urea)s for Intravascular Stent Coatings: *In vivo* Investigation**

Shekera O.V.[1], Lazarenko O.N.[2], Tkachenko I.M.[1], Alexeeva T.A.[3], Muzhev V.V.[1], Shevchenko V.V.[1], Oshkaderov S.P.[3]
[1]*Institute for Macromolecular Chemistry NAS of Ukraine, Kyiv, Ukraine*
[2]*Kyiv Medical for Post Graduate Education, Ukraine, Kyiv*
[3]*G.V.Kurdyumov Institute for Metal Physics NAS of Ukraine, Kyiv*

AP-10P/14 Modification of polyurethanes by folic acid for medicine
Andrushina O.S., Galatenko N.A., Rozhnova R.A., Kiselova T.O.
Institute of Macromolecular Chemistry of the National Academy of Sciences of Ukraine, Kyiv

AP-10P/15 Research of adsorption properties nanocrystal hydroxylapatite of calcium
Geraskina I., Arseniev P.
Moscow Power Engineering Institute, Russia, Moscow

AP-10P/16 Hydroxyapatite synthesis for biomedical purposes
Solonenko A.P., Belskaya L.V., Golovanova O.A.
Omsk state university, Russia, Omsk

AP-10P/17 Transcrystallization of calcium fluorhydroxyapatite in process of biocompatible coating formation
Kryzhanovska O.S., Doroshenko A.G., Savin Yu.N., Tolmachev A.V.
"STC "Institute for Single Crystals" NAS of Ukraine, Kharkov, Ukraine

AP-10P/18 Nanoceramics calcium phosphate implants
Tkachenko M.M., Zyman Z., Nesterenko A.
V.Karazin Kharkiv National University, Kharkiv, Ukraine

AP-10P/19 Features of synthesis of hydroxyapatatite according to the thermodynamic calculations
Lemesheva S.A., Golovanova O.A.
Omsk State University named after F.M. Dostoevskiy, Omsk, Russia

AP-10P/20 In vivo behavior of magnetic bioceramics based on calcium phosphates
Tkachenko M.V., Barabashko M.C., Tkachenko M.M.
V.Karazin Kharkiv National University, Ukraine

AP-10P/21 Sapphire implants of dynamical spinal discs
Litvinov L.[1], Voloshin A.[1], Slyunin E.[1], Radchenko V.[2], Levshin A.[2], Timchenko I.[2]
[1]*STC "Institute for Single Crystals", NAS of Ukraine, Kharkiv, Ukraine*
[2]*Sytenko Institute of Spine and Joint Pathology, Kharkiv, Ukraine*

AP-10P/22 New bioactive epoxy-polyurethane composite materials
Gorbunova N.O., Galatenko N.A., Rozhnova R.A., Kuksin A.N.
Institute of Macromolecular Chemistry, NASU

AP-10P/23 Development of portable complex based on enzyme amperometric multibiosensor
Shkotova L.V.[1], Melnik V.G.[2], Dzyadevych S.V.[1]
[1]*Laboratory of Biomolecular Electronics, Institute of Molecular Biology and Genetics, National Academy of Sciences of Ukraine, Kyiv*
[2]*Institute of Electrodynamics, NASU, Kyiv*

AP-10P/24 Effect of Magnetic Field on the Concentration Dependence of the Velocity of Copper Contact Deposition on Ferromagnetic Sphere
Gorobets Yu.I.[1], Gorobets S.V.[2], Legenkiy Yu.A.[3], Pimenov Yu.N.[3]
[1]*Institute of Magnetism NAS of Ukraine, Kiev, Ukraine*
[2]*National Technical University of Ukraine "KPI", Kiev, Ukraine*
[3]*Donetsk National University, Donetsk, Ukraine*

AP-10P/25 Magnetically operated structuring of steel surfaces for the obtaining of attachments for magnetic filters

Gorobets S.V., Gorobets O.Yu., Bylo O.N., Dvoynenko O.K., Mykhailenko N.A.
National Technical University of Ukraine "Kiev Polytechnic Institute"

AP-10P/26 Preparation of new microencapsulated functional materials for industrial waste processing

Shirokova A.G., Yatsenko S.P.
Institute of Solid State Chemistry, Ural Branch of the RAS, Ekaterinburg, Russia

AP-10P/27 Investigation of water diffusion and ionic conductivity in a zeolites

Sapiga A.A., Yatsenko A.V., Sapiga A.V.
Faculty of Physics, Tavrida National University, Crimea, Ukraine

AP-10P/28 Binuclear copper(II) complexes of the cyclohexandicarboxylic acid acylhydrazones

Zub V.Ya.[1], Minin V.V.[2], Shul'gin V.F.[3], Trush Yu.V.[3], Konnic O.V.[3], Rusanov E.B.[4]
[1]*Taras Shevchenko Kiev National University, Kiev, Ukraine*
[2]*N.S. Kurnakov Institute of General and Inorganic Chemistry, Russian Academy of Science, Moscow, Russian Federation*
[3]*V.I. Vernadsky Taurida National University, Simferopol*
[4]*Institute of Organic Chemistry National Academy of Science of Ukraine, Kiev, Ukraine*

AP-10P/29 Long-range spin-spin coupling in the copper(II) spacer-armed complexes

Shul'gin V.F.[1], Konnic O.V.[1], Zub V.Ya.[2]
[1]*V.I. Vernadsky Taurida National University, Simferopol, Ukraine*
[2]*Taras Shevchenko Kiev National University, Kiev, Ukraine*

AP-10P/30 Trinuclear copper(II) complexes of trimesoic acid hydrazones

Minin V.V.[1], Zub V.Ya.[2], Shul'gin V.F.[3], Konnic O.V.[3], Rusanov E.B.[4]
[1]*N.S. Kurnakov Institute of General and Inorganic Chemistry, RAS, Moscow, Russian Federation*
[2]*Taras Shevchenko Kiev National University, Kiev*
[3]*V.I. Vernadsky Taurida National University, Simferopol*
[4]*Institute of Organic Chemistry National Academy of Science of Ukraine, Kiev, Ukraine*

AP-10P/31 The trinuclear copper(II) complexes with the diacyldihydrazines of satureted dicarboxylic acids and salicylic acid

Shul'gin V.F.[1], Obuch A.I.[1], Konnic O.V.[1], Rusanov E.B.[2]
[1]*V.I. Vernadsky Taurida National University, Simferopol*
[2]*Institute of Organic Chemistry National Academy of Science of Ukraine, Kiev, Ukraine*

AP-10P/32 Diagnostic possibility demonstration' of cerebrum oncologic diseases by biosensor based on surface plazmon resonance

Gridina N.Ya.[1], Samoilov A.V.[2], Ushenin Yu.V.[2] and Shirshov Yu.M.[3]
[1]*A.P. Romodanov's Institute of Neurosurgery Medical Science Academy, Kiev, Ukraine*
[2]*V.E. Lashkarev's Insitute of Semiconductor Physics National Academy of Science of Ukraine, Kiev, Ukraine*
[3]*New Zealand Science Centre "Science Alive", Christchurch, New Zealand*

AP-10P/33 Hydrogen storage in structures based on porous silicon and palladium

Manilov A.I.[1], Alekseev S.A.[2], Litvinenko S.V.[1], Kuznetsov G.V.[1], Skryshevsky V.A.[1]
[1]*Kiev National Taras Shevchenko University, Kiev, Ukraine*
[2]*Radiophysics Faculty, Chemistry Faculty*

Tuesday, October 6

9.00-11.00 Session BA. Plenary II

Chairmen: Granovsky A.B., Ivanov B.A.

BA-L1 **Dynamics of magnetic vortices for sub-micron ferromagnetic and antiferromagnetic particles (invited)**
Ivanov B.A.
Institute of Magnetism NASU, Kiev, Ukraine

BA-L2 **Active Nanostructures with Giant Magnetostriction, related Multiferroics and Micro-Magneto-Electro-Mechanical Systems (MMEMS) (invited)**
Pernod P.[1] & Preobrazhensky V.L.[1,2]
Joint International Laboratory "LEMAC":
[1]IEMN CNRS 8520, Ecole Centrale de Lille, France
[2]Wave Research Center, GPI RAS, Moscow, Russia

BA-L3 **Spintronics with antiferromagnets: review of possible phenomena and applications (invited)**
Gomonay H.V.[1,2] and Loktev V.[1,2]
[1]National Technical University of Ukraine «KPI», Kyiv, Ukraine
[2]Bogolyubov Institute for Theoretical Physics NAS of Ukraine, Kyiv, Ukraine

BA-L4 **New materials for spintronics: Reentrant ferromagnetism and transport properties of (In, Mn)Sb dilute magnetic semiconductor (invited)**
Krivoruchko V.N.[1], Tarenkov V.Yu.[1], Varyukhin D.V.[1], Dyachenko A.I.[1], Pashkova O.N.[2], Ivanov V.A.[2]
[1]Donetsk Physics and Technology Institute NAS of Ukraine, Donetsk, Ukraine
[2]N. S. Kurnakov Institute of General and Inorganic Chemistry RAS, Moscow, Russia

11.15-13.30 Oral Session BB. Section 5. Piezoelectric and Magnetoelectric Materials

Chairmen: Zvezdin A.K., Bichurin M.I.

BB-L1 **Spin flexoelectricity and new physical effects it induces (invited)**
Zvezdin A.K.[1], Pyatakov A.P.[1,2]
[1]A. M. Prokhorov General Physics Institute, Moscow, Russia
[2]Physics Department, M.V. Lomonosov MSU, Moscow, Russia

BB-5O/1 **Ferroelectrisity in doped manganites**
Dunaevsky S.M.
Petersburg Nuclear Physics Institute, RAS

BB-5O/2 **Magnetoelectric coupling at bending modes of ferroelectric-ferromagnetic bilayers**

Petrov V.M.[1], Bichurin M.I.[1], Averkin S.V.[1], Zibtsev V.V.[1] and Srinivasan G.[2]
[1]*Novgorod State University, Veliky Novgorod, Russia*
[2]*Oakland University, Rochester, USA*

BB-5O/3 **Multiferroic effects in perovskite manganites/ferroelectric heterostyructures studied by optical second harmonic generation**

Mishina E.D.[1], Ivanov M.S.[1], Moshnyaga V.[2], Samwer K.[2]
[1]*Moscow State Institute of Radioengineering, Electronics & Automation, Moscow, Russia*
[2]*I.Physikalisches Institut, Universität Göttingen, Göttingen, Germany*

BB-5O/4 **Low temperature Mossbauer spectroscopy study of the new iron contained crystals with langasite-type structure**

Lyubutin I.S.[1], Naumov P.G.[1,2], Demikhov E.I.[2] and Mill B.V.[3]
[1]*Shubnikov Institute of Crystallography RAS, Moscow, Russia*
[2]*Lebedev Physical Institute RAS, Moscow, Russia*
[3]*Moscow State University, Faculty of Physics, Russia*

BB-5O/5 **Cross effects in ferrite-piezoelectric nanostructures**

Filippov D.A.[1], Srinivasan G.[2]
[1]*Novgorod State University, Veliky Novgorod, Russia*
[2]*Physics Department, Oakland University, Rochester, Michigan, USA*

BB-5O/6 **Piezoinductive effect in a piezoelectric - metal ring**

Chashin D.V. and Fetisov Y.K.
Moscow State Institute of Radio Engineering, Electronics and Automation, Moscow, Russia

BB-5O/7 **Perovskite-to-perovskite phase transition under ex-situ growth of PZT thin films deposited on Pt/SiO_2/Si substrate**

Pronin I.P.[1], Kaptelov E.Yu.[1], Senkevich S.V.[1,2], Pronin V.P.[2]
[1]*Ioffe Institute, S.-Petersburg, Russia*
[2]*Herzen University, S.-Petersburg, Russia*

BB-5O/8 **Observation of microscopic stripe-like phase separation in multiferroic single crystals $Eu_{1-x}Y_xMnO_3$ (x=0.5-0.6).**

Ivanov V.Yu.[1], Mukhin A.A.[1], Iskhakova L.D.[2], Lavrishchev S.V.[2], Balbashov A.M.[3], Sarma D.D.[4], Ray S.[5], Middey S.[5]
[1]*A.M. Prokhorov General Physics Institute of the Russian Acad. Sci., Moscow, Russia*
[2]*Fiber Optics Researh Center of the Russian Acad. Sci., Moscow, Russia*
[3] *Moscow Power Engineering Institute, Moscow, Russia*
[4]*Institute of Science, Bangalor, India*
[5]*Centre for Advanced Materials Indian Association for the Cultivation of Science, Kolkata*

BB-5O/9 **The domain walls in multiferroic ferroelectric–magnet and control of its modulation**
Lykah V.A.
Physics and Technology Faculty, National Technical University "Kharkov Polytechnic Institute", Kharkov, Ukraine

9.00-14.00 Poster Session BP.
Section 9. Nanotechnologies for Functional Materials

Chairmen: Fraerman A.A., Pudonin F.A.

BP-9P/1 **The Nanotechnology of Synthesis of Semiconductor Structures in the Process of Liquid Phase Epitaxy**
Maronchuk I.E.[1], Kulyutkina T.F.[1], Bykovsky S.Yu.[1], Globina E.V.[1], Arkhipov S.A.[1], Naidenkova M.V.[2]
[1]Sevastopol National University of Nuclear Energy and Industry, Sevastopol
[2]Quantum Solar Inc, 6 Endeavor Drive, Corte Madera, USA

BP-9P/2 **The band structure of carbon nanotubes with the point defects within the framework of the Anderson's model**
Lyapkosova O.S., Lebedev N.G.
Volgograd State University, Volgograd, Russia

BP-9P/3 **Is the carbon nanotube (3,3) metal or semiconductor?**
Boutko V.G., Gusev A.A., Shevtsova T.N.
A. A. Galkin Donetsk PhysTech NASU, Donetsk, Ukraine

BP-9P/4 **The piezoresistance effect in carbon nanotubes**
Lyapkosova O.S., Lebedev N.G.
Volgograd State University, Volgograd, Russia

BP-9P/5 **The encapsulation of carbon nanotube (12,0) with crystalline forms of potassium**
Boutko V.G., Gusev A.A., Shevtsova T.N. and Pashkevich Yu.G.
A. A. Galkin Donetsk PhysTech NASU, Donetsk, Ukraine

BP-9P/6 **Optical properties of narrow bundled carbon nanotubes**
Boutko V.G., Gusev A.A., Shevtsova T.N. and Pashkevich Yu.G.
A. A. Galkin Donetsk PhysTech NASU, Donetsk, Ukraine

BP-9P/7 **Transport properties of composite material based on carbon nanotubes filled with iron**
Ovsiyenko I., Len T., Matzui L.
Kyiv National Taras Shevchenko University, Departments of Physics, Kyyiv, Ukraine

BP-9P/8 **Polymerization of C_{60} fullerite at interaction with In atoms**
Pavlenko O.L., Dmytrenko O.P., Kulish M.P., Bilyi M.M., Prylutskyy Yu.I., Shpilevsky E.M.*, Scharff P.
Kyiv National Tarash Shevchenko University, Department of Physics, Kyiv, Ukraine
Institute of Heat and Mass Exchange, Minsk, Belarus
Institute of Physics, TU Ilmenau, Ilmenau, Germany

BP-9P/9 **Strength properties of poly(vinyl) chloride with multi-walled carbon nanotubes under irradiation**

Pinchuk T.M.[1], Dmytrenko O.P.[1], Kulish M.P.[1], Grabovskiy Yu.E.[1], Prylutskyy Yu.I.[1], Bilyi M.M.[1], Rugal O.G.[1], Zabolotnyy M.A.[1], Shut M.I.[2]

[1]*Kyiv National Shevchenko University, Departments of Physics, Ukraine*
[2]*National Dragomanova University, Kyiv, Ukraine*

BP-9P/10 **Elastic-inelastic characteristics of carbon nanotubes and polypropylene**

Onanko A.P., Grabovskiy Yu.E., Lyashenko O.V., Onanko Y.A., Rugal O.G., Brozhko I.Y.

Taras Shevchenko Kiev national research university, physics department, Kiev, Ukraine

BP-9P/11 **Ageing-dependent properties of ZnPc/C_{60} photovoltaic devices**

Kažukauskas V.[1], Arlauskas A.[1], Pranaitis M.[1], Lessmann R.[2], Riede M.[2], Leo K.[2]

[1]*Semiconductor Physics Department of Vilnius University, Vilnius, Lithuania*
[2]*Technische Universität Dresden, Institut für Angewandte Photophysik*

BP-9P/12 **Catalyst free deposition of carbon-nitride thin film nanofibers**

Shalaev R.V., Ulyanov A.N., Prudnikov A.M., Varyukhin V.N.

Donetsk Institute for Physics and Engineering of Ukrainian Academy of Sciences, Donetsk, Ukraine

BP-9P/13 **Magnetization reversal of CoPt nanodiscs by inhomogeneous MFM tip field**

Mironov V.L.[1], Gribkov B.A.[1], Gusev S.A.[1], Fraerman A.A.[1], Shubin A.B.[2], Alexeev A.M.[2], Zhdan P.A.[3] and Binns C.[4]

[1]*Institute for Physics of Microstructures RAS, Nizhniy Novgorod, Russia*
[2]*"Nanotechnology MDT" Company, Zelenograd, Russia*
[3]*School of Engineering, University of Surrey, Guildford, Surrey, UK*
[4]*Department of Physics and Astronomy, University of Leicester, Leicester, UK*

BP-9P/14 **Arrays of nanoparticles fabricaton for the magnetic memory systems**

Gusev S.A., Gribkov B.A., Klimov A.Yu.

Institute for Physics of Microstructures Russian Academy of Science, Nizhny Novgorod, Russia

BP-9P/15 **Switching properties of ferromagnetic nanoparticles driven by alternative fields**

Polyakov A.Yu., Lyutyy T.V.

Sumy State University, Sumy, Ukraine

BP-9P/16 **Vapor deposition and ordering on the surface of a solid body**

Gumennyk K.V.[1], Feldman E.P.[2], Stefanovich L.I.[1]

[1]*Galkin Institute for Physics and Engineering of NASU, Donetsk, Ukraine*
[2]*Institute for Physics of Mining Processes of NASU, Donetsk, Ukraine*

BP-9P/17 **Phase composition and magnetic properties of nanoparticles in shells of capsules designed for drug delivery**

Gervits N.E.[1], Lyubutin I.S.[1], Frolov K.V.[1], Gippius A.A.[1,2], Orlova O.A.[1], Bukreeva T.V.[1]

[1]*Shubnikov Institute of Crystallography, RAS, Moscow, Russia*

[2]*Moscow State University, Faculty of Physics, Russia*

BP-9P/18 **Theory and classification of the nanostructures**

Kustov E.F.[1], Nefedov V.I.[2], Petrushko I.M.[1], Petrushko M.I.[1]

[1]*Moscow Power Engineering Institute (Technical University), Moscow, Russia*

[2]*Kurnakov Institute of General and Inorganic Chemistry, Russian Academy of Sciences, Moscow, Russia*

BP-9P/19 **Surface of nanocrystalline tungsten disulfide**

Shpak A.P.[1], Korduban A.M.[1], Kulikov L.M.[2], Kryshchuk T.V.[1], Konig N.B.[2], Kandyba V.O.[1]

[1]*G.V.Kurdyumov Institute of Physics of Metals, National Academy of Sciences of Ukraine, Kyiv, Ukraine*

[2]*Frantsevich Institute for Problems of Materials Science National Academy of Sciences of Ukraine, Ukraine, Kyiv-142*

BP-9P/20 **Magnetic properties of Ni inverse opal films**

Klimonsky S.O.[1,2], Nikiforov V.N.[1], Sapoletova N.A.[1], Slesarev A.S.[1], Napolskii K.S.[1], Eliseev A.A.[1], Vasilieva A.V.[3], Mistonov A.A.[4], Grigoriev S.V.[3], Grigoryeva N.A.[4], Kuznetsov V.D.[2], Tretyakov Yu.D.[1]

[1]*Department of Materials Science, M.V. Lomonosov Moscow State University, Moscow, Russia*

[2]*D. Mendeleyev University of Chemical Technology of Russia, Moscow, Russia*

[3]*Petersburg Nuclear Physics Institute, Gatchina, Saint-Petersburg, Russia*

[4]*Saint-Petersburg State University, Saint-Petersburg, Russia*

BP-9P/21 **Thermal factor effect on the concentration and structure ordering in quasibinary ion-plasma sputtered condensates**

Sobol O.V., Kunitskiy Yu.A.,[1] Kunitska L.Yu.,[2] Barabash M.Yu.[1]

National Technical University "Kharkov Politechnical Institute", Kharkov, Ukraine

[1]*Technical Center NAS of Ukraine, Kiev, Ukraine*

[2]*Institute of chemistry of surface NAS of Ukraine, Kiev, Ukraine*

BP-9P/22 **Periodic interrupted mode of boundary friction**

Khomenko A.V. and Lyashenko I.A.

Sumy State University, Sumy, Ukraine

BP-9P/23 **Effects in the system of interaction nanoparticles of highanisotropic ferrimagnets**

Olkhovik L.P.[1], Shurinova E.V.[1], Kamzin A.S.[2], Savchenko E.M.[1]

[1]*V.N.Karazin Kharkov national university, Kharkov, Ukraine*

[2]*A.F.Ioffe Physico-Technical institute of RAS, St.-Petersburg, Russia*

BP-9P/24 **The nanoneighbouring order influence on the indicatory surface of inelasticity-elasticity body of AgZn alloys and SiO_2**
Onanko A.P., Grabovskiy Yu.E., Lyashenko O.V., Onanko Y.A., Rugal O.G., Brozhko I.Y.
Taras Shevchenko Kiev national research university, physics department, Kiev, Ukraine

BP-9P/25 **Inhomogeneous field effects on the optical properties of quantum dot**
Lozovski V. and Tsykhonya A.
V.E. Lashkariov Institute of Semiconductor Physics, National Academy of Sciences of Ukraine, Kyiv Ukraine

BP-9P/26 **Optical and structural properties of nanocomposites via UV-induced polymerization of acrylates**
Burunkova J.A., Fokina M.I., Denisyuk I.Yu.
Saint-Petersburg State University of Information Technologies, Mechanics and Optics, Saint-Petersburg, Russia

BP-9P/27 **Influence of nanoaddition on polymeric matrix structure formation**
Burunkova J.A., Fokina M.I.
Saint-Petersburg State University of Information Technologies, Mechanics and Optics, Saint-Petersburg, Russia

BP-9P/28 **Influence of Ga_2O_3 on the chemical stimulating action of Bi_2O_3 during thermal oxidation of GaAs**
Mittova I.Ya., Penskoy P.K., Kozhevnikova T.V., Kostryukov V.F.
Voronezh State University

BP-9P/29 **The electro-physical properties and factor of the sized of ceramic materials based on ZrO_2**
Artamonova O.V.
Voronezh State University of Architecture and Civil Engineering, Voronezh, Russian Federation

BP-9P/30 **Method of receipt the nanostructured hydroxylapatite of calcium with large surfaces for creation of the effective adsorption systems**
Geraskina I., Arseniev P.
Moscow Power Engineering Institute, Russia, Moscow

BP-9P/31 **Synthesis, structure and properties of nanocomposite material polyvinylchloride plastisol — carbon**
Revo S., Lozovy F., Ivanenko K., Dashevsky M.
Taras Schevchenko National University of Kyiv

BP-9P/32 **Temperature-dependent inelasticity-elasticity body of GeSi and SiO_2**
Onanko A.P., Lyashenko O.V., Onanko Y.A., Rugal O.G., Brozhko I.Y.
Taras Shehvchenko Kiev national research university, physics department, Kiev, Ukraine

BP-9P/33 **Structure modification of the carbon nitride films by thermal treatment**
Prudnikov A.M., Varyukhin V.N., Linnik A., Olitsky L.
Donetsk Institute for Physics and Engineering of NASU, Donetsk, Ukraine

BP-9P/34 **The sol-gel technologies at preparing oganic-inorganic nanostructured thermostable materials**

Laskovenko N.N., Gomza Yu.P., Maslak Yu.V. Lebedev E.V
Institute of Macromolecular Compound Chemistry of National Academy of Sciences of Ukraine, Kyiv, Ukraine

BP-9P/35 **Theoretical description of current spike observed during the nanoindentation of GaAs crystal**

Kosogor A.O., L'vov V.A.
Radiophysics Faculty of Taras Shevchenko National University of Kyiv, Kyiv, Ukraine

BP-9P/36 **Modification of Materials Under Highly Non-Stationary Conditions of Laser and Ion Irradiation**

Pogorelov A.
G.V. Kurdyumov Institute for Metal Physics, NAS of Ukraine, Kiev, Ukraine

BP-9P/37 **Irradiation influence on inelasticity properties of Ti alloys and SiO_2**

Onanko A.P., Lyashenko O.V., Onanko Y.A., Rugal O.G., Busko T.O.
Taras Shevchenko Kiev national research university, physics department, Kiev, Ukraine

BP-9P/38 **Electrical conductivity of Sr-Bi-B-O nanocrystalline glass-ceramic**

Egorysheva A.V.[1], Volodin V.D.[1], Sorokin N.I.[2], Skorikov V.M.[1]
[1]*N. S. Kurnakov Institute of General & Inorganic Chemistry, RAS, Moscow, Russia*
[2]*A. V. Shubnikov Institute of Crystallography, RAS, Moscow, Russia*

BP-9P/39 **Morphology and optical properties of the films with magnetite nanoparticles**

Korovyanko O.[2], Dmitruk N.[1], Mamykin S.[1], Sytnyk M.[2], Litvin O.[1], Fochuk P.[2]
[1]*Institute of Semiconductor Physics of NASU, Kyiv, Ukraine, Kyiv, Ukraine*
[2]*Inorganic Chemistry, Chernivtsi National University, Chernivtsi, Ukraine*

BP-9P/40 **Synthesis of nanoparticles $Y_{0.7}Sr_{0.3}FeO_3$ with high coercive force**

Nguyen Anh Tien[1], Mittova I.Ya.[1], Grebennikov A.A.[2]
[1]*Voronezh State University, Voronezh, Russia*
[2]*Voronezh state technical university, Voronezh, Russia*

BP-9P/41 **Nitride films on the basis nanoporous III-V-structures**

Kidalov V.[1], Yatsenko Y.[1], Suchikova J.[1], Sukach G.[2]
[1]*Berdyansk State University*
[2]*Institute of Semiconductor Physics, NAS of Ukraine*

BP-9P/42 **Hydrogen in nanocrystalline silicon: technology, emission, characterization**

Litvinenko S., Alekseev S.A., Skryshevsky V.A.
Kiev Taras Shevchenko national university

BP-9P/43 **Use of methods nanotechnologies as a way of formation high piezoproperties PZT-ceramics**
Gusakova L.G.[1], Pogibko V.M.[1], Spiridonov V.N.[2], Rakov V.F.[1], Spiridonov N.A.[1], Dorofeeva V.V.[1]
[1]*STC "Reactivelektron", NAS of Ukraine, Donetsk, Ukraine*
[2]*Donetsk Physical and Technical Institute NAC of Ukraine, Donetsk, Ukraine*

BP-9P/44 **Functional nanomaterials of noble metals: antimicrobial and chemical activity of Ag/SiO_2 and Au/SiO_2 composites**
Mukha I.[1], Eremenko A.[1], Smirnova N.P.[1], Linnik O.[1], Korchak G.[2], Mikhiyenkova A.[2]
[1]*Chuiko Institute of Surface Chemistry, National Academy of Sciences of Ukraine, Kyiv-164, Ukraine*
[2]*A.N. Marzeyev Institute for Hygiene and Medical Ecology, AMS of Ukraine, Kyiv-94, Ukraine*

BP-9P/45 **High Sensitive MSM UV Photodetector Based on AlGaN/GaN Heterostructures**
Lutsenko E.V.*[1], Vainilovich A.G.[1], Rzheutskii M.V.[1], Pavlovskii V.N.[1], Yablonskii G.P.[1], Shulenkov A.S.[2], Kalisch H.[3], Jansen R.H.[3], Schineller B.[4], Heuken M.[4,3]
[1]*Stepanov Institute of Physics, National Academy of Sciences of Belarus, Minsk, Minsk, Belarus*
[2]*Minsk Research Institute of Radiomaterials, Minsk, Belarus*
[3]*Institut für Theoretische Elektrotechnik, RWTH Aachen, Germany*
[4]*AIXTRON AG, Herzogenrath, Germany*

BP-9P/46 **Kinetics of III-V nanowhiskers growth in chloride system**
Guba S.K., Kost Ya.Ya.
Lviv Polytechnic National University, Lviv

BP-9P/47 **Polimerstabilization of silver nanobiocomposites**
Yurkova I.N.[1], Ryabushko V.I.[2], Milyukova E.T.[1]
[1]*V.I.Vernadsky Tavrida National University, Simferopol, Ukraine*
[2]*Institut of Biology of Southern Seas NASU, Sevastopol, Ukraine*

15.00-17.00 Oral Session BC.
Section 6. Magnetoelastic and Adaptive Materials

Chairmen: Pernod Ph., Preobrazhensky V.L.

BC-6L/1 **Problems of structure determination for crystals with high density of planar defects (invited)**
Olikhovska L., Glavatska N., Glavatskyy I., Ustinov A.
[1]*Institute for Metal Physics, Kiev, Ukraine*

BC-6O/1 **The laws of bulk elasticity in formation of structural phase transitions of magnetic, conducting, resonance properties of magnet-containing media**
Polyakov P.I.
Institute for Physics of Mining Processes NAS of Ukraine

BC-6O/2 **Effect of nano-twinned nature of Heusler martensies on crystal structure and its identification on the example of Ni-Mn-Ga**

Glavatska N.[1], Olikhovska L.[1], Glavatslyy I.[1,2], Hoffmann J.-U.[2]
[1]*Institute for Metal Physics, Kiev, Ukraine*
[2]*Helmhotz Centre Berlin for Materials and Energy, Berlin, Germany*
[3]*Institute Laue-Langevin, 6 rue Jules Horowitz, Grenoble, France*

BC-6O/3 **Peculiar magnetic properties of Ni-Mn-In-based ferromagnetic shape memory alloy**

Khovaylo V.V.[1,2], Kanomata T.[3], Tanaka T.[4], Nakashima M.[4], Amako Y.[4], Kainuma R.[5], Umetsu R.Y.[5], Morito H.[5], Koledov V.[6], Shavrov V.[6]
[1]*National University of Science and Technology "Moscow Institute of Steel and Alloys" Moscow, Russia*
[2]*Physics Department, Moscow State Mining University, Moscow, Russia*
[3]*Faculty of Engineering, Tohoku Gakuin University, Tagajo, Japan*
[4]*Faculty of Science, Shinshu University, Matsumoto, Japan*
[5]*Institute of Multidisciplinary Research for Advanced Materials, Tohoku University, Sendai, Japan*
[6]*Institute of Radioengineering and Electronics of RAS, Moscow, Russia*

BC-6O/4 **Thermodynamics of nucleation at martensitic transformations in hydrostatical pressured nanostructural systems**

Tokiy Natalya, Varyukhin V.N., Tokiy Valentine
Donetsk Physical & Technical Institute NAS Ukraine, Donetsk, Ukraine

BC-6O/5 **Three Phonon Coupling in Antiferromagnets under Frequency Modulated Electromagnetic Pumping**

Preobrazhensky V.L.[1,3], Yevstafyev O.[2,3], Pernod P.[3], Berzhansky V.N.[2]
Joint European Laboratory LEMAC:
[1]*Wave Research Center, GPI RAS, Moscow, Russia*
[2]*Taurida National University, Simferopol, Ukraine*
[3]*IEMN CNRS 8520, Ecole Centrale de Lille, France*

BC-6O/6 **Ferromagnetic resonance properties and anisotropy of Ni-Mn-Ga thin films of different thicknesses deposited on Si substrate**

Golub Vladimir[1], Salyuk Olga[1], Reddy K.M.[2], Chernenko Volodymyr[1], Müllner Peter[3], Punnoose Alex[2], Ohtsuka Makoto[4]
[1]*Institute of Magnetism, NASU and MESU, Kiev, Ukraine*
[2]*Department of Physics, Boise State University, Boise, USA*
[3]*Department of Materials Science and Engineering, Boise State University, Boise, USA*
[4]*IMRAM, Tohoku University, Sendai, Japan*

17.00-19.00 Oral Session BD.
Section 10. Materials for Medical and Environmental Applications. Biosensors

Chairmen: Douglas W.E., Lachinov A.N.

BD-10L/1 **Bio-chemical sensory based on organic structure with Q-2 electronic gas (invited)**

Lachinov A.N.[1], Kornilov V.M.[1], Rakhmeev R.G.[1], Gadiev R.M.[1], Salikhov R.B.[2]
[1]*Institute of Molecules and Crystal Physics URC RAS, Ufa, Russia*
[2]*Bashkir State Pedagogical University, Ufa, Russia*

BD-10O/1 **Investigation of nanocrystalline TiO_2 sensor properties**

Konstantinova E.A.[1,2], Kashkarov P.K.[2,1], Kokorin A.I.[3], Lips K.[4], Kisch H.[5]
[1]*Physics Department, Moscow State M.V. Lomonosov University, Moscow, Russia*
[2]*Russian Research center "Kurchatov Institute", Moscow, Russia*
[3]*Institute of Chemical Physics RAS, Moscow, Russia*
[4]*Hahn-Meitner-Institut, Berlin, Germany*
[5]*Erlangen-Nürnberg University, Erlangen, Germany*

BD-10O/2 **Optimization of Methods of Ethanol Determination in Wine by Amperometric Enzyme Biosensor**

Goriushkina Tatiana[1,2], Orlova Anna[2], Soldatkin A.P.[1], Dzyadevych Sergei[1]
[1]*Laboratory of Biomolecular Electronics, Institute of Molecular Biology and Genetics, National Academy of Sciences of Ukraine, Kyiv, Ukraine*
[2]*Taras Shevchenko National University, Kyiv, Ukraine*

BD-10O/3 **Flicker noise gas sensor arrays with perfectly dielectrically isolated individual elements**

Makoviychuk M.I.
Yaroslavl Branch of the Institute of Physics and Technology of RAS, Yaroslavl, Russia

BD-10O/4 **Influence of ferromagnetic domain structure on its etching process in weak solution of nitric acid**

Gorobets S.V., Gorobets O.Yu., Bylo O.N.
National Technical University of Ukraine "Kyiv Polytechnic Institute" Kyiv, Ukraine

BD-10O/5 **Anisotropy of Capture Ability of Ferromagnetic Heads Ordered Structure**

Gorobets Yu.I.[1], Gorobets S.V.[2], Legenkiy Yu.A.[3], Pimenov Yu.N.[3]
[1]*Institute of Magnetism NAS of Ukraine, Kiev, Ukraine*
[2]*National Technical University of Ukraine "KPI", Kiev, Ukraine*
[3]*Donetsk National University, Donetsk, Ukraine*

17.00-18.00 Memory Session BF. 100-th Anniversaries of N.N.Bogolyubov and L.V.Kirensky

Chairmen: Baryakhtar V.G., Ignatchenko V.A.

15.00-19.00 Poster Session BQ. Section 3. Materials for Spin Electronics. Transport Phenomena

Chairmen: Krivoruchko V.N., Popkov A.F.

BQ-3P/1 **Elastic properties of La–Y–Sr-Mn-O singal crystal manganites**
Zainullina R.I.[1], Bebenin N.G.[1], Ustinov V.V.[1], Mukovskii Ya.M.[2]
[1]*Institute of Metal Physics, UD RAS, Ekaterinburg, Russia*
[2]*Moscow State Steel & Alloys Institute, Moscow, Russia*

BQ-3P/2 **Critical parameters near the paramagnetic to ferromagnetic phase transition in Sr-doped manganite single crystals**
Tovstolytkin A.I.[1], Pogorilyi A.M.[1], Kalita V.M.[2], Lozenko A.F.[2], Ryabchenko S.M.[2], Trotsenko P.O.[2]
[1]*Institute of Magnetism, Kyiv, Ukraine*
[2]*Institute of Physics, Kyiv, Ukraine*

BQ-3P/3 **Auto-oscillations of conductivity in systems with combined magnetic and resistive phase transitions of the first order**
Dzhezherya Yu.I., Klimuk E., Tovstolytkin A.I.
Institute of Magnetism, Kyiv, Ukraine

BQ-3P/4 **Preisach model of hysteresis for magnetoresistance of mixed-phase manganites**
Marchenko M.A., Krivoruchko V.N.
Donetsk Physics and Technology Institute NAS of Ukraine, Donetsk, Ukraine

BQ-3P/5 **Domain wall dynamics in ultrathin manganite film**
Uspenskaya L.S.[1], Nurgaliev T.[2], Miteva S.[2]
[1]*Institute of Solid State Physics, Russian Academy of Sciences, Chernogolovka, Russia*
[2]*Institute of Electronics, Bulgarian Academy of Sciences (BAS); Sofia, Bulgaria*

BQ-3P/6 **Planar Hall Effect in strained epitaxial manganite thin films**
Borisenko I.V.
Kotel'nikov Institute of Radio Engineering and Electronics, Russian Academy of Sciences, Moscow, Russia

BQ-3P/7 **Structure, phase transitions and magnetoresistive properties of $La_{0.6}Sr_{0.2}Mn_{1.2-x}Al_xO_{3\pm\delta}$ ceramics**
Pashchenko V.P.[1,2], Pashchenko A.V.[1], Silcheva A.G.[2], Prokopenko V.K.[1], Revenko Yu.F.[1], Kisel N.G.[1]
[1]*Donetsk Institute for Physics and Engineering, National Academy of Sciences of Ukraine*
[2]*Luhansk Taras Shevchenko National University*

BQ-3P/8 **Influence of synthesis temperature for nanopowder rare-earth manganitoperovskites on their dispersivity, structure and magnetoresistive properties**

Pashchenko A.V.[1], Pashchenko V.P.[1,2], Prilipko Yu.S.[2], Prilipko S.Yu.[1], Revenko Yu.F.[1], Shemyakov A.A.[1], Kisel N.G.[1], Burkovetsky V.V.[1]

[1]*Donetsk Institute for Physics and Engineering, NAS of Ukraine*

[2]*Donetsk Research-Technological Center "Reactiveelectron", NAS of Ukraine*

BQ-3P/9 **Critical behavior at paramagnet-ferromagnet transition for A-site ordered $PrBaMn_2O_6$**

Trukhanov A.V.[1], Trukhanov S.V.[1], Stognij A.I.[1], Szymczak H.[2]

[1]*Scientific-Practical Materials Research Centre NAS of Belarus, Minsk, Belarus*

[2]*Institute of Physics of PAS, Warsaw, Poland*

BQ-3P/10 **Magnetic and Electrical Properties Evolution of Single Crystal $Nd_{0.5}Sr_{0.5}MnO_3$ in Magnetic Field 0 - 9 T**

Dovgiy V.T., Linnik A., Kamenev V., Mikhailov V., Tarenkov V.Yu., Sidorov S.L., Linnik T., Davydeiko N., Spiridonov V.N., Levchenko G.

Donetsk Institute for Physics and Engineering of NASU

BQ-3P/11 **Room temperature magnetoresistance of Pr(Ba)-ordered manganites**

Trukhanov S.V.[1], Trukhanov A.V.[1], Szymczak H.[2]

[1]*Joint Institute of Solids and Semiconductor Physics of NASB, Minsk, Belarus*

[2]*Institute of Physics of PAS, Warsaw, Poland*

BQ-3P/12 **The investigation of the crystal structure of the Ti-substituted neodymium manganites**

Pastushonok S.N.[1], Lobanovsky L.S.[2], Korshikov F.P.[3]

[1]*BSPU named of M.Tank, Minsk, Belarus*

[2]*SSPA «Scientific-Practical Materials Research Centre of NAS of Belarus Minsk, Belarus*

[3]*VGU named of P.M. Masherov, Vitebsk, Belarus*

BQ-3P/13 **Dynamics of charge system and phase separation in half-doped manganites**

Chabanenko V.[1], Vasiliev S.[1], Nabiałek A.[2], Tsvetkov T.[1], Dunaevsky S.[3], Minikaev R.[2], Piechota S.[2], Szymczak H.[2], Kravchenko Z.[1]

[1]*Institute for Physics and Engineering, NASU, Donetsk, Ukraine*

[2]*Institute of Physics, PAS, Warsaw, Poland*

[3]*Petersburg Nuclear Physics Institute, Gatchina, Russia*

BQ-3P/14 **Onset of the canted ferromagnetic phase in doped manganites and the temperature of the transition into it**

Khutsishvili K.O., Fokina N.P., Ugulava A.I.

Tbilisi Ivane Javakhishvili State University, Georgia, Tbilisi

BQ-3P/15 **Sensitivity of $La_{0.7}Sr_{0.3}MnO_{3-\delta}$ film conductance to the oxygen stoichiometry**

Nikolaenko Yu.M.[1], Medvedev Yu.V.[1], Mukhin A.B.[1], Belyaev B.V.[2], Gritskih V.A.[2], Zhikharev I.V.[1,2], Kara-Murza S.V.[2], Korchikova N.V.[2], Tikhiy A.A.[2]

[1]Donetsk Institute for Physics and Technology named after A.A.Galkin, National Academy of Sciences of Ukraine, Donetsk, Ukraine

[2]Lugansk National University named after T.Shevchenko, Lugansk, Ukraine

BQ-3P/16 **Imaginary magnetic susceptibility and NMR investigations of the magnetic inhomogeneity of self-doped La-manganites**

Tarasenko T.N., Mazur A.S., Linnik A.I., Dovgiy V.T.

Donetsk Institute for Physics and Engineering named after O.O. Galkin, Donetsk, Ukraine

BQ-3P/17 **Impact of nanoscale phase separation on electrical and magnetic features of thin $La_{0.67}Ca_{0.33}MnO_3$ films**

Dorosinets Vladimir

Stepan Shvarkov, Belarusian State University, Minsk, Republic of Belarus

BQ-3P/18 **Thermal conductance of multilayer film structures**

Nikolaenko Yu.M., Medvedev Yu.V., Mukhin A.B., Lyubchanskii M.I., Prudnikov A.M.

Donetsk Institute for Physics and Technology named after A.A.Galkin, National Academy of Sciences of Ukraine, Donetsk, Ukraine

BQ-3P/19 **Magnetic properties of the $(La_{0.7}Sr_{0.3})_{1-x}Ca_xFeO_3$ perovskites ($0 \le x \le 1$)**

Lobanovsky L.S., Trukhanov S.V.

SSPA «Scientific-Practical Materials Research Centre of NAS of Belarus», Minsk, Belarus

BQ-3P/20 **Temperature dependence of thermopower value in erbium and holmium cobaltites**

Khirnyi V.F.[1], Kozlovskiy A.A.[1], Semenov A.V.[1], Puzikov V.M.[1], Chiang Yu.N.[2]

[1]Institute for Single Crystals, NAS of Ukraine. Kharkov, Ukraine

[2]B.Verkin Institute for Low Temperature Physics and Engineering, NAS of Ukraine. Kharkov, Ukraine

BQ-3P/21 **Magnetic properties of $RFe_3(BO_3)_4$ (R=Gd, Er, Dy)**

Kuvandikov O.K.[1], Leonyuk N.I.[2], Shakarov H.O.[1], Shodiev Z.M.[1], Amonov B.U.[1]

[1]Samarkand State University, Samarkand, Uzbekistan.

[2]Moscow State University, Moscow, Russia

BQ-3P/22 **Magnetic properties of $ErFe_3(BO_3)_4$**

Demidov A.A.[1], Volkov D.V.[2]

[1]Bryansk State Technical University, Bryansk, Russia

[2]M.V. Lomonosov Moscow State University, Moscow, Russia

BQ-3P/23 **Influence of thermal fluctuations on the current induced macrospin self-oscillations in a layered magnetic nanostructure**

Popkov A.F.[1,2], Chinenkov M.Yu.[1,2]
[1]*F.V. Lukin State Scientific-Reseach Institute of Physical Problems, Moscow, Russia*
[2]*Moscow Institute of Electronic Technology, Moscow, Russia*

BQ-3P/24 **Instability of non-equilibrium superconductive state in Pb films induced by spin-polarized electron injection**

Rudenko E.M., Korotash I.V., Kudryavtsev Y.V. and Krakovny A.A.
Institute of Metal Physics, National Academy of Sciences of Ukraine, Kiev-142, Ukraine

BQ-3P/25 **ESR studies of solid solutions $Hg_{1-x}Fe_xSe$ (M = Cr, Fe)**

Bekirov B.[1], Ivanchenko I.[1], Popenko N.[1], Okulov V.[2], Tkach V.[3], Paranchich S.[4], Zhitluhina E.S.[5], Lamonova K.V.[5], Orel S.M.[5], Pashkevich Yu.G.[5]
[1]*Usikov Institute for Radiophysics and Electronics of NASU, Kharkov, Ukraine*
[2]*Institute of Metal Physics, Ural Division, Russian Academy of Sciences, Ekaterinburg, Russia*
[3]*V. N. Bakul Institute for SuperhardMaterials of NASU, Kyiv, Ukraine*
[4]*Chernivtsi National University, Chernivtsi, Ukraine*
[5]*A. A. Galkin Donetsk Institute for Physics and Engineering of NASU, Donetsk, Ukraine*

BQ-3P/26 **Magnetic properties of thin cobalt films on semiconductor substrates**

Pashkevich M.V.[1], Stognij A.I.[1], Novitskii N.N.[1], Gribkov B.A.[2], Mironov V.L.[2], Shulenkov A.S.[3] and Fettar F.[4]
[1]*Scientific-Practical Materials Research Centre of NAS of Belarus*
[2]*Institute for physics of microstructures RAS*
[3]*Minsk research institute of radiomaterials*
[4]*Institut Néel, CNRS*

BQ-3P/27 **Preparation of single crystal half metal films by hydrothermal technology**

Mytsyuk B.[1], Gupta A.[2], Nevdacha V.[1], Podyalovskiy D.[1], Pogorilyi A.M.[1]
[1]*Institute of Magnetism NAS of Ukraine, Kyiv, Ukraine*
[2]*The University of Alabama, Center for Materials for Information Technology (MINT), Tuscaloosa, USA*

BQ-3P/28 **Current - voltage relation for superconductor/ferromagnet proximity structures**

Volobueva I.V., Krivoruchko V.N.
Donetsk Physics and Technology Institute, NAS of Ukraine, Donetsk, Ukraine

BQ-3P/29 **Electrophysics Properties of MTJ Fabricated by EBE-Method on Amorphous Substrate**

Filatov A., Pogorelov A.
G.V. Kurdyumov Institute for Metal Physics, NAS of Ukraine, Kiev, Ukraine

BQ-3P/30 **Spin injection in ferromagnet-superconductor heterostructures**
Rudenko E.M.[1], Korotash I.V.[1], Krakovny A.A.[1], Kudryavtsev Y.V.[1], Dyakin M.V.[1], Boylo I.V.[2]
[1]*Institute for Metal Physics, National Academy of Sciences of Ukraine, Kyiv-142, Ukraine*
[2]*Donetsk Institute for Physics and Engineering, National Academy of Sciences of Ukraine, Donetsk-114, Ukraine*

BQ-3P/31 **The physical propeties of EuO:Fe injector and the spin - field transistor creation**
Borukhovich A.S.[2], Ignat'eva N.I.[1], Stognij A.I.[2], Yanushkevich R.I.[1]
[1]*Institute of Solid State Chemistry, Ural Division, Russian Academy of Sciences, Yekaterinburg, Russia*
Russian State Vocational Pedagogical University, Yekaterinburg,
[2]*Joint Institute of Solid State and Semiconductor Physics, National Academy of Sciences of Belarus, Minsk*

BQ-3P/32 **Field dependence for the magnetization of a thin ferromagnetic film in contact with an antiferromagnet**
Pankratova M.L., Kovalev A.S., Grechnev A.G.
V. N. Karazin Kharkov National University, Kharkov

BQ-3P/33 **Pressure-Induced Spin Transition in 2D Compounds $Fe(3\text{-}Fpy)_2Pd(CN)_4$, $Fe(3\text{-}Fpy)_2Ni(CN)_4$ and $Fe(3\text{-}Fpy)_2Pt(CN)_4$**
Bukin G.V.[1], Terekhov S.A.[1], Gaspar A.B.[2], Real J.A.[2], Levchenko G.G.[1]
[1]*Donetsk Physical & Technical Institute NAS of Ukraine, Donetsk*
[2]*Institut de Ciencia Molekular/Departement de Quimica Inorganica Universitat de Valencia. Valencia, Spain*

BQ-3P/34 **Tunneling magnetoresistance in ferromagnetic junctions**
Useinov A.N., Useinov N.Kh., Tagirov L.R.
Kazan State University, Kazan, Russia

BQ-3P/35 **Effect of current on spin-valve layer magnetization**
Sohatsky V., Shulimov Y.
T. Shevchenko Kyiv National University, Ukraine

BQ-3P/36 **Electrophysical, magnetoresistive and magnetooptic properties of thin films with spin-depended scattering of electrons**
Velykodnyi D.V., Cheshko I.V., Protsenko S.I., Tkach O.P., Protsenko I.Yu.
Sumy State University, Sumy, Ukraine

BQ-3P/37 **Laser-induced remagnitization of multilayer films**
Krupa Mykola, Korostil Andrii
Institute of Magnetism of NAS of Ukraine, Kyiv

BQ-3P/38 **The magnetic properties of the $Cd_{1-x}Mn_xGeAs_2$ ($0 \le x \le 0.3$) chalcopyrites near T_C**
Trukhan V.M., Lobanovsky L.S., Shoukavaya T.V.
SSPA «Scientific-Practical Materials Research Centre of NAS of Belarus», Minsk, Belarus

BQ-3P/39 **Electron transport in thin ferromagnetic $Zn_{1-x}Co_xO$ films**

Kytin V.G.[1], Kulbachinskii V.A.[1], Glebov D.S.[1], Reukova O.V.[1], Burova L.I.[2], Kaul A.R.[2]

[1]*Faculty of Physics of M. V. Lomonosov Moscow State University, Moscow, Russia*

[2]*Chemistry Department of M. V. Lomonosov Moscow State University, Moscow, Russia*

BQ-3P/40 **Optical properties of AlN/n-SI (111) obtained by method of hf reactive magnetron sputtering**

Zayats M.S., Boiko V.G., Gentsar P.O., Vuychik M.V.,Kruglenko I.V., Litvin O.S., Stronski A.V.

V.Lashkaryov Institute of semiconductor physics NAS Ukraine, Kyiv

BQ-3P/41 **Nonlinear electrical resistivity of four–component cobaltite $Er_{1-x}Sr_xCoO_{3-\delta}$ over a wide range of dopant concentrations**

Dzyuba M.O.[1], Chiang Yu.N.[1], Shevchenko O.G.[1] and Khirnyi V.Ph.[2]

[1]*B. I. Verkin Institute for Low Temperature Physics and Engineering, NAS of Ukraine, Kharkov, Ukraine*

[2]*State Scientific Institution "Institute for Single Crystals", NAS of Ukraine, Kharkov, Ukraine*

Wednesday, October 7

9.00-13.00 Oral Session CA.
Section 3. Materials for Spin Electronics. Transport Phenomena

Chairmen: Sato K., Bebenin N.G.

CA-3L/1 **Magnetic states and transport properties of laterally confined magnetic multilayers (invited)**
Fraerman A.A.
Institute for Physics of Microstructures RAS, Nizhny Novgorod, Russia

CA-3L/2 **Optical properties of lanthanum manganites (invited)**
Bebenin N.G.and Loshkareva N.N.
Institute of Metal Physics, UD RAS, Ekaterinburg, Russia

CA-3L/3 **Giant magnetoresistance on ferromagnetic/polymer interface (invited)**
Lachinov A.N.[1], Vorob'eva N.V.[1], Salazkin S.N.[2], Lachinov A.A.[1], Kornilov V.M.[1]
[1]Institute of Molecules and Crystal Physics URC RAS, Ufa, Russian Federation
[2]Institute of Elementoorganic Compounds RAS, Moscow, Russian Federation

CA-3O/1 **Electron transport in magnetic quantum nanocontacts**
Bukharaev A.A., Gatiyatov R.G., Lisin V.N.
Zavoisky Physical Technical Institute of RAS, Kazan, Russia

CA-3O/2 **Metal-insulator transitions in a quantum wire driven by the Rashba spin-orbit coupling**
Japaridze George I.
Andronikashvili Institute of Physics, Tbilisi, Georgia

CA-3O/3 **Heusler alloy films as potential spin-injectors for spintronic applications: atomic disorder effects**
Kudryavtsev Y.V.[1], Uvarov V.N.[1], Rudenko E.M.[1] and Lee Y.P.[2]
[1]Institute of Metal Physics, NAS of Ukraine, Kiev-142, Ukraine
[2]q-Psi and Department of Physics, Hanyang University, Seoul, Korea

CA-3O/4 **Tunneling mechanism of a giant magnetoresistance effect in double spin-filter junctions**
Khachaturova T.A., Belogolovskii M.A., Ryngach N.I., Khachaturov A.I.
Donetsk Institute for Physics and Engineering, National Academy of Sciences of Ukraine, Donetsk, Ukraine

CA-3O/5 **Spin injection in ferromagnet-superconductor heterostructures**
Krakovny A.A.[1], Boylo I.V.[2], Dyakin M.V.[1], Shchyptsov D.S.
[1]Institute for Metal Physics,National Academy of Sciences of Ukraine, Kyiv-142, Ukraine
[2]Donetsk Institute for Physics and Engineering, National Academy of Sciences of Ukraine, Donetsk-114, Ukraine

CA-3O/6 **Above Room Temperature Ferromagnetism in Si:Mn and $TiO_{2-\delta}$:Co**

Granovsky A.[1], Orlov A.[2], Balagurov L.[2], Perov N.[1], Ganshina E.[1], Sapelkin A.[3], Rogalev A.[4], Smekhova A.[4]
[1]*Faculty of Physics, Moscow State University, Moscow, Russia*
[2]*State Institute for Rare Metals, Moscow, Russia*
[3]*Queen Mary University of London, London, UK*
[4]*European Synchrotron Radiation Facility, Grenoble, Cedex 9, France*

CA-3O/7 **Autoemission current switching of spin states in magnetic nanostructure**

Popkov A.F.[1,2], Kulagin N.E.[1], Korneev V.I.[2], Bobrov A.A.[1,2], Mazurkin N.S.[2]
[1]*F.V. Lukin State Scientific-Reseach Institute of Physical Problems, Moscow, Russia*
[2]*Moscow Institute of Electronic Technology, Moscow, Russia*

CA-3O/8 **Giant magnetoresistance in semiconductor/granular film heterostructures with cobalt nanoparticles**

Lutsev L.V.[1], Stognij A.I.[2] and Novitskii N.N.[2]
[1]*A.F. Ioffe Physico-Technical Institute, Russian Academy of Sciences, Petersburg, Russia*
[2]*Scientific-Practical Materials Research Center, National Academy of Sciences of Belarus, Minsk, Belarus*

CA-3O/9 **Paramagnet to Ferromagnet and Insulator to Metal Phase transitions in $La_{0.88}MnO_{2.95}$**

Lazuta A.V.[1], Ryzhov V.A.[1], Khavronin V.P.[1], Chernenkov Yu.P.[1], Molkanov P.L.[1], Smirnov O.P.[1], Troaynchuk I.O.[2], Khomchenko V.A.[2]
[1]*Petersburg Nuclear Physics Institute RAS, Gatchina, Russia*
[2]*Institute of Physics of Solids and Semiconductors NAS, Minsk, Belarus*

CA-3O/10 **Exchnage coupling influence on hysteresis loops and magnetization kinetics of ferromagnetic loops**

Uspenskaya L.S.[1], Indenbom M.V.[2]
[1]*Institute of Solid State Physics RAS, Chernogolovka, Russia*
[2]*Laboratory of magnetism of Brittany CNRS, Brest, France*

9.00-14.00 Poster Session CP.
Section 6. Magnetoelastic and Adaptive Materials

Chairmen: Shavrov V.G., Glavatska N.

CP-6P/1 **Resonator Mode of Parametric Interaction in Magnetoelastic Active Element of Ultrasound Wave Phase Conjugator**

Pylnov Yu.V.[1,2], Shirkovsky P.N.[1,2], Preobrazhensky V.L.[1,3], Pernod P.[1]

Joint European Laboratory for Nonlinear Magnetoacoustics of Condensed Matter (LEMAC):
[1]Institut of Electronics, Microelectronics and Nanotechnology (IEMN DOAE UMR CNRS 8520), Ecole Centrale de Lille, France
[2]Moscow Institute of Radio Engineering, Electronics and Automation, Moscow, Russia
[3]Wave Research Center, A. M. Prokhorov General Physics Institute, Russian Academy of Sciences, Moscow, Russia

CP-6P/2 **Parametrically Active Magnetoelastic Composite Based on Nickel–Ferrite and Porous Polymers**

Shirkovsky P.N.[1,2], Pylnov Yu.V.[1,2], Preobrazhensky V.L.[1,3], Pernod P.[1]

European Laboratory for Nonlinear Magnetoacoustics of Condensed Matter (LEMAC):
[1]Institut of Electronics, Microelectronics and Nanotechnology (IEMN DOAE UMR CNRS 8520), Ecole Centrale de Lille, Villeneuve d'Ascq Cedex, France
[2]Moscow Institute of Radio Engineering, Electronics and Automation, Moscow, Russia
[3]Wave Research Center, A. M. Prokhorov General Physics Institute, Russian Academy of Sciences, Moscow, Russia

CP-6P/3 **Role of elastic stresses in the magnetic properties of solids**

Polyakov P.I., Ryumshyna T.A.

Physics of Mining processes institute of NAS of Ukraine, Donetsk, Ukraine

CP-6P/4 **Ferromagnetic resonance and magnetoelastic demodulation in giant magnetostriction $TbCo_2$/FeCo nanostructured thin film**

Klimov A.[1,2], Ignatov Yu.A.[2], Nikitov S.A.[2], Tiercelin N.[1], Preobrazhensky V.L.[1,3], Pernod P.[1]

[1]LEMAC–IEMN CNRS UMR 8520, Ecole Centrale de Lille, Villeneuve d'Ascq Cedex, France
[2]Kotel'nikov Institute of Radioengineering and Electronics (IRE RAS), Moscow, Russia
[3]Wave Research Center, A.M. Prokhorov General Physics Institute RAS, Moscow, Russia

CP-6P/5 **Magneto-acoustic resonance in strained crystal of iron borate**

Khizhnyi V.I., Tarakanov V.V., Khizhnaya T.M.

Institure of Radiophysics and Electronics NAS of Ukraine, Kharkov, Ukraine

CP-6P/6 **Influence of crystal steps on surface magnetism of Iron Borate**
Maksimova E.M.[1], Nayhatsky I.A.[1], Strugatsky M.B.[1], Zubov V.E.[2]
Joint European Laboratory LEMAC:
[1]Taurida National University, Simferopol, Ukraine
[2]Moscow State University, Lenin's Hills, MSU, Moscow, Russia

CP-6P/7 **Magnetization of Iron Borate monocrystals by axial pressure**
Skibinsky K.M., Strugatsky M.B., Yagupov S.V.
Joint European Laboratory LEMAC: Taurida National University, Simferopol, Ukraine

CP-6P/8 **Magnetic phases of Iron Borate under conditions of high hydrostatic pressure with axial component**
Skibinsky K.M., Strugatsky M.B.
Joint European Laboratory LEMAC: Taurida National University, Simferopol, Ukraine

CP-6P/9 **Thermal fluctuations in Iron Borate crystallization process and their correlation analysis**
Chuklov V.A., Strugatsky M.B., Yagupov S.V.
Joint European Laboratory LEMAC: Taurida National University, Simferopol, Ukraine

CP-6P/10 **Temperature phase transitions in therfenol**
Fridman Yu.A., Klevets Ph.N., Voytenko A.P.
V.I. Vernadskiy Taurida national university, Simferopol, Ukraine

CP-6P/11 **Inductive detection of magnetoacoustic responses and domain-acoustic echo in magnetostrictive materials using a pulse NMR technique**
Mamniashvili G.I.[1], Sharimanov Yu.G.[1], Gegechkori T.O.[1], Pohorily A.M.[2], Kuzmak O.M.[2]
[1]Andronikashvili Institute of Physics, Tbilisi, Georgia
[2]Institute of Magnetism, Kyiv, Ukraine

CP-6P/12 **Landau theory describing the martensite aging phenomenon**
Kosogor A.O., L'vov V.A.
Radiophysics Faculty of Taras Shevchenko National University of Kyiv, Kyiv, Ukraine

CP-6P/13 **Thermal Expansion of Single Crystal Ni_2MnGa**
Skirta Yu.B.[1], Sozinov A.[2], Nevdacha V.[1], Pogorilyi A.M.[1]
[1]Institute of Magnetism NAS of Ukraine, Kyiv, Ukraine
[2]AdaptaMat, Helsinki, Finland

CP-6P/14 **Effect of annealing on the temperature dependence of magnetization $Ni_{2.08}Mn_{0.96}Ga_{0.96}$ alloy**
Musabirov I.I., Mulyukov Kh.Ya.
Institute for Metals Superplasticity Problems, RAS, Russia, Ufa

CP-6P/15 **Effect of texture on the behavior of temperature dependence of thermal expansion $Ni_{2.08}Mn_{0.96}Ga_{0.96}$ alloy**
Musabirov I.I., Mulyukov Kh.Ya.
Institute for Metals Superplasticity Problems, RAS, Russia, Ufa

CP-6P/16 **Raman study of lattice dynamics of TiNi phases**
Ponosov Yu.S., Gundyrev V.M.
Institute of Metal Physics UD RAS, Ekaterinburg, Russia

CP-6P/17 **Unexpected mechanical oscillations of Ni-Ti-Cu amorphous melt spun ribbons under constant electric current**
Istomin-Kastrovskiy V., Khovailo V., Koledov V., Morozov E., Shavrov V.G., Shelyakov A., Tulaikova A.
Institute of a radio engineering and electronics of V.A.Kotelnikov of the Russian Academy of Sciences, Moscow, Russia

CP-6P/18 **The Structure and Functional Properties of Rapidly Quenched Ribbons NiTiCu with Different Part of Crystalline Phase State**
Belyaev S.P.[1], Istomin-Kastrovskiy V.V.[2], Koledov V.V.[3], Kuchin D.S.[3], Lega P.V.[3], Resnina N.N.[1], Shavrov V.G.[3], Shelyakov A.V.[4]
[1]*Saint-Petersburg State University, St. Peterburg, Russia*
[2]*The state technological university the Moscow institute of a steel and alloys Moscow, Russia*
[3]*Institute of a radio engineering and electronics of V.A.Kotelnikov of the Russian Academy of Sciences, Moscow, Russia*
[4]*Moscow engineering-physical institute, Moscow, Russia*

CP-6P/19 **Study of nanostructured NiTi shape memory alloy's structure and functional properties**
Afonina V.S., Gizatullin R.M., Ghundirov D.V., Kalashnikov V.S., Koledov V.V., Shavrov V.G., Istomin-Kastrovskiy V.V.
Institute of a radio engineering and electronics of V.A.Kotelnikov of the Russian Academy of Sciences, Moscow, Russia

CP-6P/20 **Application of nanostructural Nickel Titanium Implants with Shape Memory Effect to modern Dental practice**
Afonina V.S., Gizatullin R.M., Anan'ev S.P., Borisenko N.I., Kalashnikov V.S., Koledov V.V., Krasnoperov E.P., Arsen'ev P.A., Alexandrov M.T., Yusov N.A., Beletskiy B.I., Suslov V.I.
Institute of a radio engineering and electronics of V.A.Kotelnikov of the Russian Academy of Sciences, Moscow, Russia

CP-6P/21 **The Deformation Behavior of Fe-Ni-Co-Ti-Cu Shape Memory Alloys**
Titenko A.N.[1], Kozlova L.E.[1], Skirta Yu.B.[1], Demchenko L.D.[2]
[1]*Institute of Magnetism NAS of Ukraine, Kiev, Ukraine*
[2]*Institute of Metal Physics, Kiev, Ukraine*

CP-6P/22 **Martensitic transformation in Cu-Al-Mn alloy melt-spun ribbons.**
Kokorin V.V.[1], Kozlova L.E.[1], Konoplyuk S.M.[1], Perekos A.O.[2], Nadutov V.M.[2]
[1]*Institute of Magnetism NAS of Ukraine, Kiev, Ukraine*
[2]*Institute of Metal Physics, Kiev, Ukraine*

CP-6P/23 **Emergent Phenomena in complex materials and stability adaptive matter**
Kodess B.N.
VNIIMS-ICS&E, Moscow, Russia

CP-6P/24 **Indicatory surface of inelasticity-elasticity body of $Ti_{0.5}Al_{0.5}$ alloy and SiO_2**

Onanko A.P., Lyashenko O.V., Onanko Y.A., Rugal O.G., Busko T.O.
Taras Shevchenko Kiev national research university, physics department, Ukraine

9.00-14.00 Poster Session CQ. Section 5. Piezoelectric and Magnetoelectic Materials

Chairmen: Fetisov Y.K., Mishina E.D.

CQ-5P/1 **Magnetoelectric energy harvesting system**

Bichurin M.I.[1], Petrov V.M.[1], Petrov R.V.[1], Ivanov D.N.[1], Dong S.[2], Viehland D.[3] and Priya S.[3]
[1]*Novgorod State University, Veliky Novgorod, Russia*
[2]*Peking University, Beijing, China*
[3]*Virginia Tech., Blacksburg, Virginia, USA*

CQ-5P/2 **Low-frequency magnetoelectric devices**

Bichurin M.I.[1], Filippov A.V.[1], Pukinskii Yu.J.[1], Ivanov S.N.[1], Semenov G.A.[1], Liverts E.[2] and Paperno E.[2]
[1]*Novgorod State University, Veliky Novgorod, Russia*
[2]*Ben-Gurion University of the Negev, Beersheva, Israel*

CQ-5P/3 **Electrical field control of magnetoelectric interaction efficiency in ferromagnetic-piezoelectric structures**

Fetisov L.Y.[1], Fetisov Y.K.[2] and Srinivasan G.[3]
[1]*Faculty of Physics, MSU, Leninskie Gory, Moscow, Russia*
[2]*MIREA, Moscow, Russia*
[3]*Physics Department, Oakland University, Rochester, Michigan*

CQ-5P/4 **Efffects of mechanical activation on the preparation and physical properties of PZN-PZT ceramics**

Akimov A.I., Letko A.K.
State Scientific-Production Association "Scientific-Practical Material Research Centre NAS of Belarus", Minsk, Belarus

CQ-5P/5 **Dielectric and magnetoelectric properties of PZT Ni-ferrite bulk composites**

Laletin V.M.[1], Srinivasan G.[2]
[1]*Institute of Technical Acoustics, National Academy of Sciences of Belarus, Vitebsk, Belarus*
[2]*Physics Department, Oakland University, Rochester, Michigan, USA*

CQ-5P/6 **Preparation and physical properties of piezoceramic materials of the $xNa_{0.5}Bi_{0.5}TiO_3 - (1-x)Sr_{0.7}Bi_{0.2}TiO_3$ system**

Akimov A.I., Savchuk G.K., Letko A.K.
SSPA "Scientific-Practical Material Research Center of NASB", Minsk, Belarus

CQ-5P/7 **Converse magnetoelectricity in asymmetric magnetoelectric structures**
Radchenko G.S.
Institute of Physics, South Federal University, Rostov-on-Don, Russia
Pedagogical Institute of South Federal University, Rostov-on-Don, Russia

CQ-5P/8 **Influence of external electric field on domain structure of the ferrite garnet epitaxial films**
Koronovskyy V.E.
Department of Radiophysics, Taras Shevchenko Kiev National University, Kiev, Ukraine

CQ-5P/9 **Influence of powerful laser irradiation on electromagneto-optical dependences of bismuth-substituted ferrite garnets**
Koronovskyy V.E.
Department of Radiophysics, Taras Shevchenko Kiev National University, Kiev, Ukraine

CQ-5P/10 **Microwave magnetoelectric effects in nickel zinc ferrite-piezoelectric bilayers**
Tatarenko A.S.[1], Ustinov A.B.[1,2], Srinivasan G.[1]
[1]*Oakland University, Rochester, USA*
[2]*St. Petersburg Electrotechnical University, St. Petersburg, Russia*

CQ-5P/11 **Magnetoelectric response in different types of Ni – PZT layered composites**
Padubnaya N.M.[1], Laletin V.M.[1], Stognij A.I.[2], Novitskii N.N.[2]
[1]*Institute of Technical Acoustics of National Academy of Sciences of Belarus, Belarus, Vitebsk*
[2]*SSPA «Scientific-Practical Materials Research Centre of NAS of Belarus», Belarus, Minsk*

CQ-5P/12 **The influence of thermal excitation duration of piezoelectric ceramics PZT on stability of its polarized state**
Kuzenko D.V.[1,2], Ishchuk V.M.[1], Bazhin A.I.[2], Spiridonov N.A.[1]
[1]*STC "Reaktivelektron" NAS of Ukraine, Donetsk, Ukraine*
[2]*Donetsk National University, Donetsk, Ukraine*

CQ-5P/13 **Piezoceramic ordered crystallite texture forming in alternating electric field**
Pogibko V.M., Gusakova L.G., Kuzenko D.V., Spiridonov N.A.
Scientific and technological Centre Reactivelectron of NAS of Ukraine, Dontsk

CQ-5P/14 **Pyroelectric and dielectric responses in the PZT thin films**
Sergeeva O.N.[1], Bogomolov A.A.[1], Nigomatulin A.V.[1], Pronin I.P.[2], Kaptelov E.Yu.[2]
[1]*Tver State University, Tver, Russia*
[2]*Ioffe Institute, S.-Petersburg, Russia*

CQ-5P/15 **Vacuum Evaporated Bismuth Films as a Matter Similar to GMR Material: Magnetoresistance, Structure and Application**
Avramenko B.A., Aseev A.S., Grigorov S.N., Kolupaeva Z.I., Mirzoev I.G., Ravlik A.G.
National Technical University "Kharkiv Polytechnic Institute", Kharkiv, Ukraine

CQ-5P/16 **The phase diagram of the pseudo-cubic ferroic**
Merkulov V.S.
Scientific-Practical Materials Research Centre of NASB, Minsk, Belarus

CQ-5P/17 **Investigation of the pyroelectric properties of α-$LiIO_3$ crystals at the temperatures above 293 K**
Yatsenko A.V., Yevdokimov S.V., Burijako N.N.
Taurida National University, Simferopol, Ukraine

CQ-5P/18 **Analysis of the dipole electronic polarizability in simple oxides, fluorides and sulfides**
Yatsenko A.V., Mojarovskaya S.N.
Taurida National University, Simferopol, Ukraine

CQ-5P/19 **Memory effect in the crystalline phases of bent core mesogen**
Zharova M.A.[1], Ungar G.[2], Zeng X.[2], Usol'tseva N.V.[1]
[1]*Ivanovo State University, Ivanovo, Russia*
[2]*Department of Engineering Materials, University of Sheffield, UK*

Thursday, October 8

9.00-11.45 Oral Session DA.
Section 7. Microwave Materials and Metamaterials

Chairmen: Ignatchenko V.A., Slavin A.N.

DA-7L/1 **Cooperative Dynamics of an Array of Nonlinear Spin-Torque Nano-Oscillators (invited)**
Slavin Andrei and Tiberkevich Vasil
Department of Physics, Oakland University, Rochester, USA

DA-7L/2 **Effects of cross correlations between inhomogeneities on the spectrum and damping of spin and elastic waves (invited)**
Ignatchenko V.A.
L.V. Kirensky Institute of Physics, Siberian Branch of RAS, Krasnoyarsk, Russia

DA-7O/1 **Experimental investigation of spin-wave solitons in magnonic crystals**
Ustinov A.B.[1], Demidov V.E.[2], Kalinikos B.A.[1] and Demokritov S.O.[2]
[1]*St. Petersburg Electrotechnical University, St. Petersburg, Russia*
[2]*Institute for Applied Physics, University of Muenster, Germany*

DA-7O/2 **Response of Spin-Torque Nano-Oscillators to External RF Signals**
Pogoryelov Ye.[1], Bonetti S.[1], Muduli P.[1], Zhou Y.[1], Mankoff F.[2] and Akerman J.[1,3]
[1]*Royal Institute of Technology, Stockholm, Sweden*
[2]*Everspin Technologies, Chandler, AZ, USA*
[3]*Göteborg University, Göteborg, Sweden*

DA-7O/3 **Transmission of electromagnetic waves through stratified metamaterials**
Ubeid Muin F. and Shabat Mohammed M.
Department of Physics, Faculty of Science, Islamic University of Gaza, Gaza, Gaza Strip, Palestinian Authority

DA-7O/4 **Photon tunelling bands of 1D magnetic photonic crystal in crossed magnetic and electric DC fields**
Kulagin D.V.[1], Savchenko A.S.[1], Shavrov V.G.[2], Tarasenko S.V.[1]
[1]*Donetsk Institute for Physics & Engineering of the NAS of Ukraine*
[2]*Institute of Radioengineering & Electronics of RAS*

DA-7O/5 **The analysis and synthesis of field-transforming metamaterials**
Maly S.V.
Belarusian State University, Minsk, Belarus

12.00-13.30 Oral Session DB.
Section 2. Soft and Hard Magnetic Materials

Chairmen: Filippov B.N., Pogorily A.N.

DB-2O/1 **Nonlinear dynamic of domain structure in rotating magnetic field and connected with that magnetic losses in iron-silicon alloys**
Tiunov V.F., Filippov B.N.
Institute of Metal Physics, Ural Branch of Russian Ac. Sc., Ekaterinburg, Russia

DB-2O/2 **Filed tunable composites with Co-rich ferromagnetic microwires**
Pankratov N.[1,2], Qin F.[1], Peng H.-X.[1], Panina L.[3], Zhukov A.P.[4]
[1]*ACCIS, Aerospace Engineering, University of Bristol, Bristol, United Kingdom*
[2]*Faculty of physics, M.V.Lomonosov Moscow State University, Moscow, Russia*
[3]*School of computing, Communication and Electronics, University of Plymouth, UK*
[4]*Departamento de Física de Materiales, Facultad de Química, UPV/EHU, San Sebastian, Spain*

DB-2O/3 **FeCoPB metallic glasses with improved soft magnetic properties and high thermal stability**
Tkatch V.I., Popov V.V., Rassolov S.G., Kostyrya S.A.
Donetsk Institute of Physics & Engineering of the NAS of Ukraine, Donetsk, Ukraine

DB-2O/4 **Structural relaxation and nanocrystallization of amorphous soft magnetic finemet-type alloys**
Maslov V.V.[1], Tkatch V.I.[2], Rassolov S.G.[2], Nosenko V.K.[1]
[1]*Institute for Metal Physics of the NAS of Ukraine, Kyiv, Ukraine*
[2]*Donetsk Institute of Physics & Engineering of the NAS of Ukraine, Donetsk, Ukraine*

DB-2O/5 **Nanotechnology: Production of Nanocrystalline Alloy with High Magnetic Properties and High Temperature Stability**
Noskova N.I., Shulika V.V., Potapov A.P.
Institute of Metal Physics, Ural Division, Russian Academy of Sciences, Ekaterinburg, Russia

DB-2O/6 **Some features of magnetoresistance of multilayered systems of magnetic nanoislands**
Boltaev A.P., Pudonin F.A., Sherstnev I.A.
P.N.Lebedev Physical Institute of the Russian Academy of Science, Moscow, Russia

DB-2O/7 **Impact of Mo^{6+} on some physical properties of Copper Ferrite**
Rao B.V. and Rao A.D.P.
Department of Nuclear physics, Andhra University, Visakhapatnam, India

DB-2O/8 **Creation and studies of invar carbon containing Fe–Ni–Co–based PVD CAE coatings**
Nadutov V.M., Panarin V.Ye., Kosintsev S.G., Svystunov Ye.O., Volosevich P.Yu.
G.V. Kurdyumov Institute for Metal Physics of the N.A.S. of Ukraine, Kiev

9.00-14.00 Poster Session DP.
Section 1. Fundamental Physics of Functional Materials

Chairmen: Morosov A.I., Ekomasov E.G.

DP-1P/1 **Phase diagram of antiferromagnetic chain on a ferromagnetic substrate**
Berzin A.A., Morosov A.I. and Sigov A.S.
Moscow State Institute of Radioengineering, Moscow, Russia

DP-1P/2 **High speed dynamics of the domain wall in garnet films in the large in-plane magnetic fields**
Chetkin M.V., Kurbatova Yu.N., Shapaeva T.B.
Faculty of Physics M.V.Lomonosov Moscow State University, Russia

DP-1P/3 **The origin of the magnetic nonhomogeneities of the pulson and 2D soliton types and the nonlinear solitary bending waves stimulation in the moving domain wall**
Ekomasov E.G., Azamatov Sh.A., Murtazin R.R., Gumerov A.M.
Bashkir State University, Ufa, Russia

DP-1P/4 **The nonlinear dynamics of the magnetic nonhomogeneities simulation in real magnetics**
Ekomasov E.G., Azamatov Sh.A., Murtazin R.R., Gumerov A.M., Davletshina A.D.
Bashkir State University, Ufa, Russia

DP-1P/5 **Modulated magnetic structure realization in non-heisenberg magnets**
Fridman Yu.A., Kosmachev O.A., Klevets Ph.N., Matunin D.A., Gorelikov G.A.
V.I. Vernadskiy Taurida national university, Simferopol, Ukraine

DP-1P/6 **Phase diagram of spin nematic with S = 2**
Fridman Yu.A.[1], Kosmachev O.A.[1], Ivanov B.A.[2]
[1]*V.I. Vernadskiy Taurida national university, Simferopol, Ukraine*
[2]*Institute of magnetism NASU, Kiev, Ukraine*

DP-1P/7 **The role of frustrations in the magnetization-remagnetization mechanisms forming for the diluted ferromagnetic oxides $BaFe_{12-x}In_xO_{19}$**
Efimova N.M., Tkachenko M.V.
V.N. Karazin Kharkov National University, Kharkov, Ukraine

DP-1P/8 **Nonlinear dynamics for anisotropic sigma model**
Kuznetsov A.S.[1], Butrim V.I.[1], Ivanov B.A.[2]
[1]*V.I. Vernadsky Taurida national university, Simferopol, Ukraine*
[2]*Institute of Magnetism, NASU, Kiev, Ukraine*

DP-1P/9 **Inertial mass of the vortex matter**

Chabanenko V.[1], Rusakov V.[2], Vasiliev S.[1], Szymczak H.[3]
[1]*Institute for Physics and Engineering, NASU, Donetsk, Ukraine*
[2]*Donetsk National University, Donetsk, Ukraine*
[3]*Institute of Physics, PAS, Warsaw, Poland*

DP-1P/10 **Temperature dependence of interlayer exchange coupling in Fe/Si/Fe tri-layers**

Drovosekov A.B.[1], Kholin D.I.[1], Kreines N.M.[1], Kuzyuk I.V.[1], Bürgler D.E.[2], Schreiber R.[2]
[1]*P.L. Kapitza Institute for Physical Problems RAS, Moscow, Russia*
[2]*Institut für Festkörperforschung, Jülich, Germany*

DP-1P/11 **Complexes of structural elements in magnets.**

Gadzhilov M.V., Kuzmenko S.N.
Kerche state sea technological university

DP-1P/12 **Fractals in magnetism**

Kuvandikov O.O., Sobirov R.A.
Samarkand State University, Uzbekistan

DP-1P/13 **Fluctuation effects in the $SmFeAsO_{7-\delta}$**

Sidorov S.L.[1], Tarenkov V.Yu.[1], Dyachenko A.I.[1], Solovjev A.L.[2]
[1]*Donetsk Physics & Engineering Institute NASU, Donetsk*
[2]*Institute of low temperature Physics & Engineering NASU, Kharkov*

DP-1P/14 **Microscopic mechanism of magnetocaloric effect in MnAs**

Golovchan A.V., Gribanov I.F.
Donetsk Institute for Physics and Engineering named after O.O.Galkin of the National Academy of Sciences of Ukraine

DP-1P/15 **Electronic structure and structure peculiarity of cobalt and manganes diphosphates**

Smolyak Svitlana[1], Karbovskii Vladimir[2], Zagorodniy Yuriy[2]
[1]*Institute for Metal Physics NAS of Ukraine, Kiev, Ukraine*
[2]*Technical Center NAS of Ukraine, Kiev, Ukraine*

DP-1P/16 **Indicatory surface of inelasticity-elasticity body of Ti_3Al alloy and SiO_2**

Onanko A.P., Lyashenko O.V., Onanko Y.A., Rugal O.G., Busko T.O.
Taras Shevchenko Kiev national research university, physics department, Kiev, Ukraine

DP-1P/17 **Effect of thermal annealing on transition layer formation in NbN-GaAs heterosystem**

Shekhovtsov L.V., Venger E.F.
V. Lashkaryov Institute of Semiconductor Physics of the National Academy of Sciences of Ukraine, Kiev, Ukraine

DP-1P/18 **Re_3As_7 as a parent compound for promising thermoelectric materials: *ab-initio* study**

Gippius A.A.[1,3], Okhotnikov K.S.[1], Tkachev A.V.[1], Kelm E.A.[2] and Shevelkov A.V.[2]
[1]*Faculty of Physics, Moscow State University, Moscow, Russia*
[2]*Chemistry Department, Moscow State University, Moscow, Russia*
[3]*Institute of Crystallography RAS, Moscow, Russia*

DP-1P/19 **Electronic structure and structure peculiarity of hydroxyapatite with isomorphous substitutions of phosphate tetrahedron by VO_4^{3-} and AsO_4^{3-} anions**

Karbovskii Vladimir[1], Smolyak Svitlana[2], Zagorodniy Yuriy[1]
[1]*Institute for Metal Physics NAS of Ukraine, Kiev, Ukraine*
[2]*Technical Center NAS of Ukraine, Kiev, Ukraine*

DP-1P/20 **Faceting of twin grain boundaries in polysilicon films**

Nakhodkin N.G., Kulish N.P., Rodionova T.V.
Kiev National Taras Shevchenko University, Kiev, Ukraine

DP-1P/21 **Is the spin crossover in metalloorganic compounds a special phase transition?**

Shelest V.V. , Christov A.V. , Levchenko G.G.
Donetsk Institute for Physics and Engineering, NASU, Donetsk, Ukraine

DP-1P/22 **Interaction effect of trap impurity at thermally stimulated currents in semiconductors**

Chmyrev V.I., Larina E.V., Skorikov V.M.
Kurnakov Institute of General and Inorganic Chemistry, Russian Academy of Sciences

DP-1P/23 **Search for magnetism - induced Raman splitting of the optical phonon in hcp iron and its alloys**

Ponosov Yu.S.
Institute of Metal Physics UD RAS, Ekaterinburg, Russia

DP-1P/24 **The maximum possible magnetocaloric ΔT-effect**

Zverev V.I.
Department of Physics, M.V. Lomonosov Moscow State University, Moscow, Russia

DP-1P/25 **Anomalous strain rate dependence of yield point of metals at low temperatures**

Malashenko V.V.[1,2], Malashenko V.V.[1,2]
[1]*Donetsk Physical & Technical Institute of the National Academy of Sciences of Ukraine*
[2]*Donetsk National Technical University, Donetsk, Ukraine*

DP-1P/26 **The researches of ageing process of binary and multicomponent amorphous alloys**

Lysov V.I., Tsaregradskaya T.L., Turkov O.V., Saenko G.V.
Kyiv Taras Shevchenko national university, Kyiv, Ukraine

DP-1P/27 **Isomorphic substitutions in the tetrahedral position of apatites and their influence on physicochemical properties**

Karbivskyy V.L., Kurgan N.A., Shpak A.P., Dimitriev O.P.
G.V. Kurdyumov Institute for Metal Physics NAS of Ukraine, Kiev, Ukraine

DP-1P/28 **Charge and spin correlations in the t-J model with electron-phonon interaction**

Myronova S.F., Zubov E.E.
Donetsk Institute for Physics and Engineering named after O.O. Galkin of National Academy of Sciences of Ukraine

DP-1P/29 **Effect of active molecule adsorption on electronic properties of silicon nanocrystalls**

Konstantinova E.A.[1,2], Pavlikov A.V.[1], Vorontsov A.S.[2], Kashkarov P.K.[2,1]
[1]*Physics Department, Moscow State M.V. Lomonosov University, Moscow, Russia*
[2]*Russian Research center "Kurchatov Institute", Moscow, Russia*

DP-1P/30 **Electron mobility in ZnHgSe solid solution**

Malyk O.P.
Semiconductor Electronics Department, Lviv Polytechnic National University, Lviv, Ukraine

DP-1P/31 **Ab-initio investigation of electronic structure and short range order in nitrogen austenite**

Timoshevskii A.N., Yeremin V.I., Yablonovskii S.O., Kalkuta S.A.
Institute of magnetism of National academy of sciences and Ministry of education and science of Ukraine, Kiev

DP-1P/32 **Optical properties of GaSe thin-films prepared the method of thermal evaporation on n-Si (111)**

Kysselyuk M.P., Vlasenko O.I., Gentsar P.O., Vuychik M.V., Zayats M.S., Kruglenko I.V., Litvin O.S., Kryskov Ts.A.
V.E .Lashkaryov Institute of semiconductors physics NAS Ukraine, Kyiv

DP-1P/33 **Double-exchange and ferromagnetism of a chloroanilato bridged iron mixed-valency 2D molecular networks $\{Fe_2(C_6Cl_2O_4)_3\}^{2-}$**

Ovanesyan N.S.[1], Nikitina Z.K.[1], Aldoshin S.M.[1], Makhaev V.D.[1], Shilov G.V.[1], Journaux Y.[2], Gruselle M.[2], Train C.[2]
[1]*Institute of Problems of Chemical Physics RAS, Chernogolovka, Russia*
[2]*Laboratory of Inorganic Materials,University of P.& M. Curie, Paris, France*

DP-1P/34 **Directed transport in a random sawtooth potential: Numerical simulation**

Lyutyy T.V., Denisova E.S.
Sumy State University, Sumy, Ukraine

DP-1P/35 **Comparison of computer simulation of pattern formation on the initially flat surface of amorphous and crystalline solids**

Gubarev A.A.
Donetsk National University, Donetsk, Ukraine

DP-1P/36 **"Weak" Satellites in Tb^{159} NMR-Spectra of Terbium Containing Alloys and Compounds**

Kotov V.V., Pogorilyi A.M., Golub V.O.
Institute of Magnetism NASU and MESU, Kiev, Ukraine

DP-1P/37 **New materials with multifunctional properties on the base of complex oxide rare earth compounds**

Kroutko V.A.[1], Chudinova N.N.[1], Voron'ko U.K.[2], Popov A.V.[2]
[1] *Kurnakov Insitute of General and Inorganic Chemistry RAS, Moscow*
[2]*Prohorov Institute of General physics RAS, Moscow*

DP-1P/38 **S- and d-electron contributions into hyperfine magnetic fields on chromium nucleus**

Berzhansky V.N., Sorokin Yu.V.
Taurida National V.I.Vernadsky University, Simferopol, Ukraine

DP-1P/39 **Electron structure and polymorphism of $LaVO_3$ single crystal**

Nevolin Alexey Y., Uvarov V.N.
Solid State Spectroscopy Department, G.V. Kurdiumov Institute for Metal Physics NAS of Ukraine, Ukraine

DP-1P/40 **Multi-minimum potential of a crystal field in the mono-crystal normal spinel $ZnAl_2O_4$, doped by Cu^{2+} and Fe^{3+} ions**

Shapovalov V.A.[1], Shapovalov V.V.[2], Zhitluhina E.S.[1],
Lamonova K.V.[1], Orel S.M.[1], Pashkevich Yu.G.[1]
[1]*A. A. Galkin Donetsk Institute for Physics and Engineering of NASU, Donetsk, Ukraine*
[2]*Department of Physics Queens College of the City University of New York, New York, USA*

DP-1P/41 **EPR study of solid solutions, based on the compound ScF_3.**

Voronov V.N., Petrakovskaya E.A., Alexandrovskaya A.V.
L.V. Kirensky Institute of Physics, Russia, Krasnoyarsk

DP-1P/42 **The study of phase diagram of solid solution $NaNb_xTa_{1-x}O_3$ by calorimetrical and NMR MAS ^{23}Na methods**

Ivanov Yu.N., Sukhovsky A.A., Voronov V.N., Bondarev V.S.
L.V. Kirensky Institute of Physics SB RAS, Krasnoyarsk, Russia

DP-1P/43 **NMR Studies of Nb_3Sn Layers Structure in Multifilamentary Superconductors**

Aleksashin B.A., Soloninin A.V., Dyakina V.P., Popova E.N., Romanov E.P., Sudareva S.V.
Institute of Metal Physics Urals Div. of RAS, Ekaterinburg, Russia

DP-1P/44 **Kubo – Anderson Oscillator and NMR of Solid State**

Olszewski M.[1], Sergeev N.A.[1], Levchenko A.V.[2], Sapiga A.V.[2]
[1]*Institute of Physics, University of Szczecin, Poland*
[2]*Faculty of Physics, Taurida National University, Crimea, Ukraine*

DP-1P/45 **Stroboscopic investigation of hodographs of magnetization of nonlinear NMR**

Ugulava A.I., Chkhaidze S., Chotorlishvili L., Khutsishvili K.O.
I. Javakhishvili Tbilisi State University, Tbilisi, Georgia

DP-1P/46 **Multiple NMR spin echo in magnets**

Akhalkatsi A.M.[1], Gavasheli T.A.[1], Gegechkori T.O.[2], Mamniashvili G.I.[2], Shermadini Z.G.[2], Clark W.G.[3]
[1]*Tbilisi State University, Tbilisi, Georgia*
[2]*Andronikashvili Institute of Physics, Tbilisi, Georgia*
[3]*UCLA Department of Physics and Astronomy, Los Angeles, California, USA*

DP-1P/47 **Influence of the electron beam orientaion in relation to a film with a hexagonal bubble lattice on the entrance blocking and channelling effects**

Melnichuk I.A.[1], Melnychuk P.I.[2], Vasko E.I.[1]
[1]*Donetsk National University, Donetysk*
[2]*«Sitronics» company, Kiiv, Ukraine*

DP-1P/48 **Influence of the irradiation dose and temperature on the flux of ejecting atoms during relief formation on the surface of Mg by Ar^+ sputtering**

Starshinov I.N., Melnichuk I.A.
Donetsk National University, Donetsk, Ukraine

DP-1P/49 **Influence of laser pulse power on the penetration of magnetic flux into the irradiated YBaCuO film**

Melnichuk I.A.[1], Vasyliev A.V.[1], Gulii S.A.[2]
[1]*Donetsk National University*
[2]*enterprise "Polus", Donetsk, Ukraine*

DP-1P/50 **Exact solution of the mean field equation for real polymer chains trapped between interfaces**

Gerasimchuk Igor V.[1] and Sommer Jens-Uwe[2,3]
[1]*Institute of Magnetism, National Academy of Sciences of Ukraine and Ministry of Education and Science of Ukraine, Kyiv, Ukraine*
[2]*Leibniz Institute of Polymer Research Dresden e.V., Dresden, Germany*
[3]*Institute for Theoretical Physics, Dresden Technical University, Dresden, Germany*

DP-1P/51 **Turbulent lamellar structures in nonsymmetric polymer films**

Krasnyuk I.B.[1], Taranets R.M.[2], Yurchenko V.M.[1]
[1]*O. Galkin Donetsk Physics&Technology Institute NASU, Donetsk, Ukraine*
[2]*Institute of Applied Mathematics and Mechanics NASU, Donetsk, Ukraine*

DP-1P/52 **Nonlinear dependence of the transverse relaxation time on RF power in $Y_3Fe_5O_{12}$**

Berzhansky V.N., Gorbovanov A.I., Polulyakh S.N., Ziuzin M.V.
Taurida National V.I. Vernadsky University, Simferopol, Ukraine

DP-1P/53 **Two-pulse echoes in systems with internal molecular mobility**

Ryabushkin D.S.
Taurida National V.I. Vernadsky University, Simferopol, Ukraine

15.00-18.45 Oral Session DC.
Section 9. Nanotechnologies for Functional Materials

Chairmen: Mapps D., Varyukhin V.N.

DC-9L/1 **Phase transitions in nanocrystalline metals and alloys (invited)**
Varyukhin V.N.
Donetsk Physics and Technology Institute of the NAS of Ukraine, Donetsk, Ukraine

DC-9L/2 **Nanomaterials based on novel cyanoporphyrazine ytterbium and vanadium complexes for potential optoelectronic and biophotonic applications (invited)**
Klapshina L.G.[1], Douglas W.E.[2], Grigoryev I.S.[1], Shirmanova M.V.[3] and Korytin A.I.[4]
[1]Razuvaev Institute Organometallic Chemistry, Russian Academy of Sciences, Nizhny Novgorod, Russia.
[2]Labo. CMOS, CNRS UMR 5253, Institut Gerhardt, Université Montpellier II, Montpellier, France
[3]Nizhny Novgorod State Medical Academy, Russia
[4]Institute of Applied Physics, Russian Academy of Sciences, Nizhny Novgorod, Russia

DC-9L/3 **Absence of universal conductivity in impure graphene (invited)**
Loktev V.M.[1], Skrypnyk Yu.V.[2]
[1]Bogolyubov Institute for Theoretical Physics NAS of Ukraine
[2]Kurdyumov Institute for Metal Physics NAS of Ukraine

DC-9L/4 **Atomic layer deposition as modern nanotechnological method for functional materials (invited)**
Semikina Tetiana, Venger E.F., Komashcshenko Valeriy
Institute of semiconductor physics named V.Lashkarev NAS of Ukraine

DC-9O/1 **Molecular dynamics of graphene production by mechanical exfoliation of a graphite surface**
Khomenko A.V., Prodanov N.V.
Sumy State University, Sumy, Ukraine

DC-9O/2 **Frustrated magnetic states in ferromagnetic nanoparticles**
Mironov V.L. , Gribkov B.A. , Gusev S.A. and Fraerman A.A.
Institute for Physics of Microstructures RAS, Nizhniy Novgorod, Russia

DC-9O/3 **Grain size effect on hysteresis in the high pressure transformation of BCC- to HCP- iron**
Tokiy Valentine[1], Varyukhin V.N.[1], Tokiy Natalya[1], Pilyugin V.P.[1], Efros B.M.[2]
[1]Donetsk Physical & Technical Institute NAS Ukraine, Donetsk, Ukraine
[2]Institute of metal physics of Ural division of PAN

DC-9O/4 **Annealed by calcium nano-powders of yttrium ferrite: synthesis and magnetic properties $Y_{1-x}Ca_xFeO_3$ (x = 0.1; 0.2; 0.3; 0.4)**
Nguyen Anh Tien, Mittova I.Ya.
Voronezh State University, Voronezh, Russia

DC-9O/5 **Research of the process of thermal oxidation of GaAs under the influence of composition of oxide-activator (V_2O_5) + inert component (Al_2O_3) of variable compositions with various sizes of particles**
Kozhevnikova T.V., Penskoiy P.K., Kostryukov V.F., Mittova I.Ya.
Voronezh State University

DC-9O/6 **Dielectric properties of structures on the basis of metal island layers**
Boltaev A.P., Pudonin F.A.
P.N.Lebedev Physical Institute of the Russian Academy of Science, Moscow, Russia

DC-9O/7 **Charge-Carrier Spectrum in Nanotube with Adsorbed Incommensurate Molecular Structures**
Lykah V.A.[1], Syrkin E.S.[2]
[1]*NTU "Kharkiv Polytechnic Institute", Kharkiv, Ukraine*
[2]*Institute for Low-Temperature Physics and Engineering, Kharkiv, Ukraine*

15.00-19.00 Poster Session DQ. Section 2. Soft and Hard Magnetic Materials

Chairmen: Nadutov V.M., Zubov V.E.

DQ-2P/1 **In plane field effect on the domain wall mobility in superthin Co films with perpendicular anisotropy**
Kabanov Yu.[1], Iunin Y.[1], Nikitenko V.[1-3], Shapiro A.[2], Shull R.[2], Zhu L.[3], Chien C.[3]
[1]*Institute of Solid State Physics RAS, Chernogolovka, Moscow region, Russia*
[2]*National Institute of Standards and Technology, Gaithersburg, MD, USA*
[3]*The Johns Hopkins University, Baltimore, USA*

DQ-2P/2 **Visualization of a domain structure of the inner Fe layers in uniaxial (210)[Fe/Cr] superlattice**
Ustinov V.V.[1], Milyaev M.A.[1], Krinitsina T.P.[1], Gornakov V.S.[2], Kabanov Yu.P.[2]
[1]*Institute of Metal Physics, Ural Division RAS, Ekaterinburg, Russia*
[2]*Institute of Solid State Physics RAS, Chernogolovka, Russia*

DQ-2P/3 **Magnetic symmetry of the plain domain walls in magnetically ordered media**
Tanygin B.M., Tychko O.V.
Taras Shevchenko Kiev National University, Radiophysics Faculty, Kyiv, Ukraine

DQ-2P/4 **Changing of domain wall width in amorphous ferromagnet due to reversible adsorption**
Zubov V.E.
Moscow State University, Physical Department, Moscow, Russia

DQ-2P/5 **Manifestation of the mutual influence of magnetic and atomic orders in the phase-equilibrium diagram of Fe–Co system**

Melnyk I.M., Radchenko T.M., Tatarenko V.A.
G.V. Kurdyumov Institute for Metal Physics, N.A.S.U., Department of Solid State Theory, Kyyiv-142, Ukraine

DQ-2P/6 **The thermal treatment and magnetic properties of amorphous Fe-based alloys**

Pavlova I.O., Minina O.A., Skulkina N.A., Ivanov O.A.
Ural State University, Yekaterinburg

DQ-2P/7 **Super-spin-glass state of non-percolated CoFeB-SiO_2 nanogranular films**

Kalita V.M., Ryabchenko S.M., Timopheev A.A., Lozenko A.F., Trotsenko P.A.
Institute of Physics NAS of Ukraine, Kiev, Ukraine

DQ-2P/8 **Stress-induced magnetic anisotropy, thermal stability of magnetic properties and structure of nanocrystalline alloys Fe-Co-Cu-Nb-Si-B with different Co content**

Lukshina V.A.[1], Dmitrieva N.V.[1], Volkova E.G.[1] Kleinerman N.M.[1], Serikov V.V.[1], Ershov N.V.[1], Chernenkov Yu.P.[2], Fedorov V.I.[2], Potapov A.P.[1]
[1]*Institute of Metal Physics, Ural Branch of RAS, Yekaterinburg, Russia*
[2]*Petersburg Konstantinov Institute of Nuclear Physics, RAS, Gatchina, Russia*

DQ-2P/9 **The influence of laser treatment on magnetic properties of amorphous Fe-based ribbons**

Semenov A.L.[1], Gavriliuk A.A.[1], Mokhovikov A.Yu.[1], Turik N.V.[1], Semirov A.V.[2], Kudryavtsev V.O.[2]
[1]*Irkutsk State University, Irkutsk, Russia*
[2]*Irkutsk State Teacher's University, Irkutsk, Russia*

DQ-2P/10 **Phenomenological model for magnetoresistance effect in ferromagnetic amorphous alloys**

Semenko M.P., Zakharenko M.I.
Department of Physics, Taras Shevhenko national university, Kyiv, Ukraine

DQ-2P/11 **Estimation of magnetostriction and Debye temperature of Fe-Ni-C-based alloys on Mössbauer and dilatometric analysis data**

Nadutov V.M., Kosintsev S.G., Svystunov Ye.O., Zaporozhets O.I.
G.V. Kurdyumov Institute for Metal Physics of the N.A.S. of Ukraine, Kiev

DQ-2P/13 **Properties of MgO-Fe nanopowder obtained from iron-magnesium oxalate**

Nadutov V.M., Voynash V.Z., Perekos A.O., Zalutskyj V.P., Yefimova T.V., Svystunov Ye.O.
G.V. Kurdyumov Institute for Metal Physics of the N.A.S. of Ukraine, Kiev

DQ-2P/14 Influence of elastic deformations on impedance properties of soft magnetic $Co_{66}Fe_4Si_{12.5}Nb_{2.5}B_{15}$ wires annealed by DC current

Semirov A.V.[1], Kudryavtsev V.O.[1], Gavriliuk A.A.[2], Moiseev A.A.[1], Bukreev D.A.[1]
[1]*Irkutsk state teachers training university, Irkutsk*
[2]*Irkutsk state university, Irkutsk*

DQ-2P/15 Influence of laser heat treatment on impedance properties of the Fe-based foils

Semirov A.V.[1], Gavriliuk A.A.[2], Kudryavtsev V.O.[1], Bukreev D.A.[1], Moiseev A.A.[1], Zaharov G.V.[1], Semenov A.L.[2]
[1]*Irkutsk state teachers training university, Irkutsk*
[2]*Irkutsk state university, Irkutsk*

DQ-2P/16 The possibility of magnetic structure control in amorphous microwires with a thick glass cover

Antonov A.S.[1], Samsonova V.V.[2], Buznikov N.A.[1], Furmanova T.A.[1], Rakhmanov A.A.[1], Zhukov A.P.[3]
[1]*Institute for Theoretical and Applied Electrodynamics RAS, Moscow, Russia*
[2]*Faculty of Physics, M.V. Lomonosov Moscow State University, Moscow, Russia*
[3]*Departamento Física de Materiales, Facultad de Químicas, UPV/EHU, San Sebastián, Spain*

DQ-2P/17 The investigations of influence of alloying on thermal stability of amorphous alloys

Lysov V.I., Tsaregradskaya T.L., Turkov O.V., Saenko G.V.
Kyiv Taras Shevchenko national university, Kyiv, Ukraine

DQ-2P/18 Modeling of stray fields of magnetic discrete elements

Kovaleva N.P.
Irkutsk state teachers training university, Irkutsk,

DQ-2P/19 The cellular domain structure in ferrite-garnet films

Mamalui Ju.A., Siryuk Ju.A.
Donetsk National University, Donetsk, Ukraine

DQ-2P/20 Peculiarities of bubble formation in thin magnetic films with low uniaxial anisotropy

Borisenko T.Ju., Siryuk Ju.A.
Donetsk National University, Donetsk, Ukraine

DQ-2P/21 Structure of domain boundaries under spin-reorientation phase transitions in a low- anisotropic ferrite-garnet film

Bezus A.V., Mamalui Ju.A., Siryuk Ju.A.
Donetsk National University, Donetsk, Ukraine

DQ-2P/22 90-degree domain walls in (001)-plate of substituted yttrium iron garnets

Dyachenko S.A., Tychko O.V.
Radiophysics Faculty of Taras Shevchenko National University of Kyiv, Kyiv, Ukraine

DQ-2P/23 **Influence of pinholes defects in thin ferromagnetic films on coercivity. Comparison OOMMF code modeling with experiment.**
Scorobogatova A.V.[1,2], Nikulin Y.V.[1], Filimonov Yu.A.[1]
[1]*Saratov branch of Kotel'nikov Institute of Radio Engineering and Electronics of RAS, Russia, Saratov*
[2]*Saratov State Technical University, Russia, Saratov*

DQ-2P/24 **Magnetic viscosity in epitaxial garnet ferrite films with the "anglular phase" anisotropy**
Semuk Ye.Yu., Prokopov A.R., Berzhansky V.N.
V.I. Vernadsky Taurida National University, Simferopol, Ukraine

DQ-2P/25 **Mossbauer studies of high valence cations substituted Mg-Mn ferrites**
Lakshmi D.V.[1], Rao A.D.P.[2] and Raju S.B.[1]
[1]*Department of physics,*
[2]*Department of Nuclear physics, Andhra University, Visakhapatnam, India*

DQ-2P/26 **Effect of high valence cations on Lithium Ferrite physical properties**
Mehar M.V.K.[1], Rao A.D.P.[2] and Raju S.B.[1]
[1]*Department of physics,*
[2]*Department of Nuclear physics, Andhra University, Visakhapatnam, India*

DQ-2P/27 **Influence of annealing and deposition rate on magnetic properties, crystallinity and surface roughness of Ni/SiO_2/Si films**
Dzhumaliev A.S., Nikulin Y.V., Filimonov Yu.A.
Kotel'nikov Institute of Radio Engineering and Electronics of RAS, Russia, Saratov

DQ-2P/28 **Laser Ni films: structure and magnetic properties**
Bagmut A.G., Shipkova I.G., Zhuchkov V.A.
National Technical University "KhPI", Kharkiv, Ukraine

DQ-2P/29 **Magnetic pulse elements**
Azarenkov N.A., Kirichenko V.G., Lytovchenko S.V.
Karazin Kharkiv National University, Kharkiv, Ukraine

DQ-2P/30 **Ferromagnetic alloy with giant Barkhausen jump for magnetic pulse elements**
Azarenkov N.A., Kirichenko V.G., Lytovchenko S.V.
KarazinKharkiv National University, Kharkiv, Ukraine

DQ-2P/31 **Influence of the unidirectional anisotropy on magnetic noise in permalloy films**
Polyakov V.V.
Kirensky Institute of Physics SB RAS, Krasnoyarsk, Russia

DQ-2P/32 **Magnetic noise research of multilayer magnetic flux concentrators**
Lubyaniy L.Z., Samofalov V.N., Ravlik A.G., Overko N.E., Chichibaba I.A.
National Technical University "Kharkov Polytechnic Institute", Kharkov, Ukraine

DQ-2P/33 Prospects of Development of Strong Stray Field Magnetizers for Refrigerators Based on Materials Revealing Giant Magnetocaloric Effect

Belozorov D.P.[2], Lubyaniy L.Z.[1], Ravlik A.G.[1], Rusakova A.V.[1], Samofalov V.N.[1]

[1]*National Technical University «Kharkiv Polytechnic Institute», Kharkiv, Ukraine*

[2]*Institute of Theoretical Physics of NRC « Kharkiv Institute for Physics and Engineering», Kharkiv, Ukraine*

DQ-2P/34 The research of hydrogen absorption by hard magnetic alloys Nd-Fe-B (TiC, ZrC, Cu, Ti) at continuous heating

Brekharya G., Kozina N., Lyashenko N.

Dneprodzerzhinsk state technical university, Dneprodzerzhinsk, Ukraine

DQ-2P/35 The investigation of structure and characteristic compacts during sintering of as-quenched TLC-tapes Fe-Nd-B(C, Cu, Ti) alloys under high pressures

Brekharya G.P.[1], Gulyaeva T.V.[2]

[1]*Dneprodzerzhinsk State Technical University, Dneprodzerzhinsk, Ukraine*

[2]*Zaporozhye State National University, Zaporozhye, Ukraine*

DQ-2P/36 The influence of powder particle size on proprieties of anisotropic Nd-Fe-B magnets textured with hot plastic deformation method

Lipiec Wojciech

Electrotechnical Institute, Wrocław, Poland

DQ-2P/37 Current dependencies of GMI effect in amorphous microwires in the X-band

Berzhansky V.N., Khomenko D.A., Popov V.V.

Taurida National V.I. Vernadsky University, Crimea, Simferopol, Ukraine

DQ-2P/38 Nonlinear collective dynamics and discrete solitons for magnetic dot arrays

Bondarenko P.V., Ivanov B.A.

Institute of magnetism NANU, Kiev, Ukraine

Friday, October 9

9.00-12.15 Oral Session EA. Section 4. Electrooptic and Magnetooptic Materials

Chairmen: Inoue M., Vinogradov A.P.

EA-4L/1 **Control of light in magnetic materials with artificially introduced nano-scale structures and their applications (invited)**
Inoue Mitsuteru
Toyohashi University of Technology, Toyohashi, Aichi, Japan

EA-4L/2 **Photonic structures based on functional materials (invited)**
Lyubchanskii I.L.[1], Dadoenkova N.N.[1], Mishina E.D.[2], Lee Y.P.[3] and Rasing Th.[4]
[1]*Donetsk Physical and Technical Institute of the National Academy of Sciences of Ukraine, Donetsk, Ukraine*
[2]*Moscow Institute for Radioengineering, Electronic and Automatization – Technical University, Moscow, Russia*
[3]*Quantum Photonic Science Research Center and Department of Physics, Hanyang University, Seoul, Republic of Korea*
[4]*Institute for Molecules and Materials, Radboud University Nijmegen,Nijmegen, The Netherlands*

EA-4O/1 **Inverse Borrmann effect in photonic crystals**
Vinogradov A.P.[1], Lozovik Yu.E.[2], Merzlikin A.M.[1], Dorofeenko A.V.[1], Vitebskiy I.[3], Figotin A.[3], Granovsky A.B.[4] and Lisyanskye A.A.[5]
[1]*Institute of Theoretical and Applied Electromagnetism (ITAE), RAS, Moscow, Russia*
[2]*Institute of Spectroscopy, RAS, Moscow Region, Troitsk, Russia*
[3]*Department of Mathematics, University of California at Irvine, Irvine, USA*
[4]*Faculty of Physics, Moscow State University, Moscow, Russia*
[5]*Physics Department, Queens College of the City University of New York, USA*

EA-4O/2 **Phononic and Photonic Crystals with Negative Refraction and Flat Lenses on its Base**
Vinogradov E.A.
Prokhorov General Physics Institute, Russian Academy of Science, Moscow, Russia

EA-4O/3 **Giant magnetooptical effects in plasmonic nanostructures**
Belotelov V.I.[1,2], Bezus E.A.[3], Bykov D.A.[3], Doskolovich L.L.[3], Kalish A.N.[1,2], Zvezdin A.K.[1], Vanwolleghem M.[4], Beauvillain P.[4]
[1]*A.M. Prokhorov General Physics Institute of the Russian Academy of Sciences, Moscow, Russia*
[2]*Faculty of Physics, M.V. Lomonosov Moscow State University, Moscow, Russia*
[3]*Image Processing Systems Institute of the Russian Academy of Sciences, Samara, Russia*
[4]*Institute d'Electronique Fondamentale (IEF UMR 8622), Université Paris-Sud, Orsay, France*

EA-4O/4 **Ultrafast magneto-optic switches and their civilian applications.**
Yin Stuart
Department of Electrical Engineering, The Pennsylvania State University, University Park, USA

EA-4O/5 **Plasmonic-enhanced magneto-optical kerr effect in magnetophotonic crystals**
Dolgova T.V., Zhdanov A.G., Grunin A.G., Ganshina E.A. and Fedyanin A.A.
Faculty of Physics, Lomonosov Moscow State University, Moscow, Russia

EA-4O/6 **Three-dimentional multiferroic photonic crystals**
Dolgova T.V., Tsema B.B., Sharipova M.I., Abramova V.V., Klimonsky S.O., Fedyanin A.A.
Lomonosov Moscow State University, Moscow, Russia

EA-4O/7 **One-dimensional photonic crystals with complex superconducting defect layer**
Dadoenkova N.N.[1], Lyubchanskii I.L.[1], Zabolotin A.E.[1], Lee Y.P.[2] and Rasing Th.[3]
[1]*Donetsk Physical & Technical Institute, National Academy of Sciences of Ukraine and Department of Physics, Donetsk, Ukraine*
[2]*q-Psi and Department of Physics, Hanyang University, Seoul, Korea*
[3]*Institute for Molecules and Materials, Radboud University Nijmegen, The Netherlands*

EA-4O/8 **Peculiarities of band gap width dependence upon concentration of the admixture strips randomly included in quasi-two-dimensional photonic crystal**
Rumyantsev V.V., Fedorov S.A., Shtaerman E.Ya.
A.A.Galkin Donetsk Physico-Technical Institute of NASU, Donetsk, Ukraine

EA-4O/9 **The thin-film heterostructures based on the CMR manganites as materials for the optoelectronic devices**
Telegin A.V.[1], Sukhorukov Yu.P.[1], Loshkareva N.N.[1], Kaul A.R.[2]
[1]*Institute of Metal Physics, UD of RAS, Ekaterinburg*
[2]*Moscow State University, Moscow*

EA-4O/10 **Magnetic nanocomposites based on glasses co-doped with Fe and Rare Earth oxides**
Edelman I.[1], Ivanova O.[1], Ivantsov R.[1], Petrakovskaya E.A.[1], Zabluda V.[1], Zaikovskiy V.[2]
[1]*L.V. Kirensky Institute of Physics, RAS, Krasnoyarsk, Russia*
[2]*Boreskov Institute of Catalysis, RAS, Novosibirsk, Russia*

12.15-13.30 Oral Session EB.
Section 11. Instrumentation and Measurement Technique

Chairmen: Belyaeva A.I., Ubizskii S.B.

EB-11L/1 **Spectral ellipsometry – efficient technique for early diagnostics of changes of metals and alloys of metals and surface state (invited)**
Belyaeva A.I.[1], Galuza A.A.[2], Savchenko A.A.[1]
[1]National Technical University "Kharkov Politechnical Institute", Kharkov, Ukraine
[2]Institute for electrophysics and radiation technologies, Kharkov, Ukraine

EB-11O/1 **Experimental equipment for material testing**
Ivanchenko I. and Popenko N.
Usikov Institute for Radiophysics and Electronics of the National Academy of Sciences of Ukraine, Kharkov, Ukraine

EB-11O/2 **Low frequency noise spectroscopy as a tool to study disordered materials**
Makoviychuk M.I.
Yaroslavl Branch of the Institute of Physics and Technology of RAS, Yaroslavl, Russia

EB-11O/3 **Anisotropic rotation magnetization reversal of thin film**
Ubizskii S.B., Pavlyk L.P.
R&D Center for Solid State Electronics and Sensors, Lviv Polytechnic National University, Lviv, Ukraine

9.00-14.00 Poster Session EP.
Section 7. Microwave Materials and Metamaterials

Chairmen: Antonov A.S., Nikitov S.A.

EP-7P/1 **Investigation of stationary and chaotic auto-generation regimes of ferromagnetic-film-based active rings**
Kondrashov A.V., Ustinov A.B., Kalinikos B.A.
St. Petersburg Electrotechnical University

EP-7P/2 **Periodic magnetic multilayered structure as a magnetic metamaterial. Dipole-exchange spin-wave spectrum and dispersion characteristics**
Grigoryeva Natalia Yu.
Department of Physical Electronics and Technology, St.Petersburg Electrotechnical University, St. Petersburg, Russia

EP-7P/3 **Symmetrical resonators metamaterial cells**
Bychkov I.V., Dubrovskikh D., Fediy A.A.
Chelyabinsk State University, Chelyabinsk, Russia

EP-7P/4 **Propagating spin-wave modes in 2D ferrite magnonic crystal**
Vysotsky S.L.[1], Filimonov Yu.A.[1], Nikitov S.A.[2]
[1]*Saratov branch of the Institution of Russian academy of sciences Kotel'nikov Institute of Radio Engineering and Electronics of RAS, Saratov, Russia*
[2]*Institution of Russian academy of sciences Kotel'nikov Institute of Radio Engineering and Electronics of RAS, Moscow, Russia*

EP-7P/5 **The Patterns of Microwave Radiation, Arising as a Result of Transformation of a Magnetostatic Wave into an Electromagnetic Wave**
Lock Edwin and Vashkovsky Anatoly
Kotel'nikov Institute of Radio Engineering and Electronics of RAS (Fryazino branch), Moscow region, Russia

EP-7P/6 **Ferromagnetic resonance properties of thin film antidot arrays: micromagnetic simulation**
Marchenko A.I., Krivoruchko V.N.
Donetsk Physics & Tecnology Institute, NAS of Ukraine, Donetsk, Ukraine

EP-7P/7 **Inelastic scattering of bulk spin waves at the non-ideal boundary of biaxial ferromagnets**
Gorobets Yu.I.[1], Reshetnyak S.A.[2], Khomenko T.A.[2]
[1]*Institute of Magnetism of NAS of Ukraine, Kiev*
[2]*National Technical University of Ukraine "Kyiv Polytechnic Institute", Kyiv*

EP-7P/8 **Propagation of magnetostatic surface waves in ferromagnetic films with variable thickness**
Ignatov Yu.A., Scheglov V.I., Klimov A.A., Nikitov S.A.
Kotel'nikov Institute of Radio Engineering and Electronics, Moscow

EP-7P/9 **Frequency-response characteristics of a barium aluminum hexaferrite resonator**
Ustinov A.B.[1,2], Srinivasan G.[1]
[1]*Oakland University, Rochester, USA*
[2]*St. Petersburg Electrotechnical University, St. Petersburg, Russia*

EP-7P/10 **Propagation of electromagnetic waves through composite medium consisting of magnetic and dielectric slides**
Antonets I.V.[1], Kotov L.N.[1], Shavrov V.G.[2], Shcheglov V.I.[2]
[1]*Syktivkar State University, Syktivkar, Russia*
[2]*Institute of Radioengineering and Electronics of RAS, Moscow, Russia*

EP-7P/11 **The nonlinear reorientation of magnetization vector in magnetoelastic medium during dynamic magnetization**
Vlasov V.S.[1], Kotov L.N.[1], Shavrov V.G.[2], Shcheglov V.I.[2]
[1]*Syktivkar State University, Syktivkar, Russia*
[2]*Institute of Radioengineering and Electronics of RAS, Moscow, Russia*

EP-7P/12 **Propagation of magnetostatic waves in structure ferrite - dielectric - metal grating biased by nonuniform magnetic field**
Shcheglov V.I., Zubkov V.I.
Institute of Radioengineering and Electronics of RAS, Moscow, Russia

EP-7P/13 **The microwave susceptibility of composite medium consisting of ferrite particles with uniaxial anisotropy**
Shcheglov V.I., Zubkov V.I.
Institute of Radioengineering and Electronics of RAS, Moscow, Russia

EP-7P/14 **Penetration of microwaves into metallic powders and its heating**
Anzulevich A.P.[1], Bychkov I.V.[1], Buchelnikov V.D.[1], Louzguine-Luzgin D.V.[2]
[1]*Condensed Matter Physics Department, Chelyabinsk State University*
[2]*WPI Advanced Institute for Materials Research, Tohoku University*

EP-7P/15 **Nonlinear dynamics of Bloch domain walls in variable fields**
Gerasimchuk V.S.[1] and Shitov A.A.[2]
[1]*National Technical University of Ukraine "Kyiv Polytechnic Institute", Kyiv, Ukraine*
[2]*Donbass National Academy of Civil Engineering, Makeevka, Ukraine*

EP-7P/16 **Resonant amplification of evanescent acoustic waves in the 2D magnetic heterostucture**
Laptyeva T.V.[1], Sukhorukova O.S.[1], Tarasenko S.V.[1], Tsymbal L.T.[1], Kotov V.A.[2], Shavrov V.G.
[1]*Donetsk A.A. Galkin Institute of Physics & Engineering of NASU, Donetsk, Ukraine*
[2]*V.A. Kotelnikov Institute of Radioengineering & Electronics of RAS, Moscow, Russia*

EP-7P/17 **Microwave dielectrics $Ba_{0,4}Sr_{0,6}(R_{0.5}Nb_{0.5})O_3$, (R=Er, Yb, Lu) with complex perovskite structure**
Bliznyuk L.A., Ges A.P., Klimza A.A., Fedotova V.V.
State Scientific-Production Association "Scientific-Practical Material Research Centre NAS of Belarus"», Minsk

EP-7P/18 **Properties of microwave absorbing covers with magnetic metal nanoparticles at Giga- and Terahertz frequencies**
Nikolaychuk G.A.[1], Lutsev L.V.[2], Yakovlev S.V.[1], Ivanov V.P.[1], Nikiforov A.V.[1], Prokhorov A.S.[3], Zhukova E.S.[3], Gorshunov B.P.[3]
[1]*Research Institute "Ferrite-Domen", Saint Petersburg, Russia*
[2]*A.F. Ioffe Physico-Technical Institute, Russian Academy of Sciences, St. Petersburg, Russia*
[3]*A.M. Prokhorov General physics institute, Moscow, Russia*

EP-7P/19 **Radiation absorbing covers of low reflection coefficient**
Bychkov I.V., Zotov I.S., Fediy A.A.
Chelyabinsk State University, Chelyabinsk, Russia

EP-7P/20 **Influence of Barium-Strontium Titanate Film on the Properties of a Surface Discharge in Air**
Maslova L.A., Filikov V.A., Sokolova M.V., Krivov S.A., Nikitin A.M.
Moscow Power Engineering Institute (TU)

EP-7P/21 **Dielectric Properties and Morphology of Barium-Strontium Titanate Films prepared by Radio-frequency Ion-plasma Spattering**
Maslova L.A., Filikov V.A., Vasilyeva N.D., Gordeev V.N.
Moscow Power Engineering Institute (TU)

EP-7P/22 **The effect of nanoparticles on microstructure and properties of microwave barium titanate ceramics**
Cherkasov A.P., Dambis M.K., Dolgov A.V., Filikov V.A.
Moscow Power Engineering Institute

EP-7P/23 **Properties of composites on the basis of Z type ferrites**
Serebryannikov S.V., Smirnov D.O., Cheparin V.P., Rumjantsev A.A.
Moscow Power Engineering Institute (Technical University), Moscow

EP-7P/24 **Electromagnetic wave absorbers using doped hexaferrite based composite media**
Kitaitsev A.A., Cheparin V.P., Shakirzyanov F.N.
Moscow Power Engineering Institute (Technical University), Moscow

EP-7P/25 **Model of strip structure on hyromagnetic substrate**
Kovaleva T.Y. Bezyazykova T.G.
Canct-Peterburg University of Telecomunication namba M.A.Bonch-Bruevich (GUT)

9.00-14.00 Poster Session EQ.
Section 8. Ionizing Radiation Sensing Materials

Chairmen: Nedilko S., Kažukauskas V.

EQ-8P/1 **TlBr: carier transport and defects**
Kažukauskas V.[1], Ziminskij A.[1], Davidyuk G.[2], Bozhko V.[2], Mironchuk G.[2]
[1]*Semiconductor Physics Department of Vilnius University, Vilnius, Lithuania*
[2]*Volyn National University, Lutsk, Ukraine*

EQ-8P/2 **The GeO_2–Eu_2O_3–Au gel-films for registration of ionizing radiation**
Malashkevich G., Bokshits Yu.[1], Shevchenko G.[1], Chukova O.[2], Nedilko S.[2], Scherbatskii V.P.[2]
Institute of Physics of NAS of Belarus, Minsk, Belarus
[1]*R&D Institute of Physicochemical Problems of Belarusian State University, Minsk, Belarus*
[2]*Kyiv National Taras Shevchenko University, Kyiv, Ukraine*

EQ-8P/3 **Adaptation of the Organic Porous Scintillators for the α-Emitters Determination**
Andryushchenko A.Yu., Budakovsky S.V., Shevtsov M.I.
Institute for Scintillation Materials, STC "Institute for Single Crystals" of NAS of Ukraine, Kharkiv, Ukraine

EQ-8P/4 **Peculiarities of obtaining of ZnSe scintillation crystals for X-ray detectors**

Rybalka Irina, Galkin Sergey, Voronkin Yevgeniy,
Lalayants Alexandr, Ryzhikov Vladimir
Institute for Scintillation Materials of NAS of Ukraine, Kharkov, Ukraine

EQ-8P/5 **Seebeck effect in $PbTe_{1-x}Br_x$ solid solutions**

Sharov Mikhail K., Samoylov Alexander M.
Voronezh State University, Voronezh, Russian Federation

EQ-8P/6 **Single $CdS_{1-x}Te_x$ solid solutions crystal growth from vapor phase for scintillation detectors**

Melnikov A.A.[1], Glebkin A.A.[1], Sopov V.S.[2]
[1]*Moscow State Institute of Radioengineering, Electronics and Automation (Technical University), Moscow, Russia*
[2]*Institute of Theoretical and Experimental Physics, Moscow, Russia*

EQ-8P/7 **Influence technological factors receptions nZnSe(X)/Ni diode Shottky on their quality**

Katrunov K., Gal'chinetskii L., Perevertaylo V., Starzhinskiy N.G., Popov V., Pokanevich V., Mackevich V., Ryzhikov V.
STC "Institute for Single Crystals" NAS of Ukraine, Kharkov, Ukraine

EQ-8P/8 **Luminescent and scintillation characteristics of $LuBO_3:Ce^{3+}$ powders and composite films on their basis**

Meotishvili A.A., Zadneprovski B.I., Sosnovzev V.V., Permenov D.G.
Central Research and Development Institute of Chemistry and Mechanics, Moscow, Russia

EQ-8P/9 **Luminescence properties of undoped and Sm^{3+}-doped $YAl_3B_4O_{12}$**

Berezovskaya I.V., Dotsenko V.P., Efryushina N.P.
Physico-Chemical Institute, Ukrainian Academy of Sciences, Odessa, Ukraine

EQ-8P/10 **Luminescent characteristics of lithium-aluminophosphate glasses doped with Ce^{3+} and Eu^{3+} ions**

Zadneprovski B.I.[1], Permenov D.G.[1], Sosnovzev V.V.[1],
Spassky D.A.[2]
[1]*Central Research and Development Institute of Chemistry and Mechanics, Moscow, Russia*
[2]*Skobeltsyn Institute of Nuclear Physics, Moscow State University, Moscow, Russia*

EQ-8P/11 **Effect of a phase inhomogeneity on the luminescence properties of gadolinium borates doped with Tb^{3+}**

Permenov D.G., Meotishvili A.A., Mitiaev A.S., Zadneprovski B.I.
Central Research and Development Institute of Chemistry and Mechanics, Moscow, Russia

EQ-8P/12 **Complex lanthanide oxides from molten phosphate – molybdate (tungstate) media: crystal structure and photoluminescence properties**

Nedilko S.G.[1], Baumer V.N.[2], Boyko V.V.[1],
Scherbatskii V.P.[1],Slobodyanik M.S.[1], Terebilenko K.V.[1], Virko S.V.[3], Zatovsky I.V.[1]
[1]*Kiev National Taras Shevchenko University, Kiev, Ukraine*
[2]*STC "Institute for Single Crystals", NAS of Ukraine, Kharkiv, Ukraine*
[3]*Institute of Semiconductor Physics NAS of Ukraine, Kyiv, Ukraine*

EQ-8P/13 **Synthesis and luminescence of fluorochloride glasses activated by Er^{+3}**

Brekhovskikh M.N.[1], Galagan B.I.[2], Dmitruk L.N.[2], Moiseeva L.V.[2], Fedorov V.A.[1]
[1]*N.S.Kurnakov Institute of General and Inorganic Chemistry RAS, Moscow*
[2]*A.M.Prokhorov Institute of General PhysicsRAS, Moscow*

EQ-8P/14 **Investigation of scintillation characteristics of gellike scintillators**

Gorbacheva T.E., Bedrik A.I., Andryzhenko L.A., Zhmurin P.N., Tarasov V.A., Shershukov V.M., Velmozhnaya El.S.
Institute for Scintillation Materials NAS of Ukraine, Kharkov, Ukraine

EQ-8P/15 **Ionizing radiation detectors on the basis of proton irradiation silicon**

Brinkevich D.I., Prosolovich V.S., Yankovski Yu.N.
Belorussian State University, Minsk, Belarus

EQ-8P/16 **The effect of electron irradiation on the structure and properties of natural quartzites of Ukraine**

Shevyakova E.P., Borts B.V., Bereznyak E.P., Sayenko L.A., Rybalchenko N.D.
National Scientific Center Kharkov Institute of Physics & Technology, NSC Ukraine, Kharkov, Ukraine

EQ-8P/17 **Radiation-induced processes in natural biotites**

Shevyakova E.P., Borts B.V., Bereznyak E.P., Sayenko L.A., Dovbnya N.A.
National Science Center Kharkov Institute of Physics & Technology NAS of Ukraine, Kharkov, Ukraine

EQ-8P/18 **New luminescent materials based on zinc Schiff base 3-pyridinyl-5-aminophenyl-1,2,4-triazole's complexes**

Gusev A.N.[1], Shul'gin V.F.[1], Meshkova S.B.[2], Kiskin M.A.[3], Yeryomenko I.L.[3]
[1]*V.I. Vernadsky Taurida national university, Simferopol, Ukraine*
[2]*A.V. Bogatsky Physico-chemical Institute of the NAS of Ukraine, Odessa, Ukraine*
[3]*N.S. Kurnakov Institute of General and Inorganic Chemistry, Russian Academy of Science, Moscow, Russian Federation*

EQ-8P/19 **Growth and luminescence of $(Lu_{1-x}Gd_x)_3Al_5O_{12}$ crystals doped with Pr^{3+}, Ce^{3+}**

Nizhankovskiy S.V.[1], Dan`ko A.Ya.[1], Zorenko Yu.V.[2],
Baranov V.V.[1], Grin` L.A.[1]
[1]*Institute for Single Crystals of NAS of Ukraine,Kharkov*
[2]*Ivan Franko National University of Lviv, Lviv, Ukraine*

EQ-8P/20 **The influence of Cr alloying atoms on dielectric properties of ZnSe laser crystals**

Gerasimenko A.S.[1], Komar V.K.[1], Morozov D.S.[2], Nalivaiko D.P.[1], Oleynick S.V.[2], Puzikov V.M.[1], Sulima S.V.[1], Chugai O.N.[2], Chuyko A.S.[2]

[1]*STC «Institute for Single Crystals», National Academy of Sciences of Ukraine*

[2]*National aerospace university*

EQ-8P/21 **Influence of the scintillator entrance surface structural state on light collection in detectors on their basis during low-penetrating radiation registration**

Vidayj Yu.T., Tarasov V.A., Gorbacheva T.E.

Institute for Scintillation Materials, STC "Institute for Single Crystals" of NAS of Ukraine, Kharkov, Ukraine

15.00-17.15 Oral Session ED.
Section 8. Ionizing Radiation Sensing Materials

Chairmen: Starzhinskiy N.G., Katrunov K.

ED-8O/1 **Chalcogenide Scintillators for Medical and Technical X-Ray Radiography**

Starzhinskiy N.[1], Grinyov B.[1], Gal'chinetskii L.[1], Katrunov K.[1], Ryzhikov V.[1], Tamulaitis G.[2], Zenya I.M.[1]

[1]*Institute for Scintillation Materials, Kharkiv, Ukraine*

[2]*IMSAR, Vilnius University, Saulėtekio 9-III, Vilnius, Lithuania*

ED-8O/2 **The formation peculiarities of ZnS_xTe_{1-x} solid solutions and perspectives of their application as effective "light" scintillators**

Katrunov K., Lalayants A., Galkin S., Gal'chinetskii L., Starzhinskiy N., Trubaeva O.

Institute of Scintillation Materials, Kharkov, Ukraine

ED-8O/3 **Solubility Region of Ga in PbTe films prepared on Si-substrates**

Samoylov Alexander M.[1], Belenko Sergey V.[1], Khoviv Alexander M.[1], Sharov Mikhail K.[1], Synorov Yuri V.[2]

[1]*Voronezh State University, Voronezh, Russian Federation*

[2]*Voronezh State Academy of Technology, Voronezh, Russian Federation*

ED-8O/4 **Peculiarities of scintillation characteristics of $CdLa_2(WO_4)_4$ crystals**

Baumer V.N.[1], Gorobets Yu.N.[1], Kosmyna M.B.[1], Nazarenko B.P.[1], Puzikov V.M.[1], Shekhovtsov A.N.[1], Zelenskaya O.V.[2]

[1]*Institute for Single Crystals, NAS of Ukraine*

[2]*Institute for Scintillation Materials, NAS of Ukraine, Kharkov, Ukraine*

ED-8O/5 **Control of LSO luminescence kinetics by co-doping with rare-earth elements**

Sidletskiy O.Ts., Starzhinskiy N.G., Grinyov B.V., Katrunov K.A., Zenya I.M., Kurtsev D.A., Bondar V.G., Malyukin Yu.V.

Institute for Scintillation Materials NAS of Ukraine, Kharkiv, Ukraine

ED-8O/6 **Lutetium containing nanocrystalline oxides as new luminescent materials**
Babayevskaya N.V., Dorochenko A.G., Kryzhanovskaya A.S., Tolmachev A.V., Yavetskiy R.P., Yermolayeva Yu.V.
Institute for Single Crystals NAS of Ukraine, Ukraine

ED-8O/7 **New spherical nanocrystalline X-ray phosphors on the basis of $Lu_2O_3:Eu^{3+}$**
Yermolayeva Yu.V., Korshikova T.I., Vovk O.M., Tolmachev A.V.
Institute for Single Crystals NAS of Ukraine, Ukraine, Kharkov

ED-8O/8 **New luminescent materials for white light emitting diodes**
Dotsenko V.P., Berezovskaya I.V., Efryushina N.P., Zubar E.V., Levshov S.M.
Physico-Chemical Institute, Ukrainian Academy of Sciences, Odessa

15.00-19.00 Poster Session ER. Section 11. Instrumentation and Measurement Technique

Chairmen: Edelman V.S., Levchenko G.G.

ER-11P/1 **Perspectives of use electrochemical method of reception and research of functional materials on the basis of sulfides and oxides phases**
Mikhailichenko T.V., Kalinina L.A., Fominykh E.G., Ushakova Ju.N., Shinshin A.S.
SEI OF HPE «Vyatka State University», Kirov, Russia

ER-11P/2 **Application of Hall Effects for Magnetic Nanostructures Studies**
Pogoryelov Ye.[1], Gomonay H.[2]
[1]*Institute of Magnetism, NAS of Ukraine, Ukraine*
[2]*Institute for Physics and Technology, NTUU "KPI", Ukraine*

ER-11P/3 **Susceptibility measurement of the second and third orders in the heterostructure CMT.**
Demin A.V., Levin G.G.
All-Russian Research Institute for Optical and Physical Measurements, Moscow

ER-11P/4 **Dynamics of nanoscale processes on the surface of the growing crystals by atomic force microscopy data**
Piskunova N.N.
Institute of Geology of Komi SC UB RAS, Syktyvkar, Komi republic, Russia

ER-11P/5 **Study of densification of uniaxial pressing SiC system by ultrasonic measurements**
Macherzynska Beata, Gubernat Agnieszka, Macherzynski Mariusz
AGH University of Science and Technology, Krakow, Poland

ER-11P/6 **An Autonomous Dilution Microcryostat–Insert: a Tool to investigate Functional Materials**
Edelman V.S.
Kapitsa Institute for Physical ProblemsRAS, Moscow, Russia

ER-11P/7 **Automatized High Pressure Set-Up for Complex Research of Functional Materials**

Bukin G.V., Kasyanov A.I., Levchenko G.G.
Donetsk Physical & Technical Institute NAS of Ukraine. Donetsk

ER-11P/8 **Spectrometer for mossbauer measurement under high pressure in the wide of temperatures range.**

Postol P.N., Terekhov S.A., Makmak I.M., Berejnaya L.V., Levchenko G.G.
Donetsk Physical & Technical Institute NAS of Ukraine, Donetsk, Ukraine

ER-11P/9 **Application of the methods of self-organization for the interpretation of Fe-C and Fe-N Mossbauer spectra**

Timoshevskii A.N., Yeremin V.I., Yablonovskii S.O.
Institute of Magnetism NASU, Kiev

ER-11P/10 **High-pressure x-ray cell for studying the structure of fluids, viscous and solid samples**

Drobotko V.F., Kasyanov A.I., Kamenev V.I., Levchenko G.G.
A. A. Galkin Donetsk Physical – Technical Institute NAS of Ukraine, Donetsk, Ukraine

ER-11P/11 **Localization of a ferromagnetic microparticle by means of rapidly oscillating magnetic field in flowing system**

Gorobets O.Yu., Potyemkin M.M.
National Technical University of Ukraine "Kiev Polytechnic Institute", Kyiv, Ukraine

ER-11P/12 **Crystallography and microstructure of $R_{1-x}R'_xMnO_3$ (R=Eu,Tb; R′=Y,Ho) systems studied by X-ray and electron backscatter diffraction**

Iskhakova L.D.[1], Ivanov V.Yu.[2], Mukhin A.A.[2], Lavrishchev S.V.[1], Balbashov A.M.[3], Sarma D.D.[4]
[1]*Fiber Optics Researh Center of the Russian Acad. Sci., Moscow, Russia*
[2]*Prokhorov General Physics Institute of the Russian Acad. Sci., Moscow, Russia*
[3]*Moscow Power Engineering Institute, Moscow, Russia*
[4]*Institute of Science, Bangalor, India*

ER-11P/13 **The strains, the size of the domains and lattice parameter of iron by Williamson–Hall method**

Savina D.L.[1], Tokiy Natalya[1], Pilyugin V.P.[1], Efros B.M.[2]
[1]*Donetsk Physical & Technical Institute NAS Ukraine, Donetsk, Ukraine*
[2]*Institute of metal physics of Ural division of PAN*

ER-11P/14 **Singularities of GaAs Microwave High Electron Mobility Transistor (HEMT) Modeling in Passive Regime**

Belkin Leonid M., Belkin Mikhail E.
Moscow State Technical University of Radio Engineering, Electronics and Automatics, Moscow, Russian Federation

ER-11P/15 **Investigation of the I^{127} NQR spectra of the mixed semiconducting layered crystals $BiI_3 \cdot PbI_2$**
Gnatenko Yu.P., Barabash A.I., Vertegel I.G., Chesnokov E.D., Ovcharenko A.I., Pogrebnyak S.V.
Institute of Physics National Academy of Sciences of Ukraine, Kiev, Ukraine

ER-11P/16 **The means of the magneto-optic visualization for investigation of document magnetic protection elements**
Agalidi Y.S., Leviy S.V., Machnyev A.M., Ponomarev S.L.
National Technical University «The Kiev Polytechnic Institute», Kiev, Ukraine

ER-11P/17 **High sensitive precision electrometric amplifier**
Yatsenko A.V., Yevdokimov S.V., Yatsenko A.A.
Taurida National University, Simferopol, Ukraine

ER-11P/18 **Calculation of a seeming susceptibility of rocks**
Urusova B.I., Salpagarova Z.A.
Karachaevo-Circassian the state university, Russia, Karachaevsk

ER-11P/19 **Experimental setup for fast measurements of the magnetocaloric effect**
Kopeliovich D.B.[1], Spichkin Y.I.[1] and Tishin A.M.[2]
[1]*Advanced Magnetic Technologies and Consulting, LLC, Moscow region, Russia*
[2]*Moscow State University, Physics Faculty, Moscow, Russia*

AP-10P/12 **Development of biosensor for maltose determination**
Pyeshkova V.M.[1,2], Saiapina O.Y.[1,3], Soldatkin O.O.[1], Dzyadevych S.V.[1]
[1]*Institute of molecular biology and genetics NAS Ukraine, Kyiv*
[2]*Taras Shevchenko Kyiv National University, Kyiv, Ukraine*
[3]*National Food Industry University, Kyiv, Ukraine*

15.00-19.00 Poster Session ES.
Section 4. Electrooptic and Magnetooptic Materials

Chairmen: Pavlov V.V., Stuart Y.

ES-4P/1 **Polarization switching in planar structures based on multiferroic $Bi_{0.97}FeNd_{0.3}O_3$ films**
Sherstyuk Natalia[1], Mishina Elena and Muhortov Vladimir[2]
[1]*Moscow State Institute of Radioengineering, Electronics and Automation, Russia*
[2]*South Scientific Centre of RAS, Rostov-on-Don, Russia*

ES-4P/2 **A giant change of IR transmission in the manganite/ferrite epitaxial heterostructures**
Telegin A.V.[1], Sukhorukov Yu.P.[1], Kaul A.R.[2]
[1]*Institute of Metal Physics, UD of RAS, Ekaterinburg*
[2]*Moscow State University, Moscow*

ES-4P/3 **Optical properties of $Y_3Fe_5O_{12}$ nanoceramic**

Gizhevskii B.A.[1], Sukhorukov Yu.P.[1], Ganshina E.A.[2], Loshkareva N.N.[1], Telegin A.V.[1]
[1]*Institute of Metal Physics, Ural Div. of RAS, Ekaterinburg, Russia*
[2]*M.I. Lomonosov Moscow State University, Moscow, Russia*

ES-4P/4 **Properties of interfaces of Bi-substituted LPE garnet films - GGG-substrate for thermo-magnetic recording**

Berzhansky V.N., Karavainikov A.V., Milyukova E.T., Prokopov A.R., Shaposhnikov A.N.
Taurida National V.I. Vernadsky University, Ukraine, Simferopol

ES-4P/5 **Preparation and properties of magneto-optical films $Y_{3-x-y}Bi_xR_yFe_{5z}M_zO_{12}$ for one-dimensional magneto-photonic crystals**

Berzhansky V.N., Karavainikov A.V., Milyukova E.T., Mikhailova T.V., Prokopov A.R., Shaposhnikov A.N.
Taurida National V.I. Vernadsky University, Ukraine, Simferopol

ES-4P/6 **Controllable magneto-photonic crystal**

Dzedolik Igor , Ponomarenko Vladimir
Taurida V.Vernadsky National University, Physics Department, Simferopol, Ukraine

ES-4P/7 **Sputtered bismuth iron garnet composite films with record magnetooptical quality and uniaxial magnetic anisotropy**

Kotov A.[1,2], Burkov V.I.[3], Vasiliev Mikhail[4], Nur-E-Alam Mohammad[4], Alameh Kamal[4], Balabanov D.E.[3], Belotelov V.I.[5], Shavrov V.G.[1], Zvezdin K.A.[2]
[1]*IRE RAS, Moscow, Russia*
[2]*GPI RAS, Russia*
[3]*MIPT, Dolgoprudny, Russia*
[4]*ESRI, Edith Cowan University, WA, Australia*
[5]*MSU, Moscow, Russia*

ES-4P/8 **Magnetooptics of ultrathin iron - garnet films and transitional layers with thicknesses down to 1 nm**

Kotov V.A.[1,2], Burkov V.I.[3], Vasiliev Mikhail[4], Alameh Kamal[4], Balabanov D.E.[3], Belotelov V.I.[5], Shavrov V.G.[1], Zvezdin K.A.[2]
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[3]*MIPT, Dolgoprudny, Russia*
[4]*ESRI, Edith Cowan Univer., Joondalup, WA, Australia*
[5]*MSU, Moscow, Russia*

ES-4P/9 **Faraday rotation red shift in bismuth iron garnet**

Kotov V.A.[1,2], Burkov V.I.[3], Balabanov D.E.[3], Belotelov V.I.[4], Giri G.S.[5], Jalali A.A.[5], Levy M.[5], Shavrov V.G.[1], Zvezdin K.A.[2]
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[2]*GPI RAS, Moscow, Russia*
[3]*MIPT, Dolgoprudny, Moscow region, Russia*
[4]*MSU, Moscow, Russia*
[5]*MTU, Houghton, MI, USA*

ES-4P/10 **Layering Effects in Strained Epitaxial Garnets**

Berzhansky V.N., Vishnevskii V.G., Danishevskaya H.V., Nedviga A., Nesteruk A., Milyukova E.T.
Taurida National V.I. Vernadsky University, Ukraine, Simferopol

ES-4P/11 **Ultrafast switching in multiferroic photonic crystalls**

Ilyin Nikita
Moscow State Institute of Radioengineering, Electronics and Automation, Moscow, Russia

ES-4P/12 **Pseudo-Brewster angles at light reflection from a nonlinear dielectric film on a magnetoelectric bigyropropic substrate**

Dadoenkova Yu.S.[1], Lyubchanskii I.L.[1], Lee Y.P.[2], Rasing Th.[3]
[1]*Donetsk Physical & Technical Institute of NAS of Ukraine and Department of Physics, Donetsk National University, Ukraine, Donetsk*
[2]*q-Psi and Department of Physics, Hanyang University, Korea, Seoul*
[3]*Institute for Molecules and Materials, Radboud University Nijmegen, the Netherlands*

ES-4P/13 **Inverted magnetic metallic opals: linear and nonlinear photonic properties**

Mashkov N.A., Semin S.V.
Moscow State Institute of Radioengineering, Electronics and Automation, Moscow, Russia

ES-4P/14 **Magnetic intermediate state in the iron borates $TbFe_3(BO_3)_4$ and $PrFe_3(BO_3)_4$**

Bedarev V.A.[1], Bezmaternykh L.N.[2], Gnatchenko S.L.[1], Pashchenko M.I.[1], Temerov V.L.[2]
[1]*B. Verkin Institute for Low Temperature Physics and Engineering of the National Academy of Sciences of Ukraine, Kharkov, Ukraine*
[2]*L.V. Kirenskii Institute of Physics, Siberian Branch of RAS, Krasnoyarsk, Russia*

ES-4P/15 **Nonlinear-optical properties of thin strained bismuth ferrote films**

Murzina T.V.[1], Kartavtseva M.[2], Gorbenko O.Yu.[2], Kaul A.R.[2], Aktsipetrov O.A.[1]
[1]*Department of Physics, Moscow State University, Moscow, Russia*
[2]*Department of Chemistry, Moscow State University, Moscow, Russia*

ES-4P/16 **Magnetic Circular Dichroism (XMCD) of FePt and FePd nanoparticles in cyclohexane**

Zabluda V.[1], Saboungi M-L.[2], Edelman I.[1], Fleurier R.[3], Sukhachev A.[1]
[1]*Physics of Magnetic Phenomena Laboratory, Kirensky Institute of Physics SB RAS, Krasnoyarsk, Russia*
[2]*Centre de Recherche sur la Matire Divisie, France*
[3]*Laboratoire D'etude des Microstructures ONERA 29, Chatillon, France*

ES-4P/17 **Quadric and cubic nonlinear optical responses of the KDP crystals doped with TiO_2 nanoparticles**

Gayvoronsky V.Ya.[1], Kopylovsky M.A.[1], Gromov Yu.V.[1], Pogrebnyak S.V.[1], Kosinova A.V.[2], Pritula I.M.[2]
[1]*Institute of Physics NASU, Kyiv, Ukraine*
[2]*Institute for Single Crystals NASU, Kharkiv, Ukraine*

ES-4P/18 **Near-Field-Distribution in the System "HTSC Particle on Substructure" in Non-local Approach**

Glumova M.V.[1], Lozovski V.Z.[2], Reznik D.V.[2]
[1]*Tavrida National Vernadsky University, Simferopol, Ukraine*
[2]*Institute of Semiconductor Physics, National Academy of Sciences of Ukraine, Kyiv, Ukraine*

ES-4P/19 **Second Critical Magnetic Field of Multilayer Conductor with Nanodimension Layers of Superconducting NbTi Alloy**

Korzhov V.P.[1], Nikulov A.V.[2], Zverev V.N.[1]
[1]*Institute of Solid State Physics RAS, Chernogolovka, Russia*
[2]*Institute of Microelectronics Technology and High Pure Materials RAS, Chernogolovka, Russia*

ES-4P/20 **The cores of the fiber-optic coupler in conditions of weak and strong fusion**

Basiladze G.D., Berzhansky V.N., Dolgov A.I. and Milyukova E.T.
Taurida National V.I. Vernadsky University, Ukraine, Simferopol

ES-4P/21 **Determination of the higher-order optical nonlinearity for pure and colored complex organic compounds using the multiwave mixing methods**

Agishev I.N., Tolstik A.L.
Belarusian State University, Minsk, Belarus

ES-4P/22 **Electrically-controlled structures based on liquid crystals and photoaligning polymers**

Kazak A.A., Melnikova E.A., Tolstik A.L.
Belarusian State University, Minsk, Belarus

ES-4P/23 **Formation of polarization degenerate band gap**

Merzlikin A.M.[1], Vinogradov A.P.[1], Levy M.[2] and Granovsky A.B.[3]
[1]*Institute of Theoretical and Applied Electromagnetism (ITAE), RAS, Moscow, Russia*
[2]*Department of Physics, Michigan Technological University, Michigan, USA*
[3]*Faculty of Physics, Moscow State University, Moscow, Russia*

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