International Conference
"Functional Materials"

ICFM-2007

PROGRAM

Ukraine, Crimea, Partenit
October 1 – 6, 2007

International Conference *"Functional Materials"*

Organizers:

Ministry of Education and Science of Ukraine

V.I. Vernadsky Taurida National University

Institute of Magnetism of NASU&MESU

Institute for Single Crystals of NASU

Donetsk Phys&Techn. Institute of NASU

Crimean Scientific Center of NASU&MESU

Section "Magnetism" of CPhCM of RAS

Ukrainian Physical Society

Taurida Humanitarian & Ecological Institute

with cooperation

Health Centre "Krym",
"Zdravnitsy Yuga",
"Kurort-Proect

ICFM' 2007. The conference will address aspects relevant to the physics, technology and applications of new materials and structures with the determined functional properties

International Committee

V. Baryakhtar - Chairman (Ukraine),
K. Aleksandrov (Russia),
S.H. Cho (Korea),
B. Grinyov (Ukraine),
M. Ibarra (Spain),
G. Makovetskii (Belarus),
P. Perlo (Italy),
P. Pernod (France),
K. Sato (Japan),
A. Shpak (Ukraine),
H. Szymczak (Poland),
K. Ullakko (Finland),
V. Ustinov (Russia),
P. Wigen (USA)

Scientific Committee

Yu. Gorobets (Co-Chairman) (Ukraine),
A. Zvezdin (Co-Chairman) (Russia),
N. Bebenin (Russia),
V. Berzhansky (Ukraine),
A. Granovsky (Russia)
B. Ivanov (Ukraine),
A. Lagarkov (Russia)
V. Loktev (Ukraine),
I. Lyubutin (Russia),
S. Oshkaderov (Ukraine),
S. Ovchinnikov (Russia),
G. Petrakovsky (Russia),
A. Pogorily (Ukraine),
V. Preobrazhensky (France),
S. Ryabchenko (Ukraine),
A. Sigov (Russia),
V. Tiberkevich (USA),
P. Stetsenko (Russia),
A. Tolmachev (Ukraine),
M. Valakh (Ukraine),
V. Varyukhin (Ukraine)

Organizing Committee

V. Berzhansky (Chairman),
A. Gorbovanov,
A. Murava-Sereda,
I. Pozdeyeva,
S. Polulyakh,
V. Popov,
H. Potapova,
T. Starchevskaya,
D. Vinogorodsky,
V. Vishnevskii

Address of the Organizing Committee:
ICFM'2007,
Physics Department
V.I. Vernadsky Taurida National University,
Vernadsky Ave., 4, Simferopol, 95007 Ukraine
Phones: (+38 0652) 230 223, 637 595. ***Fax:*** 517 135
E-mail: *icfm@crimea.edu*
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 1, at 20.00 – Welcome party
Tuesday, October 2 at 20.00 – Concert
Wednesday, October 3, at 14.30 – tasting of Crimean Vine collection (Yalta).
Thursday, October 4, at 20.00 – Concert.
Friday, October 5, 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 1:
8.00-9.00 – breakfast
14.00-15.00 – dinner
19.00-20.00 – supper

Table of Contents

Schedule of Conference

Date	Time		Oral presentations (Hall)	Poster presentations (Foyer)
Monday, October 1	15.00-16.30	Session AA	Opening. Plenary I	
	16.30-19.00	Session AB	Section 1. Fundamental Physics of Functional Materials	
	15.00-19.00	Session ER		Section 11. Materials for Medical and Environmental Applications. Biosensors
	20.00-21.30	Culture program	**Welcome party**	
Tuesday, October 2	9.00-11.30	Session BA	Plenary II	
	11.00-14.00	Session BB	Section 5. Piezoelectric and Magnetoelectric Materials	
	9.00-14.00	Session BP		Section 10. Nanophysics & Nanotechnologies for Functional Materials I
	15.00-17.15	Session BC	Section 6. Elastic & Magnetoelastic Phenomena. Adaptive Materials	
	17.30-19.00	Session BD	Section 11. Materials for Medical and Environmental Applications. Biosensors	
	17.45-19.00	Session RT	Round table «50-anniversary of Invention of weak ferromagnetism»(Hall 2)	
	15.00-19.00	Session BQ		Section 10. Nanophysics & Nanotechnologies for FunctionalMaterials II
		Session BR		Section 3. Materials for Spin Electronics. Transport Phenomena
	20.00-21.30	Culture program	**Concert**	
Wednesday, October 3	9.00-13.00	Session CA	Section 3. Materials for Spin Electronics. Transport Phenomena	
	9.00-14.00	Session AP		Section 6. Elastic & Magnetoelastic Phenomena. Adaptive Materials
		Session AQ		Section 7. Metamaterials. Photonic, magnonic & phononic crystals
	15.00-18.00	Culture program	**Wine Tasting (Yalta)**	

Date	Time		Oral presentations (Hall)	Poster presentations (Foyer)
Thursday, October 4	9.00-13.00	Session DA	Section 8. Spin Dynamics. Microwave Materials	
	13.15-14.00	Session DB	Section 12. NMR & EPR	
	9.00-14.00	Session DP		Section 9. Ionizing Radiation Sensing Materials
		Session DQ		Section 2. Soft and Hard Magnetic Materials
	15.00-19.00	Session DC	Section 10. Nanophysics & Nanotechnologies for Functional Materials	
	15.00-19.00	Session DR		Section 2. Soft and Hard Magnetic Materials
		Session DS		Section 4. Electrooptic and Magnetooptic materials
	20.00-21.30	Culture program	**Concert**	
Friday, October 5	9.00-11.30	Session EC	Section 2. Soft and Hard Magnetic Materials	
	11.30-14.00	Session EB	Section 7. Metamaterials. Photonic, magnonic & phononic crystals	
	9.00-14.00	Session EP		Section 5. Piezoelectric and Magnetoelectric Materials
		Session EQ		Section 8. Spin Dynamics. Microwave Materials
	15.00-17.15	Session EA	Section 4. Electrooptic and Magnetooptic materials	
	17.30-19.00	Session ED	Section 9. Ionizing Radiation Sensing Materials	
	15.00-19.00	Session CP		Section 1. Fundamental Physics of Functional Materials
		Session CQ		Section 12. NMR & EPR
	19.00	**Closing**		
	20.30-23.00	**Conference dinner**		

Monday, October 1

15.00-16.30 Session AA. Opening.

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

Plenary I

Chairmen: Gorobets Yu.I., Berzhansky V.N.

AA-L2 **Functional Materials for Present and Future Data Storage Systems** (invited)
Mapps D.J.
Centre for Research in Information Storage Technology, Faculty of Technology, University of Plymouth, UK

AA-L3 **Magnetophotonics: present and future** (invited)
Granovsky A., Gan'shina E., Perov N., Orlov A.[1], Vinogradov A.[2], Inoue M.[3]
Faculty of Physics, Moscow State University, Moscow, Russia
[1]Giredmet State Research Institute, Moscow, Russia
[2]Institute for Theoretical and Applied Electromagnetics, Moscow, Russia
[3]Toyohashi University of Technology, Toyohashi, Japan

16.30-19.00 Oral Session AB. Section 1. Fundamental Physics of Functional Materials

Chairmen: Ivanov B.A., Ovchinnikov S.G.

AB-1L/2 **Exactly solvable model of electron in the Lame potential and singularities of the electron thermodynamic potential** (invited)
Baryakhtar V.G.[1,2], Belokolos E.D.[1], Dmytriiev A.V.[1], Samar A.V.[2]
[1]Institute of Magnetism, Kyiv, Ukraine
[2] National Technical University of Ukraine "KPI", Kyiv, Ukraine

AB-1L/3 **Nonlinear spin dynamics for antiferromagnets and non-Heisenberg magnets** (invited)
Ivanov B.A.
Institute of Magnetism, NASU, Kiev, Ukraine

AB-1L/4 **Quantum computers: review of possible implementations in solids** (invited)
Gomonay H. , Malyshenko N.
National Technical University of Ukraine «KPI», Kyiv, Ukraine

AB-1O/2 **Spin-reorientation phase transitions in thin magnetic films of different anisotropy**
Bezus A.V., Mamalyi Ju.A., Siryuk Ju.A.
Donetsk National University, Donetsk, Ukraine

AB-1O/3 **On the nature of asymmetry in the activity of nucleation centers in ultrathin Co films and Co/Pt multilayers**
Iunin Y.L.[1], Kabanov Y.P.[1], Nikitenko V.I.[1-3], Shapiro A.J.[2], Shull R.D.[2], Cheng X.M.[3], Chien C.L.[3]
[1]Institute of Solid State Physics, Russian Academy of Sciences, Chernogolovka, Russia
[2]National Institute of Standards and Technology, Gaithersburg, MD USA
[3] The Johns Hopkins University, Baltimore, MD USA

AB-1O/4 **Influence of magnetic field on phase nucleation in Cu-Be alloy**
Runov V.V., Pokoev A.V.[1], Runova M.K., Smirnov O.P.
Petersburg Nuclear Physics Institute RAS, Gatchina, Russia.
[1]Samara State Universities, Samara, Russia.

AB-1O/5 **The effect of Mn substitution on magnetic phase transitions of $Y_2(Fe,Mn)_{17}$ compounds**
Pankratov N.Yu., Ilyn M.I., Skokov K.P.[1], Iwaseczko W.[2], Nikitin S.A.
Department of Physics, M.V.Lomonosov Moscow State University, Moscow, Russia
[1]Department of Physics, Tver State University, Tver, Russia.
[2]Trzebiatowski Institute of Low Temperatures and Structure Research, Wrocław, Poland

AB-1O/7 **Investigation of the vibration anharmonicity in the crystal lattice of mixed composition apatites**
Karbovsky V.L., Kurgan N.A.[1], Shpak A.P., Dimitriev O.P.
G.V. Kurdyumov Institute for Metal Physics NASU, Kiev, Ukraine
[1]SPM-Centre", Technical Center NASU, Kiev, Ukraine

15.00-19.00 Poster Session ER.

Section 11. Materials for Medical and Environmental Applications. Biosensors

Chairmen: Gorbenko O.Yu., Gorobets S.V.

Biosensors

ER-11P/1 **Development of the biomimetic sensor for phenols detection based on tyrosinase mimics**
Sergeyeva T.A.[1], Piletsky S.A.[2], Brovko O.O.[3], Sergeeva L.M.[3], El'ska G.V.[1]
[1]Institute of Molecular Biology and Genetics, Kiev, Ukraine,
[2]Cranfield Health, Cranfield University at Silsoe, Bedfordshire, UK
[3]Institute of Macromolecular Chemistry, Kiev, Ukraine

ER-11P/2 **Application of surface plazmon resonance spectrometer for determination of optical parameters of the thin polyaniline films**
Samoylov A.V., Ushenin Yu.V., Khristosenko R.V.
V. E. Lashkaryov Institute of Semiconductor Physics NASU, Ukraine

ER-11P/3 The analysis of criterion function under definition of optical constants of thin films by using biosensor based on surface plasmon resonance
Shirshov Yu.M., Beketov G.V., Zinyo S.A., Kazantceva Z.I., Samoylov A.V., Surovceva E.R., Ushenin Yu.V., Venger E.F.
V. Lashkaryov Institute of Semiconductor Physics, NASU, Kiev, Ukraine

ER-11P/4 Influence of adsorption of ferments on electronic parameters of mesoporous silicon
Vashpanov Yu.A.[1], Konup I.A.[2]
[1]*Department of experimental physics,*
[2]*Department of microbiology and virology, I.I.Mechnikov national university of Odessa, Odessa, Ukraine*

ER-11P/5 Adaptation of biosensor bioselective element for sucrose determination in beverages
Peshkova V.N.[1,2], Soldatkin A.A.[1], El'skaya A.V.[1], Soldatkin A.P.[1], Dzyadevych S.V.[1]
[1]*Institute of Molecular Biology and Genetics, NASU, Kiev, Ukraine*
[2]*National Taras Shevchenko University of Kyiv, Kyiv, Ukraine*

ER-11P/6 Development of enzyme multibiosensor for determination of several toxic compounds
Soldatkin O.O.[1], Nazarenko O.A.[1], Marchenko S.V.[1], Pavluchenko O.S.[2], Kukla O.L.[2], Arkhipova V.M.[1], Dzyadevych S.V.[1], Soldatkin A.P.[1], El'skaya A.V.[1]
[1]*Laboratory of Biomolecular Electronics, Institute of Molecular Biology and Genetics NASU, Kiev, Ukraine*
[2]*Department of functional optoelectronics, Institute of Semiconductor Physics NASU, Kiev, Ukraine*

ER-11P/7 A Novel bi-enzyme biosensor for specific proteinase activity detection
Rogaleva N.S., Biloivan O.A.
Laboratory of Biomolecular Electronics, Institute of Molecular Biology and Genetics, NASU, Kiev, Ukraine

ER-11P/8 New Non-Phototoxic Materials Based on the Luminescent Styryl Dyes for Biosensors
Kudrya V.Yu.[1], Yashchuk V.M.[1], Losytskyy M.Yu.[1,2], Levchenko S.M.[1], Garasevich S.G.[1], Myagchenko Yu.O.[1], Yarmoluk S.M.[2], Kovalska V.B.[2], Balanda A.O.[2], Kryvorotenko D.V.[2]
[1] *Kyiv National Taras Shevchenko University, Kyiv, Ukraine*
[2] *Institute of Molecular Biology and Genetics NASU, Kyiv, Ukraine*

ER-11P/9 Preparation and investigation of the langmuir monolayers and LB films of polyamic acid/ruthenium complex and stearic acid/ruthenium complex for electrochemical sensors
Bezkrovnaya O.N., Savin Y.N.
Institute for Single Crystals NASU, Kharkiv, Ukraine

ER-11P/10 Selective reflection properties of cholesteric matrix doped with anthraquinone dye

Kasian N.A., Zavora L.N., Panikarskaya V.D., Lisetski L.N.
Institute for Scintillation Materials of STC "Institute for Single Crystals", NASU, Kharkiv, Ukraine

ER-11P/11 Nanocomposites on base of polymer matrix and copper sulfide nanoparticles: some physical properties and gas sensitivity

Muradov M.B., Emrick T.[1], Eyvazova G.M., Hajimamedov R.H.
Nanocenter, Baku State University, Baku, Azerbaijan
[1]National Center of Polymer Science, University of Massachusetts, Amherst, USA

ER-11P/12 The Synthesis and Physicochemical Investigations of supramolecular structures with a controllable active oxygen content as Possible Long-Lived Drug Substances

Tripol'skaya T., Pokhabova I., Pilipenko G., Legurova E.
Kurnakov Institute of General and Inorganic Chemistry, RAS, Moscow, Russia

ER-11P/13 Synthesis, modification and investigation of novel polymer functional compositions on the base of aminostyrene and carbazole

Palistrant N., Bivol V., Robu S., Barba N.
Institute of Applied Physics, Academy of Sciences of Moldova, Chisinau, Moldova

ER-11P/14 Selective recognition of creatinine by molecularly-imprinted polymer membranes based on semi-ipns. computational modeling of synthetic mimicks of bioreceptors

Sergeyeva T.A.[1], Piletska E.V.[2], Brovko O.O.[3], Sergeeva L.M.[3], El'ska G.V.[1]
[1]Institute of Molecular Biology and Genetics, Kiev, Ukraine
[2]Cranfield Health, Cranfield University at Silsoe, Bedfordshire, UK
[3]Institute of Macromolecular Chemistry, Kiev, Ukraine

ER-11P/15 Test system for aflatoxin B1 detection based on computational molecularly-imprinted polymer membranes

Sergeyeva T.A.[1], Piletska E.V.[2], Goncharova L.A.[3], Brovko O.O.[3], Sergeeva L.M.[3], El'ska G.V.[1]
[1]Institute of Molecular Biology and Genetics, Kiev, Ukrain
[2]Cranfield Health, Cranfield University at Silsoe, Bedfordshire, UK
[3]Institute of Macromolecular Chemistry, Kiev, Ukraine

ER-11P/16 The development of new functional materials by the radical immobilization at the silica surface

Kukueva V.V.
Fire Safety Institute, Cherkassy, Ukraine

ER-11P/17 Selective sorption of dendrite covers on steel high-gradient ferromagnetic packing in a magnetic field from dia- and paramagnetic solutions

Gorobets O.Yu., Gorobets S.V., Legenkii Yu.A.[1], Pimenov Yu.N.[1]
National Technical University of Ukraine "Kyiv Polytechnic Institute", Kyiv, Ukraine
[1]Donetsk National University, Donetsk, Ukraine

ER-11P/18 Formation of the ferromagnetic coatings with relief surface on high-gradient magnetic filter elements and investigation of their capturing ability

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

ER-11P/19 Formation and properties bioactive apatite coating on titanium and quartz

Doroshenko A.G., Savin Yu.N., Tolmachev A.V.
NTC Institute for Single Crystals NASU, Kharkiv, Ukraine

ER-11P/20 Intensification of the process of sorption of copper ions by Saccaromyces cerevisiae 1968 depending on a permanent magnetic field

Gorobets S.V., Kasatkina T.P.[1], Goyko I.Yu., Zinyuk A.I.
National Technical University of Ukraine "Kyiv Polytechnic Institute", Kyiv, Ukraine
[1]Institute of Microbiology and Virology, Kyiv, Ukraine

ER-11P/21 Influence of magnetic field on etching on different metals in electrolyte

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

ER-11P/22 A modification of magnetically labeled micro- and nanoscale biological objects' susceptibility determination method

Gorobets S.V., Lutsik P.I., Kashpur O.M.
National Technical University of Ukraine "Kyiv Polytechnic Institute", Kyiv, Ukraine

ER-11P/23 Sapphire head and sapphire acetabular cup in spheroid joint endoprosthesis (development and clinical testing)

Litvinov L.[1], Voloshin A.[1], Tankut O., Timchenko I., Filipenko V.
[1]Institute for Single Crystals, STC "Institute for Single Crystals", NASU, Kharkiv, Ukraine
Sytenko Institute of Spine and Joint Patholog, Kharkiv, Ukraine

ER-11P/24 Carbonated hydroxyapatite ceramics modified by magnetic particles

Tkachenko M.V., Zyman Z.Z., Ol'khovik L.P., [1]Dedukh N.V.
V.N.Karazin Kharkiv National University, Kharkiv, Ukraine
[1]Sytenko Institute of Spine and Joint Pathology, Academy of Medical Sciences, Ukraine

ER-11P/25 Biomaterials and sorbents on the basis of apatites synthesized in saline melts

Tarasenko S.O., Zinchenko V.F.
A. V. Bogatsky Physico-Chemical Institute (PCI) NASU, Odesa, Ukraine

ER-11P/26 Bioactivity of novel carbon nanocomposites *in vitro*

Prylutska S.V., Grynyuk I.I., Matyshevska O.P., Golub A.A., Ritter U.[1], Scharff P.[1]
Kyiv National Shevchenko University, Kyiv, Ukraine
[1]Technical University of Ilmenau, Ilmenau, Germany

ER-11P/27 Biodegradable magnesium alloys for medical application

Papirov I.I., Tikhonovsky M.A., Kutniy K.V., Pikalov A.I., Sivtzov S.V., Pirozhenko L.A., Shokurov V.S.
National Science Center "Kharkov Institute of Physics and Technology", Kharkov, Ukraine

ER-11P/28 Medical sorption compositions on base of carbon fibre with nanosilver

Yurkova I.N.[1], Ryabushko V.I.[2], Nikolaev V.G.[3], Sakhno L.A.[3]
[1]V.I.Vernadsky Tavrida National University, Simferopol, Ukraine
[2]Institut of Biology of Southern Seas NASU, Sevastopol, Ukraine,
[3]Institute of experimental pathology, oncology and radiobiology NASU, Kyiv, Ukraine

ER-11P/29 Optical Spectroscopy of Silicon Nanomaterials for Biomedical Applications

Efimova A.I., Abidulina R.A., Ryabchikov Yu.V., Kashkarov P.K., Timoshenko V.Yu.
Physics Department, Moscow State M.V. Lomonosov University, Moscow, Russia

ER-11P/30 Electrical conductivity of composite membranes with layer of plasma polymerized thiophene

Kravets L.[1], Satulu V.[2], Ionita D.[2], Dinescu G.[2], Gilman A.[3]
[1] Joint Institute for Nuclear Research, Flerov Laboratory of Nuclear Reactions, Dubna, Russia
[2] National Institute for Laser, Plasma and Radiation Physics, Bucharest, Romania
[3]Enikolopov Institute of Synthetic Polymer Materials, RAS, Moscow, Russia

ER-11P/31 Structural peculiarity of surface layer of the blood compatibility functional metallic system

Poperenko L.V., Grygoruk V.I., Nosach D.V.
Taras Shevchenko Kyiv National University, Kyiv, Ukraine

ER-11P/32 Fluorinated segmented poly(urethene urea)s as polymers stents coating

Shekera O., Muzhev V., Lazarenko O.[1], Alexeeva T.[2], Oshkaderov S.[2], Shevchenko V.
Institute of Macromolecular Chemistry NAS of Ukraine, Kyiv, Ukraine,
[1]Kyiv Medical of Post Graduate Education MAS of Ukraine, Kyiv, Ukraine
[2]Institute of Metal's Physics NASU, Kyiv, Ukraine

ER-11P/33 The new nanodispersed amorphous form of calcium gluconate for the treatment of complicated bones and teeth diseases

Konygin G.N., Rybin D.S., Efremov Yu.Ya.[1], Sharafutdinova D.R.[1], Petukhov V.Yu.[2], Gumarov G.G.[2], Yelsukov E.P., Shakov A.A. Porsev V.E., Strelkov N.S.[3], Pozdeev V.V.[3], Maksimov P.N.[3], Filippov A.N.[3], Bazina N.Y.[3], Korlaykov D.V.[3], Yakovenko O.V.[3]

Physical-Technical Institute UrB RAS, Izhevsk, Russia

[1]Institute of Organic and Physical Chemistry, KNC RAS, Kazan, Russia

[2]Kazan Physical-Technical Institute KNC RAS, Kazan, Russia

[3]Izhevsk State Medical Academy, Izhevsk, Russia

ER-11P/34 Hybride nanomaterials with adjustable Curie temperature for tumor hyperthermy

Melnikov O.V.[1], Gorbenko O.Yu.[1], Popova M.N.[1], Kaul A.R.[1], Atsarkin V.A.[2], Demidov V.V.[2], Odintsov B.M.[3], Roy E.J.[3]

[1]Lomonosov Moscow State University, Moscow, Russia

[2]Institute of Radio Engineering and Electronics, Russian Academy of Sciences, Moscow, Russia

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

ER-11P/35 Synthesis and characterization of nanoparticles of $La_{1-x}Ag_yMnO_3$ for medical application

Melnikov O.V.[1], Gorbenko O.Yu.[1], Popova M.N.[1], Kaul A.R.[1], Atsarkin V.A.[2], Demidov V.V.[2]

[1]Lomonosov Moscow State University, Moscow, Russia

[2] Institute of Radio Engineering and Electronics, Russian Academy of Sciences, Moscow, Russia

Tuesday, October 2

9.00-11.00 Session BA. Plenary II

Chairmen: Loktev V., Granovsky A.

AB-1L/1 Spin crossover and electronic transformations in Mott insulators under high pressure (invited)

Ovchinnikov S.G.[1,2]

[1]L.V. Kirensky Institute of Physics, Siberian Branch of RAS, Krasnoyarsk, Russia

[2] Siberian Federal University, Krasnoyarsk, Russia

BA-L2 Graphene with impurities: can massless quasiparticles be localized? (invited)

Loktev V. [1], Skrypnyk Y.[2]

[1]Bogolyubov Institute for Theoretical Physics, NASU, Kyiv, Ukraine

[2]G. V. Kurdyumov Institute of Metal Physics, NASU, Kyiv, Ukraine

BA-L3 **Layered cobaltites $RBaCo_2O_{5.5}$ – physical properties that govern by spin state transformations** (invited)

Pashkevich Yu., Luetkens H.[1], Gnezdilov V.[2], Lemmens P.[3], Ambrosch-Draxl C.[4], Choi K.-Y.[3], Lamonova K., Gusev A., Stingaciu M.[1], Pomyjakushina E.[1], Konder K.[1], Barilo S.[5], Shiryaev S.[5], Bychkov G.[5]

A.A. Galkin Donetsk Phystech NASU, Donetsk, Ukraine
[1]Lab. for Muon-Spin Spectroscopy PSI Villigen, Switzerland
[2]B.I.Verkin Inst. for Low Temp. Physics NASU, Kharkov, Ukraine
[3]IPCM, TU Braunschweig, Brauschweig, Germany
[4]University Leoben, Leoben, Austria
[5]Inst. of Phys. of Solids & Semicond., Minsk, Belarus

BA-L4 **New principles and possibilities for the characterization of functional materials and nanotechnology products by using multiple coherent and diffuse scattering effects** (invited)

Shpak A.P., Molodkin V.B., Olikhovskii S.I., Kislovskii E.N., Nizkova A.I.

G. V. Kurdyumov Institute for Metal Physics NASU, Kyiv, Ukraine

11.00-14.00 Oral Session BB.
Section 5. Piezoelectric and Magnetoelectric Materials

Chairmen: Zvezdin A.K., Pashkevich Yu.

BB-5L/1 **Spin Modulation and Multiferroicity** (invited)

Pyatakov A.P.[1,2], Zvezdin A.K.[1]

[1]Institute of General Physics RAS, Moscow, Russia
[2] M.V. Lomonosov Moscow State University, Moscow, Russia

BB-5L/2 **High pressure magnetic, electronic and spin transitions in multiferroic $BiFeO_3$** (invited)

Lyubutin I.S.[1], Gavriliuk A.G.[1,2], Struzhkin V.V.[3], Trojan I.A.[1]

[1]Institute of Crystallography, RAS, Moscow, Russia
[2]Institute for High Pressure Physics, RAS, Troitsk, Moscow region, Russia
[3] Geophysical Laboratory, Carnegie Institution of Washington, Washington DC

BB-5O/1 **Direct and inverse magnetoelectric effects in ferromagnetic- piezoelectric layered structures**

Fetisov Y.K.

Moscow State Institute of Radio Engineering, Electronics and Automation, Moscow, Russia

BB-5O/2 Modeling of Magnetoelectric Effect in Ferrite-Piezoelectric Nanocomposites

Bichurin M.I., Petrov V.M., Filippov D.A., Kozin A.V., Srinivasan G.[1], Gupta A.[2], Viehland D.[3], Nan C.W.[4]
Novgorod State University, Veliky Novgorod, Russia
[1]Oakland University, Rochester MI, USA
[2]University of Alabama, Tuscaloosa AL, USA
[3]Virginia Tech, Blacksburg VA, USA
[4]Tsinghua University, Beijing, China

BB-5O/3 Hyperfine parameters of ^{57}Fe in $Bi_{05}Sr_{05}FeO_3$ compound

Pokatilov V.S., Cherepanov V.M.[1], Pokatilov V.V.
Moscow State Institute of Radioengineering, Electronics and Automation, Moscow, Russia
[1]Russian Research Center "Kurchatov Institute", Moscow, Russia

BB-5O/4 Magnetic, magnetoelectric and piezoelectric properties of rare-earth iron borates $RFe_3(BO_3)_4$

Ivanov V.Yu.[1], Mukhin A.A.[1], Kuzmenko A.M.[1], Pronin A.A.[1], Kadomtseva A.M.[2], Popov Yu.F.[2], Vorob'ev G.P.[2], Pyatakov A.P.[1,2], Zvezdin A.K.[1], Bezmaternikh L.N.[3]
[1]A.M. Prokhorov General Physics Institute of the RAS, Moscow, Russia
[2]M.V. Lomonosov Moscow State University, Moscow, Russia
[3]Institute of Physics SB RAS, Krasnoyarsk, Russia

BB-5O/5 Microscopic mechanism of magnetoelectricity in giant magnetocapacitive $CdCr_2S_4$

Pashkevich Yu.[1], Lemmens P.[2], Gnezdilov V.[3], Scheib P.[2], Payen Ch.[4], Choi K.Y.[5], Hemberger J.[6], Loidl A.[6], Tsurkan V.
[1]A.A. Galkin Donetsk Phystech NASU, Donetsk, Ukraine
[2]IPCM, TU Braunschweig, Brauschweig, Germany
[3]B.I.Verkin Inst. for Low Temp. Physics NASU, Kharkov, Ukraine
[4]Inst. des Mat. Jean Rouxel, CNRS-IMN, Nantes, France
[5] NHMFL/FSU, Tallahassee, FL, USA
[6]Exp. Phys. V, Center for Electr. Correl. and Mag., Augsburg, Germany
Inst. of Appl. Phys., Academy of Sciences of Moldova, Chisinau, Moldova

BB-5O/6 $BaMnF_4$: Magnetic Field Control of Electric Polarization; Is Weak Ferromagnetism Possible in It?

Kadomtseva A.M.[1], Vorob'ev G.P.[1], Popov Yu.F.[1], Zvezdin A.K.[2], Pyatakov A.P.[1,2]
[1]Physics department, M.V. Lomonosov, Moscow State University, Moscow, Russia
[2]Institute of General Physics RAS, Moscow, Russia

9.00-14.00 Poster Session BP. Section 10. Nanophysics & Nanotechnologies for Functional Materials I

Chairmen: Molodkin V.B., Pudonin F.A.

BP-10P/1 Self-Organizing Processes in Condensed Nanomaterials
Sobol` O.V., Kunitskaya L.[2], Nechitaylo Ya.[1], Dementjev V., Barabash M.[1]
National Technical University «KhPI», Kharkov, Ukraine
[1]Technical Centre NAS of Ukraine, Kiev, Ukraine
[2]Institute of Surface Chemistry NAS of Ukraine, Kiev, Ukraine

BP-10P/2 Collective modes and local magnon states for magnetic dot arrays with perpendicular anisotropy
Bondarenko P.V.[1], Galkin A.Yu.[2], Zaspel C.E.[3], Ivanov B.A.[1]
[1]Institute of Magnetism NASU, Ukraine
[2]Institute of Metal Physics NASU, Ukraine
[3]University of Montana-Western IMag, NASU, Kiev, Ukraine

BP-10P/3 Investigation of low-coercive ferromagnetic nanoparticles by magnetic force microscopy
Mironov V.L.[1], Nikitushkin D.S.[1], Gribkov B.A.[1], Bins C.[2], Shubin A.B.[3], Zhdan P.A.[4]
[1] Institute for physics of microstructures RAS, Nizhny Novgorod, Russia
[2] University of Leicester, Leicester, UK
[3] "Nanotechnology MDT" Company, Zelenograd, Russia
[4] School of Engineering, University of Surrey, Guildford, Surrey, UK

BP-10P/4 Magnetic molecules and nanoclusters in ultra-strong magnetic fields
Zvezdin A.K.[1], Plokhov D.I.[1], Selemir V.D.[2], Platonov V.I.[2], Tatsenko O.M.[2]
[1]A.M. Prokhorov General Physics Institute RAS, Moscow, Russia
[2]All-Russian Research Institute of Experimental Physics, Sarov, Russia

BP-10P/5 FMR in patterned arrays of rectangular nanodots with different aspect ratios
Golub V.[1], Vovk A.[1,2], Tartakovskaya E.[1], Malkinski L.[2], Yu M.[2]
[1]Institute of Magnetism NASU and MESU, Kiev, Ukraine
[2]University of New Orleans, New Orleans, USA

BP-10P/6 Phenomenological model of surface-induced anisotropy in magnetic nanoparticles
Leonov A.A.[1], Dragunov I.E.[1], Rössler U.K.[2], Bogdanov A.N.[1,2]
[1]Donetsk Institute for Physics and Technology, Donetsk, Ukraine
[2]IFW Dresden, Dresden, Germany

BP-10P/7 Magnetic-resonance properties of $SiO_{2-\gamma}$-Fe_2O_3 composites prepared by sol-gell method
Adakimchik A.V., Karpovich I.A., Ivanovskaya M.I., Yankovsky O.N., Odzhaev V.B.
Belorussian State University, Minsk, Belarus

BP-10P/8 About a stabilization of γ-Fe_2O_3 clusters within SiO_2 matrix
Ivanovskaya M., Kotsikau D., Pankov V.
Research Institute for Physical-Chemical Problems of the Belarusian State University, Minsk, Belarus

BP-10P/9 Mössbauer and X-ray studies of Fe powder obtained by thermochemical synthesis
Nadutov V.M., Perekos A.O., Svystunov Ye.O., Zalutskyj V.P., Voinash V.Z., Makarenko S.
G.V. Kurdyumov Institute for Metal Physics, NASU, Kyiv, Ukraine

BP-10P/10 Submicron periodic structures in the magnetic liquid
Kovalenko V.F., Petrychuk M.V., Moldovan B.N.
Taras Shevchenko Kyiv National University, Kyiv, Ukraine

BP-10P/11 Self-assembling of nanoparticles in submicron threadlike magnetic clusters in the magnetic liquid
Dzyan C.V., Ivanov B.A., Kovalenko V.F. , Petrychuk M.V.
Taras Shevchenko Kyiv National University, Kyiv, Ukraine

BP-10P/12 Optical spectra of admission of magnetic liquid
Kovalenko V.F., Petrychuk M.V., Bessmertnaya L.G., Morgun A.A.
Taras Shevchenko Kyiv National University, Kyiv, Ukraine

BP-10P/13 Experience of optimization of methods for creation of hexagonal ferrite micro-crystal powders
Ol'khovik L.P., Borisova N.M., Golubenko Z.V., Levitin E.Ya.[1], Koval' A.A.[1]
Karazin Kharkov National University, Kharkov, Ukraine
[1]National University of Pharmacy, Kharkov, Ukraine

BP-10P/14 Intracrystalline pore formation in nanocrystal metal films
Skatkov L.[1], Gomozov V.[2]
[1]PCB "Argo", Beer Sheva, Israel
[2]National Technical University "Kharkov Polytechnical Institute", Kharkov, Ukraine

BP-10P/15 Magnetotransport, magnetostatic and FMR studies of Co - ($A_{l2}On$) granular system near percolation threshold
Timopheev A.A., Ryabchenko S.M., Lozenko A.F., Trotsenko P.A.[1], Stogney O.V.[1], Sitnikov A.V., Avdeev S.F.[1]
Institute of Physics of the NASU, Kiev, Ukraine
[1]Voronezh State Technical University, Voronezh, Russia

BP-10P/16 Monolayer–island–bulk like layer transitions in gold/cobalt nanosize system
Stognij A.I., Novitskii N.N., Yanushkevich K.I., Pashkevich M.V.
Joint Institute of Solid State and Semiconductor Physics, NASB, Minsk, Belarus

BP-10P/17 Novel Nanostructured Materials Based on Silicon in Optics and Laser Physics

Zabotnov S.V., Golovan L.A., Ryabchikov Yu.V., Piskunov N.A., Ezhov A.A., Timoshenko V.Yu., Kashkarov P.K.
Physics Department, M.V. Lomonosov Moscow State University, Moscow, Russia

BP-10P/18 Temperature influence on the faceting of grain boundaries in polysilicon films

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

BP-10P/19 Pressure-enhanced crystallization of silicon nanoparticles in nonstoichiometric silicon oxide matrix

Rudko G.Yu.[1], Majdanchuk I.Yu.[1], Indutnyy I.Z.[1], Misiuk A.[2], Shepeliavyi P.E.[1], Gule E.G.[1]
[1]*V. Lashkarev Institute of Semiconductor Physics, NASU, Kyiv, Ukraine*
[2]*Institute of Electron Technology, Warsaw, Poland*

BP-10P/20 Influence of parabenzoquinone and ammonia adsorption on recombination properties of silicon nanocrystals

Ryabchikov Yu.V., Vorontsov A. S., Osminkina I.A., Konstantinova E.A., Timoshenko V.Yu., Kashkarov P.K.
Moscow State M.V. Lomonosov University, Moscow, Russia

BP-10P/21 Nanocrystalline porous silicon as a solid reservoir for hydrogen storage

Alekseev S.[1], Barbier D.[2], Kuznetsov G.[1], Litvinenko S.[1], Lysenko V.[2], Skryshevsky V.[1]
[1] *Taras Shevchenko National University of Kyiv, Kiev, Ukraine*
[2] *Materials Physics Laboratory, CNRS UMR, INSA de Lyon, Villeurbanne cedex, France*

BP-10P/22 Forming method and proportions of polymeric composition with nanoparticles ZnS – organic shell

Burunkova J.E., Denisuk I.Y.
Saint-Petersburg State University of Information Technologies, Mechanics and Optics, Saint-Petersburg, Russia

BP-10P/23 Reguliarities of crystal structure and properties of functional powders materials sintered with electrocontact heating

Andrushchik L.O., Oschkaderov S.P.
Institute for Metal Physics G.V.Kurdymov NASU, Kyiv, Ukraine

BP-10P/24 Electrophysical and optical properties of composite structures organic polymer // CdS nanocrystals

Aleksandrov A.A., Smyntyna V.A., Chebanenko A.P.
I.I. Mechnikov National University, Odesa, Ukraine

BP-10P/25 Local Plasmons Contribution into Photocurrent of Au/GaAs Surface Barrier Structure with Au Nanoparticles on Interface

Mamykin S.[1], Dmitruk N.[1], Naumenko D.[1], Dmytruk A.[2], Park Y.-S.[2]
[1]*Institute of Semiconductor Physics NASU, Kyiv, Ukraine*
[2]*Center for Interdisciplinary Research, Tohoku University, Sendai, Japan*

BP-10P/26 Synthesis of nano-sized oxide layers on the surface of GaAs, at presence of the inert component
Penskoy P.K., Mittova I.Ya., Pshestanchik V.R., Kostryukov V.F.
Voronezh State University, Voronezh, Russia

BP-10P/27 Synthetic layered nanostructures as fillers for the polymer-inorganic nanocomposites with the improved and new characteristics
Golubeva O.Yu., Gusarov V.V.
Institute of Silicate Chemistry RAS, St.-Petersburg, Russia

BP-10P/28 Formation of porous aluminium layers near phase equilibrium in plasma-deposit system
Perekrestov V.I., Kornyushchenko A.S., Kosminskaya Yu.A.
Sumy State University, Sumy, Ukraine

BP-10P/29 Complex formation of β-cyclodextrin with mercury (II) ions in solution
Shvets O.M., Lyashenko D.Yu., Belyakova L.A.
A.A. Chuiko Institute of Surface Chemistry, NASU, Kiev, Ukraine

BP-10P/30 Low-temperature sintering of yttrium oxide ceramics Y_2O_3
Vovk E.A., Deineka T.G., Korshikova T.I., Mateichenko P.V., Tkachenko V.F., Tolmachov A.V., Shekhovtsov A.N.
STC «Institute for Single Crystals» NASU, Kharkiv, Ukraine

BP-10P/31 Structure and properties of PVD CAE coatings of eutectic alloys
Panarin V.E.
G.V. Kurdyumov Institute for Metal Physics NASU, Kiev, Ukraine

BP-10P/32 The Effect of Nanocoatings on the Performance of Cathode Materials
Shatilo Ya.V.[1], Makhonina E.V.[2], Dubasova V.S.[3], Pervov V.S.[1]
[1]*Moscow State University of Environmental Engineering, Moscow, Russia*
[2]*Kurnakov Institute of General and Inorganic Chemistry RAS, Moscow, Russia*
[3]*Scientific Research Institute of Electrical Carbon Products, Moscow oblast, Russia*

BP-10P/33 Simulation of emission off the surface of oxide cathode taking into consideration the migration of emission centers
Glumova M.V., Angelo Y.G.
Tavrida National Vernadsky University, Simferopol, Ukraine

BP-10P/34 Differential dynamical X-ray diffractometry of inhomogeneous functional materials
Molodkin V.B., Kislovskii E.N., Olikhovskii S.I., Vladimirova T.P., Reshetnyk O.V., Len E.G., Seredenko R.F., Sheludchenko B.V., Melnik A.V.
G.V. Kurdyumov Institute for Metal Physics NASU, Kyiv, Ukraine

BP-10P/35 Integral dynamical diffractometry of functional materials with macrostrains, disturbed layers, and microdefects
Molodkin V.B., Dmitriev S.V., Rudnitskaya I.I., [1]Dinaev Yu.A., Nizkova A.I., Kononenko O.S., Katasonov A.A., Zabolotnyi I.N., Melnik A.
G.V.Kurdyumov Institute for Metal Physics, NASU, Kyiv, Ukraine
[1]Kabardino-Balkarian state university, Nalchik, Russia

BP-10P/36 Dynamical X-ray diffractometry of multilayered heterostructures and superlattices with defects
Molodkin V.B., Olikhovskii S.I., Kislovskii E.N., Skakunova E.S., Sheludchenko B.V.
G. V. Kurdyumov Institute for Metal Physics of NASU, Kyiv, Ukraine

BP-10P/37 Misunderstood opportunities of x-ray fluorescence
Zabluda V.
Physics of Magnetic Phenomena Laboratory, Kirensky Institute of Physics SB RAS, Krasnoyarsk, Russia

BP-10P/38 Controlling of structure and properties of zirconia nanomaterials for functional application
Konstantinova T.
Donetsk Institute of Physics and Engineering NASU, Donetsk, Ukraine

Metal–carbon nanocomposites

BP-10P/39 The structure formation and strength properties control in hydrosilicate systems modified by nanotubes with the structure of chrysotile
Artamonova O.V., Sergutkina O.R.
Voronezh State University of Architecture and Civil Engineerin, Voronezh, Russia

BP-10P/40 Functional materials on the basis of metalcarbon fibres
Safonova A.M., Bezhok O.V., Shpilevskaja L.E.
Institute of general and inorganic chemistry NASB, Minsk, Belarus

BP-10P/41 Comprehensive approach to the study of thermal diffusion in fullerides
Shpak A.P., Korduban A.M., Mazanko V.F., Pogorelov A.E.
G.V. Kurdyumov Institute for Metal Physics, NASU, Kiev, Ukraine

BP-10P/42 Electronic properties of narrow carbon nanotubes. Ab-initio approach
Shevtsova T.N., Boutko V.G., Gusev A.A., Pashkevich Yu.G.
O.O.Galkin Donetsk PhysTech, NASU, Donetsk, Ukraine

BP-10P/43 Coatings on the basis of metalls and fullerenes
Shpilevsky E.M., Zhdanok S.A., Shpilevsky M.E., Matveeva L.A.[1]
A.V. Luikov Heat- and Mass Transfer Institute NASB, Minsk, Belarus
[1]Institute of physics of semiconductors NASU, Kiev, Ukraine

BP-10P/44 Magnetoresistance of the graphite-transition metal compounds
Matsui D.V., Mykhailenko O.V., Prylutskyy Yu.I., Matzuy L.Yu.
Kyiv National Shevchenko University, Kyiv, Ukraine

BP-10P/45 Electric resistance of compacted thermoexfoliated graphite under high pressure
Vovchenko L., Matzui L., Zhuravkov A.
Kyiv National Shevchenko University, Kyiv, Uraine

BP-10P/46 Obtaining and transport properties of carbon nanotubes modified with cobalt
Ovsiyenko I., Len T., Matzui D., Brusilovetz A., Matzui L.
Kyiv National Taras Shevchenko University, Kyiv, Ukraine

BP-10P/47 Thermopower of carbon nanomaterials modified with transition metals
Ovsienko I., Vovchenko L., Len T., Shevchenko G., Matzui L., Shevchenko N.
Kyiv National Taras Shevchenko University, Kyiv, Ukraine

BP-10P/48 Structure and vibrational properties of composites of polypropilene with multiwalled carbon nanotubes.
Dmytrenko O.P.[1], Kulish M.P.[1], Diyakon L.V.[1], Grabovskiy Yu.E.[1], Bilyy M.M.[1], Gavrilyuk N.A.[2], Sementsov Yu.I.[2]
[1]*Kiev National Shevchenko University, Kiev, Ukraine*
[2]*Institute of Surface Chemistry NASU, Kiev, Ukraine*

BP-10P/49 Properties of magnetofunctionalized carbonic nanotubes
Labunov V.A.[1], Schulichkii B.G.[1], Prudnikova E.L.[1], Demidenko O.F.[2], Makovetskii G.I.[2], Fedosyuk V.M.[2], Yanushkevich K.I.[2], Bohonov B.B.[3], Saurov A.N.[4], Basaev A.S.[4]
[1]*BSUIR, Minsk, Belarus*
[2] *JISSPS NASB, Minsk, Belarus*
[3]*Institute of Solid State chemistry and mechanochemistry of SB RAS, Novosibirsk, Russia*
[4]*NPC «Technologic Center» Moscow Institute of electronic technics, Russia*

BP-10P/50 Modeling of structure of fullerene molecular complex
Lopatin D.V., Chirkin E.S.
Tambov state university, Tambov, Russia

BP-10P/51 Trapping levels in the HOMO-LUMO gap of TMPDA·C_{60} and LCV·C_{60}·C_6H_5Cl molecular complexes
Lopatin D.V.[1], Samodurov A.A.[1], Stolyarov R.A.[1], Konarev D.V.[2], Lyubovskaya R.N.[2]
[1]*Tambov State University, Tambov, Russia*
[2]*Institute of Problems of Chemical Physics RAS, Chernogolovka, Russia*

15.00-17.15 Oral Session BC.
Section 6. Elastic & Magnetoelastic Phenomena. Adaptive Materials

Chairmen: Preobrazhensky V.L., Pernod P.

BC-6L/1 Phase transformations in Heusler alloys with exchange inversion (invited)
Buchelnikov V.D., Taskaev S.V., Zagrebin M.A., Entel P.[1]
Chelyabinsk State University, Chelyabinsk, Russia
[1]*University of Duisburg-Essen, Duisburg, Germany*

BC-6L/2 Tunable by Pressure Bistability in a Sensory- and Memory - Functional Materials on the base of Molecular compounds (invited)

Levchenko G., Bukin G., Gouskos N.[1], Galet A.[2], Gaspar A.[2], Carmen Munoz M.[2], Antonio Real J.[2]
Donetsk Physical & Technical Insnitute NASU, Donetsk, Ukraine
[1]Solid State Section, Departament of Physics, University of Athens
[2]Institut de Ciencia Molecular Universitat Valencia

BC-6O/1 Temperature hysteresis of martensitic transformations in shape memory alloys

Kokorin V.V.
Institute of Magnetism NASU, Kiev, Ukraine

BC-6O/2 Temperature dependent magnetically controlled functional properties in Ni-Mn-Ga compounds

Glavatska N., Glavatskyy I., L'vov V. [1], Söderberg O. [2], Aaltio I. [2], Hannula S.-P. [2]
Institute for Metal Physics, NASU, Kiev, Ukraine
[1]Taras Shevchenko University, Kyiv, Ukrain,
[2]Helsinki University of Technology, Laboratory of Materials Science, Finland

BC-6O/3 Effect of heat treatment on phase transformations in a Ni-Mn-Ga-Fe ferromagnetic shape memory alloy

Castillo-Villa P.O., Soto-Parra D.E., Alvarado-Hernández F., Ochoa-Gamboa R., Flores-Zúñiga H., Ríos-Jara D. [1]
Centro de Investigación en Materiales Avanzados, Complejo industrial Chihuahua, Chihuahua México
[1]Instituto Potosino de Investigación Científica y Tecnológica, San Luis Potosí, México

BC-6O/4 Nanostructured ferromagnetic shape memory Heusler alloys

Khovaylo V.V., Koledov V.V., Mulyukov Kh.Ya., Shavrov V.G.
Institute of Radioengineering and electronics of RAS, Moscow, Russia

BC-6O/5 Parametrically bounded states of quasiphonons in magnetic dielectrics and composites

Rudenko V.V. [1,3], Preobrazhensky V.L. [1,2], Berzhansky V.N. [3], Polulyakh S.N.[3], Pernod P.[1]
[1]Joint European Laboratory LEMAC :Institut d'Electronique et de Micro-electronique et de Nanotechnologie (IEMN-DOAE-UMR CNRS 8520), Ecole Centrale de Lille, Villeneuve d'Acsq, France
[2]Wave Research Center of General Physics Institute RAS, Moscow, Russia
[3] V.I.Vernadsky Taurida National University, Simferopol, Ukraine

17.30-19.00 Oral Session BD.
Section 11. Materials for Medical and Environmental Applications. Biosensors

Chairmen: Oshkaderov S., Lachinov A.N.

BD-11L/1 Medical materials science: the nearest tasks and future trends (invited)
Oshkaderov S.
Institute of Metal's Physics NASU, Kyiv, Ukraine

BD-11O/1 Formation of 'smart' polimeric membranes by plasma polymerization method
Kravets L.[1], Gilman A.[2], Drachev A.[3], Dinescu G.[4]
[1]*Joint Institute for Nuclear Research, Flerov Laboratory of Nuclear Reactions, Dubna, Russia*
[2]*Enikolopov Institute of Synthetic Polymer Materials, RAS, Moscow, Russia*
[3]*Karpov Institute of Physical Chemistry, Moscow, Russia*
[4]*National Institute for Laser, Plasma and Radiation Physics, Bucharest, Romania*

BD-11O/2 Novel functional polymer based material
Lachinov A.N.[1], Salazkin S.N.[2]
[1]*Institute of Physics of Molecules and Crystals, URC RAS, Ufa, Russia*
[2] *A.N. Nesmeyanov Institute of Organoelement Compounds, RAS, Moscow, Russia*

BD-11O/3 Development of methods of immobilization of glycerol oxidase on the surface of amperometric biosensors
Goryushkina T.B.[1], Shkotova L.V.[1], Gayda G.Z.[2], Pavlishko H.M.[2], Gonchar M.V.[2], Soldatkin O.P.[1], Dzyadevych S.V.[1]
[1]*Institute of Molecular Biology and Genetics, NASU, Kyiv, Ukraine*
[2]*Institute of Cell Biology, NASU, L'viv, Ukraine*

17.45-19.00
Round table «50-anniversary of Invention of weak ferromagnetism»
Moderators: Prozorova L.A., Preobrazhensky V.L.

15.00-19.00 Poster Session BQ.
Section 10. Nanophysics & Nanotechnologies for Functional Materials II

Chairmen: Popov Yu.F., Bagmut A.G

BQ-10P/1 Photoconductivity mechanism of $[Zn(Et_2dtc)_2{}^1HMTA]_2{}^1C_{60}{}^1C_6H_5Cl$ complex
Lopatin D.V.[1], Rodaev V.V.[1], Konarev D.V.[2], Lyubovskaya R.N.[2]
[1]*Tambov State University, Tambov, Russia*
[2]*Institute of Problems of Chemical Physics RAS, Chernogolovka, Russia*

BQ-10P/2 Carbon films structural and optical characteristics control
Tolstykh P.V., Puzyrev M.V., Azarko I.I., Kozlova E.I., Tolstykh V.P., Shochovets S.V.[1]
Belorussian State University, Minsk, Belarus
[1]Institute of Physics, TU Ilmenau, Ilmenau, Germany

BQ-10P/3 On the solid-vacuum interface specification in the Monte-Carlo simulation of surface pattern formation at ion-beam irradiation
Gubarev A.A.
PMP & HTSC division, Donetsk National University

BQ-10P/4 Synthesis and peculiarities of microstructure of nanoorganized hybrid materials based on molybdenum disulfide
Golub A.S., Novikov Yu.N.
Nesmeyanov Institute of Organoelement Compounds, RAS, Moscow, Russia

BQ-10P/5 Nanoscale film coatings of borides of transition metals
Goncharov A.A., Konovalov V.A., Stupak V.A.
Donetsk national university, Donetsk, Ukraine

BQ-10P/6 Heavy-hole interaction with a short-range potential of a crystal lattice defect in $Cd_xHg_{1-x}Te$ (x=0.38)
Malyk O.P.
Lviv Polytechnic National University, Semiconductor Electronics Department, Lviv, Ukraine

BQ-10P/7 Self-propagating high temperature synthesis (SHS) of solid lubrication on basis of molybdenum disulfide
Pysarskyy V.P., Zemlyanoy A.D., Doroshenko Y.A., Cherkes S.I.
Institute of Combustion and Advanced Technologies, I.Mechnikov Odessa National University,Odessa, Ukraine

BQ-10P/8 Influence of crystallization conditions on the paramagnetic structure of cubic boron nitride crystals
Azarko I., Ignatenko O.[1], Kozlova E., Odzhaev V., Shempel N.[1], Yankovsky O.
Belorussian State University, Minsk, Belarus
[1]Integrated institute of solid state and semiconductors physics, NASB, Minsk, Belarus

BQ-10P/9 Problems of growth of the $A^{III}B^{V}$ hetero nanostructures by isothermal CVD-methods
Guba S.K., Voronin V.A., Kurilo I.V.
Lviv Polytechnic National University, Lviv, Ukraine

BQ-10P/10 Surface morphology and optical properties of AlN/n-Si (100) films.
Zayats N.S., Boiko V.G., Gentsar P.A., Lyvyn O.S., Sopinskyy N.V., Stronski O.V.
V.E.Lashkarev Institute of Semiconductor Physics, NASU, Kiev, Ukraine

BQ-10P/11 Studying of structural perfection of epitaxial layers Cd-Hg-Te by X-ray topography method

Svezhentsova K.V., Sizov F.F., Melnichenko M.M.[1]
Institute of Semiconductor Physics of NASU, Kiev, Ukraine
[1]Taras Shevchenko Kiev National University, Kiev, Ukraine

BQ-10P/12 Electrical properties of PbTe<In>/Si films prepared by modified HWE technique

Samoylov A.M., Belenko S.V., Khoviv A.M., Artamonova O.V.
Voronezh State University, Voronezh, Russia
[1]Voronezh State University of Architecture and Civil Engineering, Voronezh, Russia

BQ-10P/13 Doped with In lead telluride films on Si substrates prepared by improved HWE technique

Samoylov A.M., Belenko S.V., Khoviv A.M., Synorov Y.V.[1]
Voronezh State University, Voronezh, Russia
[1]Voronezh State Academy of Technology, Voronezh, Russia

BQ-10P/14 Using of brushes technique for obtaining of new nanomembranes and nanomaterials

Palistrant N.[1], Kravets L.[2,*], Bivol V.[1], Robu S.[1], Barbu N.[1], Crasovski V.[1]
[1]Institute of Applied Physics, Academy of Sciences of Moldova, Chisinau, Moldova
[2]Joint Institute for Nuclear Research, Flerov Laboratory of Nuclear Reactions, Dubna, Russia

BQ-10P/15 Novel polymer/silicate nanocomposites based on crazed polymers

Trofimchuk E.S.[1], Nikonorova N.I.[1], Nesterova E.A.[1], Muzafarov A.M.[2], Bakeev N.Ph.[1]
[1]Division of Polymer, Department of Chemistry, M.V. Lomonossov Moscow State University, Mocow, Russia
[2]Institute of Synthetic Polymer Materials, Russian Academy of Science, Moscow, Russia

15.00-19.00 Poster Session BR.

Section 3. Materials for Spin Electronics. Transport Phenomena

Chairmen: Pogorily A.M., Patrin G.S.

Manganites&Cobaltites

BR-3P/1 The mechanisms of electric conduction in partially crystallized films of Na-doped manganites

Pogorily A.M., Tovstolytkin A.I., Matviyenko A.I.
Institute of Magnetism, Kiev, Ukraine

BR-3P/2 **Magnetoresistive properties of nanopowder pressing, mesostructural ceramics and thin films of rare-earth manganite-strontium perovskites**
Pashchenko A.V.[1,3], Revenko Yu.F.[1], Pashchenko V.P.[1,2], Prilipko S.Yu.[1,2], Varyukhin V.N.[1], Shemyakov A.A.[1], Prilipko Yu.S.[2], Kisel' N.G.[1, 2], Prokopenko V.K.[1], Spuskanyuk V.Z.[1], Zhikharev I.V.[1,3], Tovstolytkin A.[1,4]
[1]*Donetsk Institute for Physics and Engineering after A.A.Galkin of NASU, Donetsk, Ukraine,*
[2]*Donetsk Center for Science and Technology "Reaktivelectron" of NASU, Donetsk, Ukraine*
[3]*Lugansk Taras Shevchenko National Pedagogical University of MESU, Lugansk, Ukraine*
[4]*Institute of Magnetism of NASU & MESU, Kyiv, Ukraine*

BR-3P/3 **Optical response of $La_{0.67}Ca_{0.33}MnO_3$ after fs pulse excitation**
Dorosinets V.
Belarusian State University, Minsk, Belarus

BR-3P/4 **Optics Manifestation of magnetic inhomogeneities in manganite CMR films by effect of magnetotransmission**
Telegin A.V.[1], Melnikov O.V., Vinogradov A.N.
[1]*Institute of Metal Physics UD of RAS, Yekaterinburg*
Moscow State University, Moscow

BR-3P/5 **The volume elasticity regularities in linear changes of parameters at X-ray structure analysis of lanthanum manganites.**
Polakov P.I.
Mining Processes Physics Institute of the NASU, Donetsk, Ukraine

BR-3P/6 **Preparation conditions and structure investigations of lanthanum manganite nanoparticles**
Sedykh V., Aristova I.M., Abrosimova G.E., Shekhtman V.Sh., Dubovitskii A.V., Kulakov V.I.
Institute of Solid State Physics RAS, Chernogolovka, Moscow Region, Russia

BR-3P/7 **Inhomogeneous magnetic state in $Re_{0.55}Sr_{0.45}MnO_3$ (Re = Sm, Nd, Eu, $Eu_{0.40}Nd_{0.15}$, $Tb_{0.25}Nd_{0.30}$) manganites**
Abramovich A.I., Koroleva L.I.
M.V. Lomonosov Moscow State University, Moscow, Russia

BR-3P/8 **Structure and magnetic properties of a $Nd_{0.5}Sr_{0.5}MnO_3$ film**
Prokhorov V.G., Kaminsky G.G., Komashko V.A., Lee Y.P.[1], Park S.Y.[1], Hyun Y.H.[1], Kim J.B.[1], Park J.S.[1], Svetchnikov V.L.[2], Pashchenko V.P.[3], Khokhlov V.A.[3], Levchenko G.G.[3]
Institute of Metal Physics, NASU, Kiev, Ukraine
[1]*q-Psi and Department of Physics, Hanyang University, Seoul, Korea*
[2]*National Center for HREM, TU Delft, The Netherlands*
[3]*Donetsk Physical & Technical Institute, NASU, Donetsk, Ukraine*

BR-3P/9 Synthesis and magnetic properties of the $La_{0.50}Ba_{0.50}MnO_3$ nanomanganites

Trukhanov A.V., Stepin S.G., Trukhanov S.V.[1], Botez C.E.[2], Szymczak H.[3]
Chemistry Department, Vitebsk State University, Vitebsk, Belarus
[1]*Joint Institute of Solids and Semiconductor Physics of NASB, Minsk, Belarus*
[2]*University of Texas at El Paso, El Paso, TX, USA*
[3]*Institute of Physics of PAS, Warsaw, Poland*

BR-3P/10 Magnetotransport properties and size effects in the $Pr_{0.70}Ba_{0.30}MnO_{3+\delta}$ manganites

Trukhanov S.V., Trukhanov A.V.[1], Botez C.E.[2], Szymczak H.[3]
Joint Institute of Solids and Semiconductor Physics of NASB, Minsk, Belarus
[1]*Chemistry Department, Vitebsk State University, Vitebsk, Belarus*
[2]*University of Texas at El Paso El Paso, TX, USA*
[3]*Institute of Physics of PAS, Warsaw, Poland*

BR-3P/11 Neutron powder diffraction study of the anion-deficient $La_{0.70}Sr_{0.30}MnO_{3.00-\gamma}$ manganites

Trukhanov S.V., Trukhanov A.V.[1], Zemskova S.G.[2], Vasilovskiy S.G.[2], Beskrovniy A.I.[2]
Joint Institute of Solids and Semiconductor Physics of NASB, Minsk, Belarus
[1]*Vitebsk State University,Vitebsk, Belarus*
[2]*Joint Institute for Nuclear Research,Dubna, Moscow region, Russia*

BR-3P/12 Manganite $Pr_{0.7}Ca_{0.3}MnO_3$ films obtained by the extraction pyrolisis method

Patrin G.S.[1,2], Polyakova K.P.[2], Patrusheva T.N.[1], Velikanov D.A.[2], Volkov N.V.[2], Balaev D.A.[2], Patrin K.G.[2], Klabukov A.A.[2]
[1]*Siberian Federal University, Krasnoyarsk,Russia*
[2]*L.V.Kirensky Institute of Physics, SB RAS,Krasnoyarsk, Russia*

BR-3P/13 Resistivity switching due to spin injection in Ag-(LaCa)MnO point contacts

Boichenko D.I., Tarenkov V.Yu., D'yachenko A.I., Boichenko V.A., Krivoruchko V.N.
Donetsk Institute for Physics and Engineering named after A.A.Galkin, NASU Donetsk, Ukraine

BR-3P/14 Structural defects, phase transitions and properties of magnetoresistive ceramics $(La_{1-x}Ca_x)_{1-y}MnO_{3\pm\delta}$

Pashchenko A.V.[1,3], Revenko Yu.F.[1], Pashchenko V.P.[1,2], Turchenko V.A.[1], Prilipko S.Yu.[1,2], Varyukhin V.N.[1], Shemyakov A.A.[1], Prilipko Yu.S.[2], Kisel' N.G.[1,2], Prokopenko V.K.[1]
[1] *Donetsk Institute for Physics and Engineering named after A.A.Galkin, NASU Donetsk, Ukraine*
[2]*Donetsk Center for Science and Technology "Reaktivelectron", NASU*
[3]*Lugansk Taras Shevchenko National Pedagogical University, Lugansk, Ukraine*

BR-3P/15 Inhomogeneous Magnetic State and Magnetic Susceptibility Particularities of Single Crystal $Nd_{0.5}Sr_{0.5}MnO_3$ Manganite

Dovgii V.T., Linnik A.I., Kamenev V.I., Khokhlov V.A., Kadomtseva A.M.[1], Linnik T.A., Davydeiko N.V., Mikhailov V.I., Ignatyeva E.V.
O. Galkin Donetsk Physics & Technology Institute, NASU
[1]Lomonosov Moscow State University, Russia

BR-3P/16 The peculiarities of specific magnetization temperature dependencies of $Pr_{(1-x)}Ca_xMnO_3$-solid solutions in the temperature range 77 – 850 K

Tarasenko T.N., Yanuskevich K.I.[1]
Donetsk Institute of Physics and Engineering after O.O. Galkin, Donetsk, Ukraine
[1]Joint Institute of Solids and Semiconductor Physics, Minsk, Belarus

BR-3P/17 Double-peak structure of the temperature dependence of electric resistance in self-doped La-deficient manganites in the model of coexisting phases

Doroshev V.D., Borodin V.A., Kamenev V.I., Mazur A.S., Tarasenko T.N., Tovstolytkin A.I.[1], Trukhanov S.V.[2]
Donetsk Institute of Physics and Engineering after O.O. Galkin, Donetsk, Ukraine
[1]Institute of Magnetism, Kyiv, Ukraine
[2]Joint Institute of Solids and Semiconductor Physics, Minsk, Belarus

BR-3P/18 Electric properties of nanokompozites based on magnetite and manganite nanoparticles

Kovalenko V.F., Petrychuk M.V., Pud S.A.
Taras Shevchenko Kyiv National University, Dept. of Radiophysics, Kyiv, Ukraine

BR-3P/19 Space distribution of diffuse scattering in twinned LSGM crystals

Tataryn T., Savytskii D., Kruk B., Paulmann C.[1], Bismayer U.[1], Berkowski M.[2]
Lviv Polytechnic National University, Lviv, Ukraine
[1] Universitat Hamburg, Hamburg, Germany
[2] Institute of Physics, Warsaw, Poland

BR-3P/20 Transport and thermoelectrical properties of $Ho_{1-x}Ba_xCoO_{3-\delta}$ and $Er_{1-x}Ba_xCoO_{3-\delta}$ ceramics

Koslovskii A.A.[1], Khirnyi V.F.[1], Deineka T.G.[1], Semenov A.V.[1], Puzikov V.M.[1], Chiang Yu.N.[2], Shevchenko O.G.[2]
[1] Institute for Single Crystals, Kharkov, Ukraine
[2] Institute for Low Temperature Physics and Engineering, Kharkov, Ukraine

BR-3P/21 A comparative study of $GdCoO_3$ and $SmCoO_3$ low temperature magnetization

Kazak N.V., Ivanova N.B.[1], Michel C.R.[2], Balaev A.D., Ovchinnikov S.G.
L.V. Kirensky Institute of Physics, Krasnoyarsk, Russia
[1]Siberian Federal University,Krasnoyarsk, Russia
[2]Departamento de Fisica, C.U.C.E.I., Universidade de Guadalajara, Guadalajara, Jalisco, Mexico

Magnetic semiconductors

BR-3P/22 Ferromagnetic semiconductors based on II-IV-V2 for spintronics

Trukhan V.M., Marenkin S.F.[1], Haliakevich T.V.
Joint Institute of Solid State and Semiconductors Physics NASB, Minsk, Belarus
1Kurnakov Institute of Inorganic and General Chemistry, Moscow, Russia

BR-3P/23 Semiconducting magnets on the basis of $CuCr_2Se_4$

Aminov T.G.[1], Busheva E.V.[1], Shabunina G.G.[1], Berzhansky V.N.[2], Arshakuni A.A.[1]
[1] Kurnakov Institute of General and Inorganic Chemistry RAS, Moscow, Russia
[2] V.I.Vernadsky Taurida National University, Simferopol, Ukraine

BR-3P/24 Phase transitions in the copper spinel doped by antimony (Sb)

Kuz'min E.V.
V.I.Vernadsky Taurida National University, Simferopol, Ukraine

BR-3P/25 Simulation of impure clusters in cubic magnetic crystals

Grachov N.E., Polulyakh S.N., Berzhansky V.N., Abelyashev G.N.
V.I.Vernadsky Taurida National University, Simferopol, Ukraine

BR-3P/26 Electrical properties of doped Sb $CuCr_2S_4$

Berzhansky V.N.[1], Vlasova T.A.[1], Norden D.V.[1], Aminov T.G.[2], Busheva E.V.[2], Shabunina G.G.[2]
[1]V.I.Vernadsky Taurida National University, Simferopol, Ukraine
[2]Kurnakov Institute of General and Inorganic Chemistry RAS, Moscow, Russia

BR-3P/27 Electrolytic and ceramic properties of phases on the basis of $CaYb_2S_4$ from the overstoichiometric content of binary sulfides

Kalinina L.A., Ushakova Yu.N., Ananchenko B.A., Fominykh E.G., Shirokova G.I.
SEI HPE «Vyatka State University», Kirov, Russia

BR-3P/28 Sulfide ionic conductivity of sulfursamarates with the structure of Th_3P_4, Yb_3S_4, $CaFe_2O_4$

Kalinina L.A., Ushakova Yu.N., Yurlov I.S., Shirokova G.I., Fominykh E.G., Ananchenko B.A.
SEI HPE «Vyatka State University», Kirov, Russia

BR-3P/29 Hydrothermal Synthesis of Chromium Dioxide

Mycyuk B.M., Podyalovskiy D.Y., Nevdacha V.V., Pogorilyy A.M.
Institute of Magnetism NASU, Kyiv, Ukraine

BR-3P/30 Structure, electrical resistance and thermal electromotive force of $Co_XMn_{1-X}S$ solid solutions
Makovetskii G.I., Demidenko O.F., Galias A.I., Yanushkevich K.I., [1]Riabinkina L.I., [1]Romanova O.B.
JISSPS NASB, Minsk, Belarus
[1]Institute of Physics of SB RAS, Krasnoyarsk, Russia

BR-3P/31 Magnetotransport of Heusler alloys this films
Vovk A.[1,2], Golub V.[1], Pogoriliy A.[1], Malkinski L.[2], O'Connor C.J.[2], Tang J.[2]
[1] Institute of Magnetism NASU, Kyiv
[2] University of New Orleans, New Orleans, USA

BR-3P/32 The nature of anomalous temperature dependence of the electrical resistance of $Fe_{0,5}Co_{0,5}$ alloy
Repetsky S.P., Tatarenko V.A., Melnyk I.N., Vyshivanaya I.G.
Taras Shevchenko Kyiv University, Kyiv, Ukraine

BR-3P/33 Peculiarities of magnetoresistive properties and perspectives of practical applications of cluster-layer GMR nanostructures
Romashev L.N., Ustinov V.V., Korolev A.V., Milyaev M.A.
Institute of Metal Physics UD RAS, Ekaterinburg, Russia

BR-3P/34 Spin-flip magnetoresistance of magnetic nanocontacts in Landau-Zener model
Belyaev A.A., Useinov N.Kh., Tagirov L.R.
Kazan State University, Kazan, Russia

BR-3P/35 The effect of mean free path on giant magnetoresistance of nanoscale ferromagnetic heterocontacts
Useinov A.N., Tagirov L.R., Deminov R.G.
Kazan State University, Kazan, Russia

BR-3P/36 Electronic Properties of Spin Valves
Sohatsky V., Shulimov Y., Kolesnik S. [1]
T. Shevchenko Kyiv National University, Ukraine;
[1]Institute of Semiconductors Physics NASU

BR-3P/37 Magnetoresistive Characteristics of Bismuth Films
Avramenko B.O., Mirzoev I.G., Ravlik A.G.
National Technical University "Kharkiv Polytechnic Institute", Kharkiv, Ukraine

BR-3P/38 Pendulum-like Fluxgate Magnetic Field Sensor
Ubizskii S.B., Pavlyk L. P.
R&D Center of Solid State Electronics and Sensors, Lviv Polytechnic National University, Lviv, Ukraine

BR-3P/39 Tunneling spectroscopy of lanthanum manganites' band structure
Boichenko V.A., D'yachenko A.I., Tarenkov V.Yu., Krivoruchko V.N., Pashchenko V.P., Revenko Yu.F.
Donetsk Physics & Technology Institute NASU, Donetsk, Ukraine

CA-3O/2 **The FMR linewidth and resonance frequency shift caused by double exchange in doped lanthanum manganites**
Khutsishvili K.O., Fokina N.P.
Ivane Javakhishvili Tbilisi State University, Georgia, Tbilisi

CA-3O/7 **Magnetic properties and structure of Mn-ion implanted silicon**
Yarkin D.G., Balagurov L.A., Kartavyh A.V., Orlov A.F., Zinenko V.I., Perov N.S.[1], Bublik V.T.[2], Sapelkin A.[3]
Institute of Rare Metals, Moscow, Russia
[1]*Physics Department, Moscow State University, Moscow, Russia*
[2]*Moscow Institute of Steel and Alloys, Moscow, Russia*
[3]*Queen Mary, University of London, London, GB*

Wednesday, October 3

9.00-13.00 Oral Session CA.

Section 3. Materials for Spin Electronics. Transport Phenomena

Chairmen: Bebenin N.G., Krivoruchko V.N.

CA-3L/1 **Ferromagnetic La-Ca manganites** (invited)
Bebenin N.G.
Institute of Metal Physics, UD RAS, Ekaterinburg, Russia

CA-3L/2 **Point-contact and tunneling spectroscopy half-metallic properties of manganites** (invited)
D'yachenko A.I., Krivoruchko V.N., Tarenkov V.Yu.
Donetsk Physics & Technology Institute NASU, Donetsk, Ukraine

CA-3L/3 **Unusual Properties of Paramagnet to Ferromagnet Phase Transition and Phase Separation in Hole Doped Manganites** (invited)
Lazuta A.V., Ryzhov V. A., Kiselev I.A., Khavronin V.P., Chernenkov Yu.P., Molkanov P.L., Smirnov O.P., Troaynchuk I.O.[1], Trukhanov S.V.[1]
Petersburg Nuclear Physics Institute RAS, Gatchina, St. Petersburg, Russia
[1]*Institute of Physics of Solids and Semiconductors NAS, Minsk, Belarus*

CA-3L/4 **First-order ferromagnetic transitions in doped manganites: transformation of transport and resonance properties within a transition region** (invited)
Tovstolytkin A.I., Pogorily A.M., Dzhezherya Yu.I.
Institute of Magnetism, Kyiv, Ukraine

CA-3L/5 **Application of high pressure treatment to produce silicon based materials for spintronics** (invited)
Misiuk A., Chow L.[1]
Institute of Electron Technology, Warsaw, Poland
[1]*Department of Physics, University of Central Florida, Orlando, USA*

CA-3O/1 **Electron Structure of the CMR Manganites**
Gavrichkov V.A., Ovchinnikov S.G.
Kirensky Institute of Physics, Krasnoyarsk, Russia

CA-3O/3 Microwave detection effect in manganite granular system
Volkov N.V.[1,2], Eremin E.V.[1], Shaykhutdinov K.A.[1], Tsikalov V.S.[1], Petrov M.I.[1], Martyanov O.N.[3]
[1]*Kirensky Institute of Physics SB RAS, Krasnoyarsk, Russia*
[2]*Siberian Federal University, Krasnoyarsk, Russia*
[3] *Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia*

CA-3O/4 Nano- and mesostructural nonuniformity, phase transitions and magnetoresistive properties of manganite rare-earth perovskites and ferrospinels
Pashchenko A.V., Pashchenko V.P., Prilipko S.Yu., Varyukhin V.N., Shemyakov A.A., Prokopenko V.K., Kopaev A.V.[1], Zakharchenko S.I.[2]
Donetsk Institute for Physics and Engineering named after A.A.Galkin, NASU, and Donetsk, Ukraine
[1] *Vasyl Stefanyk Precarpathian University, Ivano-Frankivsk, Ukraine*
[2] *NPF "Ferroceram", Belaya Tserkov, Ukraine*

CA-3O/5 Investigations of interlayer coupling in trilayer NiFe/Bi/NiFe films
Patrin G.S.[1,2], Yakovchuk V.Yu.[1], Velikanov D.A.[1], Eremin E.V.[1]
[1] *L.V. Kirensky Institute of Physics, Siberian Branch, RA S, Krasnoyarsk, Russia*
[2] *Siberian Federal University, Krasnoyarsk, Russia*

CA-3O/6 Structures for detecting of weak magnetic field based on disordered multilayer systems of magnetic nanoislands
Boltaev A.P., Pudonin F.A.
P.N.Lebedev Physical Institute of the RAS, Moscow, Russia

9.00-14.00 Poster Session AP.
Section 6. Elastic & Magnetoelastic Phenomena. Adaptive Materials

Chairmen: Shavrov V.G., Kokorin V.V.

AP-6P/1 Influence of aging on martensitic transformation in Ni-Mn-Ga shape memory alloy
Khovaylo V.[1,2], Omori T.[3], Kainuma R.[4], Miki H.[5], Takagi T.[5]
[1]*Institute of Radioengineering and Electronics of RAS, Moscow, Russia*
[2]*Moscow State Mining University, Moscow, Russia*
[3]*Department of Materials Science, Graduate School of Engineering, Tohoku University ,Sendai, Japan*
[4]*Institute of Multidisciplinary Research for Advanced Materials, Tohoku University, Sendai, Japan*
[5]*Institute of Fluid Science, Tohoku University, Sendai, Japan*

AP-6P/2 Functional Shape Memory Composite Material Able to Giant Reversible Bending

Koledov V.V., Khovaylo V.V., Pushin V.G., Shavrov V.G., Perov E.P., Lebedev G.A. [1], Zakharov D.I.[1], Ohtsuka M.[2]
Institute of Radioengineering and Electronics of RAS, Moscow, Russia
[1]Moscow State Institute of Steel and Alloys, Technological University, Moscow, Russia
[2]Institute of Multidisciplinary Research for Advanced Materials, Tohoku University, Sendai, Japan

AP-6P/3 Temperature dependence of physical properties of $Ni_{53,35}Mn_{31,20}In_{15,45}$ alloy in the phase transition region

Musabirov I.I., Mulyukov Kh.Ya., Khovailo V.V.[1], Koledov V.V.[1], Shavrov V.G.[1]
Institute for Metals Superplasticity Problems, RAS, Ufa, Russia
[1]Institute of Radio Engineering and Electronics RAS, Moscow, Russia

AP-6P/4 Microactuator based on the rapidly quenched ribbon of alloy $Ti_{49,5}Ni_{25,5}Cu_{25,0}$ with two-way shape memory effect

Koledov V.V., Khovailo V.V., Kuchin D.C., Lega P.V., Pushin V.G., Shavrov V.G.
Institute of radio engineering and electronics RAS, Moscow, Russia

AP-6P/5 Relation of rapidly quenched alloy NiTiCu crystalline structure with shape memory effect

Istomin V.V., Kanashenko S.L., Koledov V.V., Kuchin D.S., Lega P.V., Lebedev G.A., Pushin V.G., Shavrov V.G.
Institute of Radioengineering and Electronics of RAS, Moscow, Russia

AP-6P/6 Narrow hysteresis martensitic transformations in the ferromagnetic Ni-Mn-Ga shape memory alloys

Kokorin V.V., Semenova Yu.S., Cherepov S.V.
Institute of Magnetism NASU, Kiev, Ukraine

AP-6P/7 Physical properties of Fe-Co-Ni-Ti ferromagnetic alloys doped by Cu

Kokorin V.V., Kozlova L.E., Perekos A.E.[1], Levchuk Yu.S., Ruzhitskaya T.V.[1]
Institute of Magnetism NAS and MES of Ukraine, Kiev, Ukraine
[1]Institute of Physics of Metals NASU, Kiev, Ukraine

AP-6P/8 New Ideas about Mechanism of Reverse Martensitic Transformation in Fe-Ni-Based Alloys

Zemtsova N.D.
Institute of Metal Physics, UD RAS, Ekaterinburg, Russia

AP-6P/9 Physical properties of the Co_2CrAl Heusler alloy films with various structural order

Oksenenko V.A., Kudryavtsev Y.V., Uvarov V.N., Lee Y.P.[1], Dubowik J.[2]
Institute of Metal Physics, NASU, Kiev, Ukraine
[1]q-Psi and Department of Physics, Hanyang University, Seoul, Korea
[2]Institute of Moleculard Physics, PAS, Poznan, Poland

AP-6P/10 Influence of Magnetic Ordering on the Structural Phase Transition in a Conducting Ferromagnet Having Degenerated Spin Subbands

Popkov A.F., Goryachev A.V.[1], Shavrov V.G.[2]
Lukin Scientific Research Institute of Physical Problems, Zelenograd, Moscow, Russia,
[1]Moscow Institute of Electronic Engenering (Technological University), Zelenograd, Moscow, Russia
[2]Institute of Radio Engineering and Electronics, RAS, Moscow, Russia

AP-6P/11 Tree-phonon bound states in antiferromagnet

Preobrazhensky V.L.[1,2], Rudenko V.V.[1,3], Pernod P.[1], Ozhogin V.I.[4]
[1]Joint European Laboratory LEMAC :Institut d'Electronique et de Micro-electronique et de Nanotechnologie (IEMN-DOAE-UMR CNRS 8520), Ecole Centrale de Lille, Villeneuve d'Acsq, France
[2]Wave Research Center of General Physics Institute RAS, Moscow, Russia
[3] V.I.Vernadsky Taurida National University, Simferopol, Ukraine
[4]RRC "Kurchatov Institute" Moskow, Russia

AP-6P/12 Wave phase conjugation of anti-stokes component of Brillouin scattering of ultrasonic waves

Pylnov Yu.V.[1,3], Smagin N.V.[1,3], Preobrazhensky V.L.[1,2], Pernod Ph.[1]
[1]Joint European Laboratory LEMAC :Institut d'Electronique et de Micro-electronique et de Nanotechnologie (IEMN-DOAE-UMR CNRS 8520), Ecole Centrale de Lille, Villeneuve d'Acsq, France
[2]Wave Research Center of General Physics Institute RAS, Moscow, Russia
[3]Moscow State Institute of Radio Engineering, Electronics & Automation, Moscow, Russia

AP-6P/13 Liquid flowmeters by using phase conjugated ultrasonic waves

Pylnov Yu.V.[1,3], Smagin N.V.[1,3], Preobrazhensky V.L.[1,2], Pernod Ph.[1]
[1]Joint European Laboratory LEMAC :Institut d'Electronique et de Micro-electronique et de Nanotechnologie (IEMN-DOAE-UMR CNRS 8520), Ecole Centrale de Lille, Villeneuve d'Acsq, France
[2]Wave Research Center of General Physics Institute RAS, Moscow, Russia
[3]Moscow State Institute of Radio Engineering, Electronics & Automation, Moscow, Russia

AP-6P/14 New procedure for verification of ability of magnetostriction ferrites to serve as an parametrically active medium in ultrasound phase conjugate systems

Brysev A.P.[1], Pernod P.[2], Preobrazhensky V.[1,2]
[1]LEMAC- Laboratoire Européen en Magnéto-ACoustique non linéaire de la matière condensée
[2] Wave Research Center of General Physics Institute RAS, Moscow, Russia

AP-6P/15 Influence of pressure on magnetic and magnetoacoustic effectsin rhombohedral antiferromagnets

Skibinsky K.M., Strugatsky M.B.
V.I.Vernadsky Taurida National University, Simferopol, Ukraine

AP-6P/16 Spectrum of surface magneto-elastic waves in a cubic ferromagnet with uniaxial anisotropy induced along [111]
Vakhitov R.M., Ryakhova O.G.[1], Nazirov N.N.
Bashkir State University, Ufa, Russia
[1]Ufa State Aircraft Technology University, Ufa, Russia

AP-6P/17 Localization of the shear waves in uncompensated magnetics
Lapteva T.V., Tarasenko S.V.
Donetsk Institute for Physics and Technology, NASU, Donetsk, Ukraine

AP-6P/18 Acoustic Resonator Spectroscopy of thin plates and layers
Alekseev S.G., Mansfeld G.D., Sergeev F.O.
Institute of Radioengineering and Electronics RAS, Moscow, Russia

AP-6P/19 Intermediate spin state stability in iron (II, III) porphyrin complexes under effects of a pressure, a temperature and a magnetic field
Zhitlukhina E.S., Lamonova K.V., Orel S.M., Pashkevich Yu.G.
Donetsk Institute for Physics and Engenearing after O. O. Galkin, NASU, Donetsk, Ukraine

AP-6P/20 Pressure-induced spin transition in model complex $Fe(phen)_2(NCS)_2$
Levchenko G.G., Bukin G.V., Gaspar A.[1], Real J.A.[1]
A.A. Galkin Donetsk Physical & Technical Institute NASU, Donetsk
[1]Institut de Ciencia Molekular, Universitat de Valencia, Spain

AP-6P/21 Thermally induced acoustic waves in porous silicon
Benilov A.I., Gavrilchenko I.V., Shulimov Yu.G., Skryshevsky V.A.
Radiophysics Department, Kiev National Taras Shevchenko University, Kiev, Ukraine

AP-6P/22 Dynamics the Acoustic Emission of Materials
Lyashenko O.V.
Taras Shevchenko Kyiv National University, Kiev, Ukraine

AP-6P/23 Fabrication of heterogeneous film structures by thermally activated mass-transfer
Filatov A.V., Pogorelov A.E., Nevdacha V.V.[1], Kravets A.F.[1]
G.V. Kurdyumov Institute for Metal Physics, NAS of Ukraine, Kiev, Ukraine
[1]Institute of Magnetism under NAS and MES of Ukraine, Kiev, Ukraine

AP-6P/24 The plastic flow of amorphous material
Marchenko V.I., Misbah C.[1]
Kapitza Institute for Physical Problems, RAS, Moscow, Russia
[1]Universite Joseph Fourier, Grenoble, France

AP-6P/25 Influence of tensile stresses on ΔE-effect in the amorphous ribbons $Fe_{64}Co_{21}B_{15}$ annealling by electric current
Gavriliuk A.A., Mokhovikov A.Yu., Semirov A.V., Semenov A.L., Turik N.V., Kudryavcew V.O.
Irkutsk State University, Irkutsk, Russia

AP-6P/26 Pressure-induced transitions during annealing of silicon implanted with oxygen, Si: O

Varyukhin V.N., [1]Misiuk A., Efros B.M.
Physics&Technology Institute of NASc of Ukraine, Donetsk, Ukraine
[1]Institute of Electron Technology, Warsaw, Poland

AP-6P/27 Simultaneous influence of alternative electrical voltage and mechanical stress on amplitude dependent internal friction in semiconductors and SiO_2

Onanko A.P., Polovina O.I., Bezrodniy D.A., Onanko Y.A., Levitskiy O.V.
Taras Shevchenko Kiev national university, physics department, Kiev, Ukraine

AP-6P/28 Influence of irradiation on relaxed processes in Si and SiO_2

Onanko A.P., Lyashenko O.V., Bezrodniy D.A., Onanko Y.A., Lyashenko I.O., Levitskiy A.V.
Taras Shevchenko Kiev national university, physics department, Kiev, Ukraine

AP-6P/29 Inluence of temperature, magnetic field and pressure on internal stresses in solids

Ryumshyna T.A., Poljakov P.I.[1]
Donetsk Institute of Physics and Engineering NAS of Ukraine, Donetsk, Ukraine
[1]Physics of Mining processes Institute, Donetsk, Ukraine

AP-6P/30 Density changes in FRTP Cu after severe plastic deformation

Zavdoveev A., Varyukhin V., Spuskanyuk V., Davidenko A., Zakoretskaya T.
DonPTI NASU, Donetsk, Ukraine

AP-6P/31 Influence of magnetic field on plastic deformation of imperfect metals at low temperatures

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

AP-6P/32 *Ab initio* lattice dynamic calculations for nonmetals at high pressure

Troitskaya E.P., Chabanenko Val.V., Horbenko E.E.[1], Kuzovoy N.V. [1], Shtaerman E.Ya.
Donetsk A.A. Galkin Institute of Physics and Technology NASU, Donetsk, Ukraine
[1]Taras. Shevchenko National Ped. University, Luhansk, Ukraine

AP-6P/33 Noise effect on thermodynamics of fragmentation at severe plastic deformation

Khomenko A.V., Lyashenko I.A., Metlov L.S.[1]
Sumy State University, Sumy, Ukraine
[1]Donetsk Institute for Physics and Engineering of the NASU, Donetsk, Ukraine

AP-6P/34 The estimation of phonon subsystem influence on spin crossover in compounds like $Fe(phen)_2(NCS)_2$
Shelest V.V., Christov A.V., Levchenko G.G.
Donetsk Institute for Physics and Engineering, NASU, Donetsk, Ukraine

AP-6P/35 Dynamic parameters of magnetostriction ferrites
Rudenko V.V.[1], Yevstafyev A.I.[1], Pernod Ph.[2], Preobrazhensky V.L.[2], Berzhansky V.N.[1], Vlasova T.A.[1], Fersenkov N.A.[3], Kunevich A.V.[4]
[1]*V. I. Vernadsky Taurida National University, Simferopol, Ukraine*
[2]*Joint European Laboratory LEMAC:*
[3]*Institut d'Electronique, de Micro-électronique et de Nanotechnologie (IEMN-DOAE-UMR CNRS 8520), Ecole Centrale de Lille, France*
[4]*"North West Laboratory" Ltd, St.Petersburg, Russia*

AP-6P/36 Automatized high pressure set-up for complex research of functional materials
Bukin G.V., Lechenko G.G., Kasyanov A.I., Sukmanov V.A.[1], Sokolov S.A.[1], Dekan A.A.[1], Sabirov A.V.[1], Golovinov V.P.[1]
Donetsk Physical & Technical Institute NASU, Donetsk, Ukraine
[1]*Donetsk National University Economy & Commerce, Donetsk, Ukraine*

AP-6P/37 Mossbauer spectrometer for high pressure study of functional materials
Terekhov S.A., Postol P.N., Makmak I.M., Levchenko G.G., Galkin A.A.
Donetsk Physical-Technical Institute NASU, Donetsk, Ukraine

AP-6P/38 Anthracite properties under high pressure up to 2 GPa
Polyakov P.I., Slyusarev V.V.
Physics of Mining Processes Institute, Ukraine, Donetsk

AP-6P/39 Structure evolution zirconium hydroxide nanoparticles under high pressure
Sinyakina S.A., Gorban O.A., Ryumshyna T.A., Kulik Yu.O.[1], Danilenko I.A., Konstantinova T.E.
Donetsk Institute of Physics and Engineering NASU, Donetsk, Ukraine
[1]*Ivan Franko Lviv National University, Ukraine*

9.00-14.00 Poster Session AQ.

Section 7. Metamaterials. Photonic, magnonic & phononic crystals

Chairmen: Vinogradov A.P., Lyubchanskii I.L.

AQ-7P/1 Excitonic magnetophotonic one-dimensional structures
Erokhin S.[1,2], Deych L.[2], Lisyansky A.[2], Granovsky A.[1]
[1]*Lomonosov Moscow State University, Moscow, Russia*
[2]*Queens College of the City University of New York, New York, USA*

AQ-7P/2 Exact coupled-mode theory of a one-dimensional magneto-photonic crystal
Boucher Y.G.[1], Bentivegna F.F.L.[1], Lyubchanskii I.L.[2]
[1]*ÉNIB/RESO Lab, CS 73862, F-29238 Brest cedex 3, France*
[2]*Donetsk Physical and Technical Institute NASU, Donetsk, Ukraine*

AQ-7P/3 **The analysis of polariton spectrum of a one-dimensional gyrotropic magnetic photonic crystal in an external DC field**
Kulagin D.V., Savchenko A.S., Tarasenko S.V.
Donetsk Institute for Physics and Engineering NASU, Donetsk, Ukraine

AQ-7P/4 **Inhomogeneously magnetization of magnonic ferrite film measurement using magnetooptical Kerr effect**
Klimov A.[1], Nikitov S.[1], Vlas'uk A.[1], Park Ch.[2]
[1]*Institute of Radio Engineering and Electronics, RAS, Russia*
[2] *Quantum Functional Semiconductor Research Center, Dongguk University, Seoul, Korea*

AQ-7P/5 **Volume magnetostatic waves in magnonic crystals**
Vysotsky S.L.[1], Nikitov S.A.[2], Filimonov Yu.A.[1], Pavlov E.S.[3]
[1]*Saratov branch of IRE RAS, Saratov, Russia*
[2] *IRE RAS, Moscow, Russia*
[3]*Saratov State University, Saratov, Russia*

AQ-7P/6 **Nonlinear surface magnetostatic waves in 2D magnonic crystals**
Vysotsky S.L.[1], Kazakov G.T.[1], Kozhevnikov A.V.[1], Nikitov S.A.[2], Filimonov Yu.A.[1]
[1]*Saratov branch of IRE RAS, Saratov, Russia*
[2] *IRE RAS, Moscow, Russia*

AQ-7P/7 **Degree of localization and distribution of amplitude of a spin wave in vicinity of a defect of a magnonic crystal**
Sokolovskii M.L.[1], Dvornik N.A.[1], Kruglyak V.V.[2], Kuchko A.N.[1]
[1]*Donetsk National University, Donetsk, Ukraine*
[2]*School of Physics, University of Exeter, Exeter, UK*

AQ-7P/8 **Peculiarities of photonic band gap width dependence upon concentration of the admixture layers randomly included in composite material**
Rumyantsev V.V., Fedorov S.A., Shtaerman E.Ya.
A.A.Galkin Donetsk Physico-Technical Institute NASU, Donetsk, Ukraine

AQ-7P/9 **Optical vortex filters on the basis of one-dimensional chiral photonic-crystal fibres**
Alexeyev C.N., Yavorsky M.A.
Taurida National V.I. Vernadsky University, Simferopol, Ukraine

AQ-7P/10 **The anomalies of volume SH wave propagating in a one-dimensional acoustically gyrotropic magnetic phononic crystal**
Lapteva T.V., Tarasenko O.S., Tarasenko S.V., Yurchenko V.M.
Donetsk Institute for Physics and Technology NASU, Donetsk, Ukraine

Thursday, October 4

9.00-13.00 Oral Session DA.
Section 8. Spin Dynamics. Microwave Materials

Chairmen: Slavin A.N., Melkov G.A.

DA-8L/1 **Spin waves and magnetic resonances in inhomogeneous superlattices and nanocrystals** (invited)
Ignatchenko V.A., Mankov Yu.I.
L.V. Kirensky Institute of Physics SB RAS, Krasnoyarsk, Russia

DA-8L/2 **Generalization of the Gilbert Model of Magnetic Damping for Large Precession Angles** (invited)
Tiberkevich V.S., Slavin A.N.
Department of Physics, Oakland University, Rochester, MI, USA

DA-8L/3 **Brillouin Light Scattering Spectroscopy of Nonlinear Spin Waves** (invited)
Serga A.A., Hillebrands B.
Fachbereich Physik, TU Kaiserslautern, Kaiserslautern, Germany

DA-8O/2 **Refraction and reflection of spin waves in ferromagnetic and antiferromagnetic materials**
Gorobets Yu.I.[1], Reshetnyak S.A.[2]
[1]*Institute of Magnetism NASU, Kiev, Ukraine*
[2]*National Technical University of Ukraine "Kyiv Polytechnic Institute", Kyiv, Ukraine*

DA-8O/3 **Nonresonant wave front reversal**
Melkov G.A., Moyseenko V.A., Vasyuchka V.I.,
Chumak A.V., Slavin A.N.[1]
Taras Shevchenko National University of Kiev, Kiev, Ukraine
[1]*Department of Physics, Oakland University, Rochester, Michigan, USA*

DA-8O/4 **BLS observations of thermal modes in YIG films on GGG substrate**
Neumann T., Schneider T., Serga A.A., Hillebrands B.
Fachbereich Physik, TU Kaiserslautern, Kaiserslautern, Germany

DA-8O/5 **Engineering Theory of Spin-Torque Microwave Oscillators**
Slavin A.N., Tiberkevich V.S.
Department of Physics, Oakland University, Rochester, MI, USA

DA-8O/6 **Magnetodynamics features in spin-valve structure under spin torque transfer**
Korneev V.I.[2], Kulagin N.E.[1], Popkov A.F.[1,2], Popov D.A.[1], 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,*

DA-8O/7 Characteristics of Electromagnetic Waves in "Magnetic Wall - Ferrite Plate - Conducting Plane" Structure
Lock E., Vashkovsky A.
Institute of Radioengineering and Electronics RAS (Fryazino branch), Moscow region, Russia

DA-8O/8 Slow magnetic polaritons in the superconductor-magnet-superconductor structure
Polzikova N.I., Raevskii A.O., Mansfeld G.M.
Institute of radioengineering and electronics RAS, Moscow

DA-8O/9 Current induced dynamics of magnetic vortex in nanoparticles
Sheka D.D.[1], Gaididei Y.[2], Mertens F.G.[3]
[1]*National Taras Shevchenko University of Kiev, Kiev, Ukraine*
[2]*Institute for Theoretical Physics, Kiev, Ukraine*
[3]*Physics Institute, University of Bayreuth, Bayreuth, Germany*

DA-8O/10 Spin waves in silicon dioxide films with cobalt nanoparticles on gallium arsenide
Lutsev L.V.[1], Stashkevich A.A.[2], Stognij A.I.[3], Novitskii N.N.[3]
[1]*Research Institute 'Ferrite-Domen', St Petersburg, Russia*
[2]*LPMTM CNRS (UPR 9001), Villetaneuse, France*
[3]*Institute of Solid State and Semiconductor Physics, NASB, Minsk, Belarus*

13.15-14.00 Oral Session DB. Section 12. NMR & EPR

Chairmen: Berzhansky V.N., Sergeev N.A.

DB-12O/1 Relaxation Properties of Spin-Echo Signals from Quadrupole Nuclei in Magnetic Materials
Berzhansky V.N., Gorbovanov A.I., Polulyakh S.N.
V.I.Vernadsky Taurida National University, Simferopol, Ukraine

DB-12O/2 Anomalous behaviour of g-factor near the spin state transition points. Modified crystal field approach
Babkin R., Zhitlukhina E., Lamonova K., Orel S., Pashkevich Yu.
Donetsk Institute for Physics and Engenearing after O. O. Galkin, NASU, Donetsk, Ukraine

9.00-14.00 Poster Session DP.
Section 9. Ionizing Radiation Sensing Materials

Chairmen: Aleksandrov K.S., Lyubutin I.S.

DP-9P/1 Growth and properties of $NaLa(WO_4)_2$ single crystals
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]STC "Institute for Single Crystals", Institute for Single Crystals, NASU, Ukraine
[2]STC "Institute for Single Crystals", Institute for Scintillation Materials, NASU, Kharkov, Ukraine

DP-9P/2 Liquid scintillators on the basis of organosilicons
Bedrik A.I., Andryuschenko L.A., Vidayj Yu.T., Grinyov B.V., Gorbacheva T.E., Tarasov V.A., Shershykov V.M., Eliseev D.A.
Institute for Scintillation Materials, STC "Institute for Single Crystals" NASU, Kharkov, Ukraine

DP-9P/3 KDP: (Tl^+, Ce^{3+}) crystals: a new scintillation detector for registration of fast neutrons
Voronov A.P., Salo V.I., Babenko G.N., Puzikov V.M., Vydai Yu.T.
STC "Institute for Single Crystals" NASU, Kharkov, Ukraine

DP-9P/4 New phases formation on internal and external surfases of NaJ:Tl crystals
Kudin K.A., Voloshko A.Yu., Matejchenko P.V.[1]
STC "Institute for Single Crystals" NASU, Kharkiv, Ukraine
[1] Institute for Single Crystals NASU, Kharkiv, Ukraine

DP-9P/5 Photochromic efect and UV radiation detection possibilities of BGO crystals
Bondar V., Katrunov K., Krivoshein V., Nagorna L., Starzhinskiy M., Tkachenko S.
Institute for Scintillation Materials NASU, Kharkov, Ukraine

DP-9P/6 Influence of different defects on radiation stability of cadmium tungstate single crystals
Tupitsyna I., Grinyov B., Katrunov K., Nagornaya L., Onishchenko G.
Institute for Scintillation Materials of STC "Institute for single crystals" NASU, Kharkov, Ukraine

DP-9P/7 Obtaining and luminescence properties of $Lu_2O_3:Eu^{3+}$ nanocrystalline powders
Yermolayeva Yu.V., Korshikova T.I., Sergienko Z.P., Tolmachev A.V., Yavetskiy R.P.
Institute for Single Crystals NASU, Kharkov, Ukraine

DP-9P/8 **Optico-luminescent and scintillation properties of low-background crystals $CdWO_4$ and $ZnWO_4$ and scintillators on their base**

Nagornaya L.L.[1], Grinyov B.V.[1], Danevich F.A.[2], Dubovik A.M.[1], Vostretsov Yu.Ya.[1], Tupitsyna I.A.
[1]*Institute for Scintillation Materials of STC "Institute for Single Crystals", Kharkov, Ukraine*
[2]*Ukraine institute for Nuclear Research, Kiev,Ukraine*

DP-9P/9 **Particularities in obtaining and scintillation properties of $(Gd_xEu_{1-x})_2SiO_5$ crystals**

Katrunov K.[1], Nagornaya L.[1], Bondar' V.[1], Burachas S.[2], Starzhynskiy N.[1]
[1]*Institute for Scintillation Materials NASU, Kharkov, Ukraine*
[2]*RRC "Kurchatov Institute" Moskow, Russia*

DP-9P/10 **Low-temperature synthesis and morphology of nanocrystalline phosphores based on $GdPO_4:Eu^{3+}$**

Babayevskaya N.V., Kryzhanovskaya A.S., Savin Yu.N., Tolmachev A.V.
STC "Institute for Single Crystals", Institute for Single Crystals NASU, Kharkov, Ukraine

DP-9P/11 **Effect of Gd^{3+} ions on emission properties of the mixed phosphates $Y_{1-x-y}Gd_xEu_yPO_4$, grown from water solution**

Babayevskaya N.V., Savin Yu.N., Oleynik S.S., Bezkrovnaya O.N.
STC "Institute for Single Crystals", Institute for Single Crystals NASU, Kharkov, Ukraine

DP-9P/12 **Distribution and luminescent properties of Ce^{3+} ions in calcium hydroxyapatite**

Berezovskaya I.V.[1], Efryushina N.P.[1], Voloshinovskii A.S.[2], Stryganyuk G.B.[2,3], Dotsenko V.P.[1]
[1]*Physico-Chemical Institute, NASU, Odessa, Ukraine*
[2]*Ivan Franko National University of Lviv, Lviv, Ukraine*
[3]*HASYLAB at DEZY, Notkestraße, Hamburg, Germany*

DP-9P/13 **Investigation of Schottky structures *n*ZnSe (X)/Ni as candidates for selective ultraviolet detectors**

Katrunov K., Starzhinskiy N., Grinyov B., Galchinetskii L., Bondarenko E.
Institute for Scintillation Materials NASU, Kharkov, Ukraine

DP-9P/14 **Microwave synthesis of cadmium tungstate**

Sofronov D.S., Baumer V.N., Voloshko A.Yu., Babijchuk I.P., Shishkin O.V.
SSI STC "Institute for Single Crystals" NASU, Kharkov, Ukraine
Institute for Scintillation Materials STC "Institute for Single Crystals" NASU, Kharkov, Ukraine

DP-9P/15 Liquid crystal formation in mixtures of metal alkanoates: gadolinium-containing binary systems

Zavora L.N., Panikarskaya V.D., Kasian N.A., Bedrik A.I., Shershukov V.M., Lisetski L.N., Mirnaya T.A.[1]
Institute for Scintillation Materials of STC "Institute for Single Crystals", NASU, Kharkiv, Ukraine
[1]V.I.Vernadsky Institute of General and Inorganic Chemistry, NASU, Kyiv, Ukraine

DP-9P/16 Luminescence of Eu-doped $Ca_3Ga_2Ge_3O_{12}$ and $Gd_3Ga_2Ge_3O_{12}$ garnets

Kostyk L., Luchechko A., Tsvetkova O., Zelenevych O.
Faculty of Electronics, Ivan Franko National University of Lviv, Lviv, Ukraine

DP-9P/17 Influence of inorganic scintillator light output non-proportionality and energy of registered ionizing radiation on radiometric parameters of detectors on their base

Vidayj Yu.T., Tarasov V.A., Gorbacheva T.E.
Institute for Scintillation Materials, STC "Institute for Single Crystals" NASU, Kharkov, Ukraine,

DP-9P/18 Light collection peculiarities in X-ray scintillation detectors

Gorbacheva T.E., Tarasov V.A., Vidayj Yu.T., Ananenko A.A., Gavrylyuk V.P.
Institute for Scintillation Materials, STC "Institute for Single Crystals" NASU, Kharkov, Ukraine

DP-9P/19 White light emitting luminophors based on $BaLn_2Ti_3O_{10}$ compounds

Titov Yu., Bojko V.[1], Krayevska Ya., Nedilko S., Nedyelko I., Scherbatskii V.
Kyiv National Taras Shevchenko University, Kyiv Ukraine
[1]National Agriculture University, Kyiv, Ukraine

DP-9P/20 The sensibilization of TiO_2 photocatalyst by zirconium dioxide at electron irradiation

Eremenko A.M.[1], Smirnova N.P.[1], Vitjuk N.V.[1], Busko T.O.[2], Dmytrenko O.P.[2], Kulish N.P.[2], Shlapatskaya V.V.[3]
[1]Institute of Surface Chemistry of NUAS, Kiev, Ukraine
[2]Kiev National Shevchenko University, Kiev, Ukraine
[3]L.V. Pisarghevsky Institute for Physical Chemistry of NUAS, Kiev, Ukraine

DP-9P/21 The influence of Bi admixtures on structural and electron-defects processes in noncrystalline GeS and GeSe films

Romanyuk R.R.[1], Mykolaychuk O.G.[2]
[1]Western Scientific Centre, Lviv, Ukraine
[2]Ivan Franko L'viv National University, Lviv, Ukraine

DP-9P/22 Cerium doped silica: preparation and spectral study

Ignatovych M.[1], Borysenko M.[1], Chernjavska T.[1], Baranyai P.[2], Vidóczy T.[2], Kelemen A.[3]
[1]Institute of Surface Chemistry, NASU, Kyiv, Ukraine
[2]Laser Spectroscopy Laboratory, CRC HAS, Budapest, Hungary
[3]Institute of Isotopes HAS, Budapest, Hungary

DP-9P/23 Ionizing detectors on the base of float-zone silicon doped by rare-earth elements
Brinkevich D.I., Prosolovich V.S., Yankovski Yu.N.
Belorussian State University, Minsk, Belarus

DP-9P/24 Electronic transitions and luminiscent properties of the doped zinc sulphide
Miloslavskyy A.
Donetsk National University, Donetsk, Ukraine

DP-9P/25 Processes of sensitization of materials on the basis of compounds with the bond such as Xe–O
Kondratenko P.A.[1], Lopatkin Yu.M.[2], Sakun T.N.[1]
[1] *National aviation university, Kiev, Ukraine*
[2] *RI of physics of Odessa National I.I.Mechnikov University, Odessa, Ukraine*

DP-9P/26 Pedestrian monitor based on the oxide scintillators
Grinyov B.V., Nekrasov V.V., Borodenko Yu.A., Piven L.A., Koval A.F., Selegenov E.M., Voloshina L.I., Kozmin Yu.S.
Institute for Scintillation Materials, NASU, Kharkov, Ukraine

DP-9P/27 Pocket high-sensitivity dosimeter-spectrometer based on the system "scintillator-photodiod"
Grinyov B.V., Nekrasov V.V., Borodenko Yu.A., Selegenev E.M., Voloshina L.I., Kozmin Yu.S.
Institute for Scintillation Materials, NASU, Kharkov, Ukraine

DP-9P/28 Organic polycrystals obtaining conditions influence on their optical and scintillation characteristics
Minenko S.S., Lisetski L.N.
Institute for Scintillation Materials of STC "Institute for Single Crystals", NASU, Kharkov, Ukraine

DP-9P/29 Photoluminescence of organic semiconductor structures contained phtalocyanine molecules doped with lanthanide ions
Belogorokhov I.A., Ryabchikov Yu.V., Tikhonov E.V., Breusova M.O., Pushkarev V.E., Tomilova L.G., Khokhlov D.R.
Moscow State University, Moscow, Russia

DP-9P/30 Comparison of the different models of the rough surface for the computer simulation of the light collection in the system "scintillator-light guide"
Kilimchuk I.V.[1], Tarasov V.A.[2], Baryakhtar V.G.[1]
[1]*Institute of Magnetism MES and NAS of Ukraine, Kiev, Ukraine*
[2]*Institute for Scintillation Materials NAS of Ukraine, Kharkov, Ukraine*

DP-9P/31 Electronic structure and spectroscopic properties of self-activated molybdate crystals
Hizhnyi Y.[1], Boyko R.[2], Chorniy V.[1], Nagorniy P.[1], Nedilko S.[1], Nikolaenko T.[1]
[1]*Kyiv National Taras Shevchenko University, Kyiv Ukraine*
[2]*National Agriculture University, Kyiv, Ukraine*

DP-9P/32 Luminescent properties of coordination compounds containing europium ions
Amirkhanov V., Sliva T., Znovjyak K., Nedyelko I., Nedilko S., Polyakov O., Scherbatskii V., Stashenko S.
Kyiv National Taras Shevchenko University, Kyiv, Ukraine

DP-9P/33 Synthesis and luminescent properties of coordination compounds based on carbacylamidophosphates
Amirkhanov V.M., Sliva T.Yu., Znovjyak K.O., Nedilko S.G., Stashenko S.I., Sakun V.P.
Kyiv National Taras Shevchenko University, Kyiv, Ukraine

DP-9P/34 Variation of the scintillation and optical parameters of zinc selenide crystals at the different thermal treatment
Gakin S.N., Rybalka I.A., Voronkin Ye.F., Lalayants A.I., Ryzhikov V.D., Grinyov B.V.
Institute for Scintillation Materials NASU, STC «Institute for Single Crystals», Kharkov, Ukraine

DP-9P/35 Application of photoelectrical registration of atomic specrtums for function materials analisys
Andryushchenko A.Yu., Blank A.B., Glushkova L.V., Shtitel'man Z.V., Shevtsov N.I., Egorov A.D. [1], Egorov S.A. [1], Zdor E.V. [1]
STC "Institute for Single Crystals" NASU, Kharkov, Ukraine
[1] Institute of radioelectronics NASU

DP-9P/36 Differential thermal analysis method using for investigation of crystallization zones
Yagupov S.V., Strugatsky M.B., Postivey N.S., Kostulin S.S.
Vernadsky Taurida National University, Simferopol, Ukraine

DP-9P/37 Influence of CsI(Tl) crystal annealing and machining method on afterglow and relative brightness of X-ray-γ-optical transformers based on these crystals
Bobovnikov Al.An., Boyarintsev A.Yu., Vidayj Yu.T., Tarasov V.A.
Institute for Scintillation Materials, STC "Institute for Single Crystals" of NASU, Kharkov, Ukraine

9.00-14.00 Poster Session DQ. Section 2. Soft and Hard Magnetic Materials

Chairmen: Nadutov V.M., Ravlik A.G.

DQ-2P/1 Nature of internal friction in Invar Fe–Ni–C alloys
Nadutov V.M., Golub T. V., Hymenyuk O.V.
G.V. Kurdyumov Institute for Metal Physics of the NASU, Kiev, Ukraine

DQ-2P/2 Magnetic properties of Invar Fe-Ni-C-based alloys
Nadutov V.M., Kosintsev S.G., Svystunov Ye.O., Efimova T.V., Tatarenko A.A.
G.V. Kurdyumov Institute for Metal Physics of the NASU, Kiev, Ukraine

DQ-2P/3 Magnetic strengthening of Invar Fe-Ni and Fe-Ni-C alloys
Nadutov V.M., Bazelyuk G.Ya., Semenov D.V., Svystunov Ye.O.
G.V. Kurdyumov Institute for Metal Physics of the NASU, Kiev, Ukraine

DQ-2P/4 Mössbauer and X-ray studies of fcc Fe-Ni–based PVD coatings
Nadutov V.M., Panarin V.Ye., Svystunov Ye.O., Kosintsev S.G., Kramar O.
G.V. Kurdyumov Institute for Metal Physics of the NASU, Kiev, Ukraine

DQ-2P/5 Effect of alloying elements on temperature dependence of internal friction in Invar Fe–Ni–C alloys
Nadutov V.M., Golub T. V., Hymenyuk O.V.
G.V. Kurdyumov Institute for Metal Physics of the NASU, Kiev, Ukraine

DQ-2P/6 Investigation of the conditions of sintering highenergy constant magnet on base of the system Fe-Nd-C made by method TLS and under high pressure
Gulyaeva T.V., Brekharya G.P.[1]
Zaporozhye National University, Zaporozhye, Ukraine,
[1]Dneprodzerzhinsk State Technical University, Dneprodzerzhinsk, Ukraine

DQ-2P/7 Effect of field-annealing on magnetic losses in single crystals Fe-6 at.% Si in rotating magnetic fields
Tiunov V.F., Lukshina V.A.
Institute of Metal Physics, Ural Division of RAS, Yekaterinburg, Russia

DQ-2P/8 DC Field-Annealing Influence on the Local Atomic and Magnetic Structure of $Fe_{0.95}Si_{0.05}$ Alloy
Ershov N.V.[1], Lukshina V.A.[1], Serikov V.V.[1], Kleinerman N.M.[1], Chernenkov Yu.P.[2], Fedorov V.I.[2]
[1]Institute of Metal Physics, Ural Division of RAS, Yekaterinburg, Russia
[2]Petersburg Institute of Nuclear Physics, RAS, Gatchina, Russia

DQ-2P/9 Reflection electron energy loss spectra and inelastic electron scattering cross sections for Fe_xSi_{1-x}
Parshin A.S., Alexandrova G.A., Dolbak A.E.[1], Pchelyakov O.P.[1], Olshanetsky B.Z.[1], Ovchinnikov S.G.[2], Kushenkov S.A.
Siberian State Aerospace University, Krasnoyarsk, Russia
[1] Institute of Semiconductor Physics SB RAS, Novosibirsk, Russia
[2] Kirensky Institute of Physics, SB RAS, Krasnoyarsk, Russia

DQ-2P/10 Magnetic properties and nonmagnetic phase formation in $(Fe/Si)_n$ multilayers
Varnakov S.N.[1,2], Komogortsev S.V.[1], Ovchinnikov S.G.[1], Bartolomé J.[3], Sesé J.[4]
[1]Kirensky Institute of Physics, Siberian Branch of RAS, Krasnoyarsk, Russia
[2]Reshetnev Siberian Aerospace University, Krasnoyarsk, Russia
[3]Instituto de Ciencia de Materiales de Aragón, CSIC-Universidad de Zaragoza, Spain
[4]Instituto Universitario de Investigación en Nanociencia de Aragón, Universidad de Zaragoza, Spain

DQ-2P/11 Investigation of critical properties of model iron-vanadium superlattice by the Monte Carlo method
Khizriev K.Sh., Murtazaev A.K.
Institute of Physics Daghestan Scientific Center of Russian Academy of Sciences, Makhachkala, Russia

DQ-2P/12 The investigations of process of the phase stratification in the amorphous alloys of Fe-Zr system
Lysov V.I., Tsaregradskaya T.L., Turkov O.V., Saenko G.V., Yarysh V.V.
Kyiv Taras Shevchenko National University

DQ-2P/13 Magnetotransport properties of the ordered $Fe_{100-x}Al_x$ (25 < x < 35 at. %)
Prudnikov V.N., Perov N.S., Yelsukova A.E., Granovsky A.B., Yelsukov E.P.[1], Voronina E.V.[1]
M.V. Lomonosov Moscow state university, Moscow, Russia
[1]Physical-technical institute UrB RAS, Izhevsk, Russia

DQ-2P/14 The magnetic properties of $(Mn_{1-x}Fe_x)_{1.68}Sn$ solid solutions
Makovetskii G.I., Dorofeichyk S.S., Demidenko O.F.
SSI "Joint Institute of Solid State Physics and Semiconductors" of NASB, Minsk, Belarus

DQ-2P/15 Permanent magnetic FePt thin films with in-plane magnetization for recording heads for high coercivity media
Glebov V.A.[1], Il'yashenko E.I.[1], Naumov V.V.[2], Glebov A.V.[1], Popova O.I.[1], Ramstad A.[3]
[1.]Moscow State University, Moscow,Russia
[2.] Institute of Microelectronics and Informatics of Russian Academy of Sciences (RAS), Yaroslavl,Russia
[3].Tandberg Storage ASA,Kjelsasveien, Kjelsas, Norway

15.00-19.00 Oral Session DC.

Section 10. Nanophysics & Nanotechnologies for Functional Materials

Chairmen: Varyukhin V.N., Fraerman A.A.

DC-10L/1 Bulk nanomaterials: physical and mechanical properties (invited)
Varyukhin V.N.
Donetsk Institute of Physics and Engineering NASU, Donetsk, Ukraine

DC-10L/2 Self-organization of semiconductor nanostructures, obtained by molecular beam epitaxy: optical and AFM-investigation (invited)
Valakh M.Ya.
V. Lashkaryov Institute of Semiconductor Physics, NASU, Kiev

DC-10L/3 Spatial Self-Organization Effects in Solids under Influence of Electrochemical Reactions, Electric and Magnetic Fields (invited)
Gorobets O.Yu.
Institute for Magnetism NASU, Kyiv, Ukraine

DC-10O/1 Non coplanar magnetic nanostructures: fabrication and transport properties
Fraerman A.A.
Institute for Physics of Microstructures RAS, Nizhny Novgorod, Russia

DC-10O/2 Control of the magnetic state in ferromagnetic nanoparticles by inhomogeneous magnetic field of MFM probe
Mironov V.L., Gribkov B.A., Fraerman A.A., Ermolaeva O.L.
Institute for Physics of Microstructures RAS, Nizhny Novgorod, Russia

DC-10O/3 Statistics of vortical magnetization states in ferromagnetic nanoparticles
Gusev S.A., Fraerman A.A., Gribkov B.A., Mironov V.L., Vdovichev S.N.
Institute for Physics of Microstructures RAS, Nizhny Novgorod, Russia

DC-10O/4 Ultrafast control of a vortex core dynamics in magnetic nanodisks
Kravchuk V.P. [1], Sheka D.D. [1], Gaididei Y. [2], Mertens F.G. [3]
[1]*National Taras Shevchenko University of Kiev, Kiev, Ukraine*
[2]*Institute for Theoretical Physics, Kiev, Ukraine*
[3]*Physikalisches Institut, Universität Bayreuth, Bayreuth, Germany*

DC-10O/5 Fabrication and investigation of the peculiarities of physical properties of nanomaterials based on oxides of 3d metals
Gizhevskii B.A. [1], Petrova S.A. [2], Zakharov R.G. [2], Arbuzova T.I. [1], Pilyugin V.P.[1], Krynetskii I.B.[3], Filinkova T.I. [2], Fishman A.Ya. [2]
[1]*Institute of Metal Physics, Ural Division of RAS, Ekaterinburg, Russia*
[2]*Institute of Metallurgy, Ural Division of RAS, Ekaterinburg, Russia*
[3]*Moscow State University, Moscow, Russia*

DC-10O/6 Interparticle magnetic interaction and the effects of small particles
Ol'khovik L.P., Sizova Z.I., Shurinova E.V.
Karazin Kharkov National University, Kharkov, Ukraine

DC-10O/7 Ultra-high permeability of the metal nanoislands systems in an electric field
Boltaev A.P., Pudonin F.A.
P.N.Lebedev Physical Institute of the RAS , Moscow, Russia

DC-10O/8 Synthesizing, structure and decay of nanocrystalline and amorphous states in Au and Au–O films
Bagmut A.G.
National Technical University "KhPI", Kharkiv, Ukraine

DC-10O/9 Metal–carbon magnetic nanocomposites
Bagdasarova K.A.[1], Zemtsov L.M.[1], Karpacheva G.P.[1], Perov N.S.[2], Maksimochkina A.V. [2], Dzidziguri E.L. [3], Sidorova E.N. [3]
[1]*A.V. Topchiev Institute of Petrochemical Synthesis RAS, Moscow, Russia*
[2]*Faculty of Physics, M.V. Lomonosov Moscow State University, Moscow, Russia*
[3]*Moscow State Institute of steel and alloys, Moscow, Russia*

DC-10O/10 New nanomaterials based on CdMnS
Bondarev A.A.[1], Ivanchenko I.V. [1], Popenko N.A.[1], Savchuk A.I. [2], Fediv V.I. [2]
[1]Usikov Institute for Radiophysics and Electronics, NASU, Kharkiv, Ukraine
[2] Chernivtsi National University, Chernivtsi, Ukraine

DC-10O/11 Nanotechnologic Composites Based on the Synthetic and Biological Compounds with Direct Excitons Conductivity for Functional Materials
Yashchuk V.M., Kudrya V.Yu., Savchenko I.O., Fedorovich R.D., Dubey I.Ya., Suga H., Dyoshin I.I.
Physics and Chemistry Faculties of Kyiv National Taras Shevchenko University, Kyiv, Ukraine

DC-10O/12 Nontrivial collective electrorotations in dielectric suspensions
Vorohobov V., Cebers A.
Institute of Physics, Salaspils, Latvia

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

Chairmen: Buchelnikov V.D., Gomonay H.V.

DR-2P/1 Magnetic properties of cobalt films on silicon substrates
Dzhumaliev A.S., Kozhevnikov A.V., Nikulin Yu.V., Pushkareva T.A., Filimonov Yu.A.
Insitute of Radioengineering and Electronics of RAS, Saratov Branch, Saratov, Russia

DR-2P/2 Research of film NiFe/SiO, NiFe/DyCo structures
Poljakov V.V., Vladimirov A.G.
L.V.Kirensky Institute of physics of the Siberian Branch of the RAS, Krasnoyarsk, Russia

DR-2P/3 Mössbauer spectroscopy of Fe^{57}/Pt and Fe^{57}/Gd interfaces in multilayer thin film compositions
Pogorily A.N., Razumov O.N.[1], Bondarkova G.V., Karaseva V.Yu., Skobik A.P.[1]
Institute of Magnetism, NASU, Kyiv, Ukraine
[1]Institute of Metal Physics, NASU, Kyiv, Ukraine

DR-2P/4 Film Induction Transducers Operating in a Wide Range of Frequencies
Lubyaniy L.Z., Samofalov V.N., Ravlik A.G., Overko N.E., Chichibaba I.A.
National Technical University "Kharkiv Polytechnic Institute", Kharkiv, Ukraine

DR-2P/5 The researches of phase formation in amorphous metallic systems
Lysov V.I., Tsaregradskaya T.L., Turkov O.V., Saenko G.V.
Kyiv Taras Shevchenko National University

DR-2P/6 **Amorphous and Nanocrystalline Soft Magnetic Materials with Improved Magnetic Properties**
Shulika V.V., Potapov A.P.
Institute of Metal Physics, Ural Division, RAS, Yekaterinburg, Russia

DR-2P/7 **Coherent Fourier-analysis using for investigation of structural features of the amorphous and nanocrystalline ferromagnetic films**
Kunitskaya L., [1]Nechitaylo Ya., [1]Dementjev V., [1]Barabash M.
Institute of Surface Chemistry NASU, Kiev, Ukraine
[1]*Technical Center, NASU, Kiev, Ukraine*

DR-2P/8 **Optical properties of amorphous metallic ribbon surfaces modified by annealing**
Poperenko L.V., Vinnichenko K.L.
Taras Shevchenko Kyiv National University, Kyiv, Ukraine

Ferrites

DR-2P/9 **Generation of the solid solution Cr-C on the surface of the steel 45 stimulated by the new ltrasonique nanotechnology**
Kapranova A.I.
The Moscow State Industrial University

DR-2P/10 **Nucleation phenomenon in the film with magnetic barrier**
Mamaluy Yu.A., Netsvetov V.I.[1]
Donetsk national university
[1]*Donetsk Institute of Physics and Engineering of the NASU*

DR-2P/11 **The role of magnetostatic pressure in stabilization of spiral domains in ferrite-garnet films**
Mamalyi Ju.A., Siryuk Ju.A.
Donetsk National University, Donetsk, Ukraine

DR-2P/12 **Fractal Domains and Crystalline Structures in Garnet Films with Misfit Dislocations**
Danishevskaya H., Vishnevskii V., Berzhansky V., Nesteruk A.
V.I.Vernadsky Taurida National University, Simferopol, Ukraine

DR-2P/13 **Susceptibility,domen strucure and FMR in ferrite-garnet films with "angular phase" anisotropy**
Berzhansky V.N., Prokopov A.R., Semuk E.Yu.
V.I. Verandskiy Taurida national university, Simferopol, Ukraine

DR-2P/14 **Bloch domain walls structure in (nml)-plate of cubic crystal with negative magnetic anisotropy**
Tanygin B.M., Tychko O.V.
Taras Shevchenko Kiev National University, Kyiv, Ukraine

DR-2P/15 **Optimization of the numerical simulation of the domain walls structure in magnetically ordered media**
Tanygin B.M., Tychko O.V.
Taras Shevchenko Kiev National University, Kyiv, Ukraine

DR-2P/16 The influence of a sample demagnetization field on Bloch domain wall structure in a cubic (001)-crystal
Dyachenko S.A., Kovalenko V.F., Tanygin B.M., Tychko O.V.
Taras Shevchenko National University of Kyiv, Kyiv, Ukraine

DR-2P/17 Modification of magnetic domain structure by superconductor proximity in superconductor/ferromagnetic heterostructures
Uspenskaya L., Egorov S.
Institute of Solid State Physics RAS, Chernogolovka, Russia

DR-2P/18 Hysteresis anomalys and magnetization kinetics of Pt thin film in FM/AFM heterostructure
Uspenskaya L., Bulatov N.[1]
Institute of Solid State Physics RAS, Chernogolovka, Russia
[1] *Astrakhan State University, Astrakhan, Russia*

DR-2P/19 Magnetic properties of Co^{3+}-substituted epitaxial yttrium garnet films
Syvorotka I.I., Syvorotka I.M., Ubizskii S.B.[1]
R&D Institute of Materials SRC "Carat", Lviv, Ukraine
[1]*Lviv Polytechnic National University, Lviv, Ukraine*

DR-2P/20 Dynamic behavior and collapse of superstructures in the region near the phase transition
Zavorotnev Yu.D., Medvedyeva L.I.
Donetsk Physico - Technical Institute, NASU, Donetsk, Ukraine

DR-2P/21 Influence of frustrations on the processes of macroscopic anisotropy formation in diluted ferrimagnetic oxides with the magnetoplumbit structure
Efimova N.N., Tkachenko M.V., Zhenzhera A.V., Tsurikova Yu.A.
Karazin Kharkov National University

DR-2P/22 Choice of additions to functional materials with spinel structure based upon sets of metal oxides activity
Zinovik E.V., Zinovik M.A.
Kirovograd National Technical University, Kirovograd, Ukraine

DR-2P/23 Synthesis and structural properties solid solutions of shpinel in system Mn-Co-Fe-O
Zinovik E.V., Prisedskij V.V., Maksimova E.M.[1], Zinovik M.A., Nauhatskij I.A.[1], Strugatskij M.B.[1]
The Kirovograd national technical university, Kirovograd, Ukraine
[1]*Taurida National University, Simferopol, Ukraine*

DR-2P/24 Solid solutions with structure shpinel in system Ni-Mn-Fe-O
Zinovik E.V., Prisedskij V.V., Maksimova E.M.[1], Zinovik M.A., Nauhatskij I.A.[1], Strugatskij M.B.[1]
The Kirovograd national technical university, Kirovograd, Ukraine
[1] *Taurida National University, Simferopol, Ukraine*

DR-2P/25 Composite materials for the magnetic - abrasive finishing treatment
Polishuk V.S.
STC "Reaktivelektron", NASU, Donetsk, Ukraine

DR-2P/26 A new composite material for current collector of electrorolling stocks
Polischuk V.S., Bukovsky V.A., Dotsenko K.I., Alyochov Yu.A.
STC "Reaktivelektron", NASU, Donetsk, Ukraine

DR-2P/27 A new color magnetic latent print powders
Alyochov Y.A.
STC "Reaktivelektron", NASU, Donetsk, Ukraine

DR-2P/28 Influence of the energy of electrons during their scattering by a film with stripe domain structure on the channeling critical angle.
Melnichuk I.A., Vasko E.I.
PMP & HTSC division, Donetsk National University

DR-2P/29 Structure transformation in Gd_2Fe_{17} thin films
Prysyazhnyuk V., Venhlyovska S.
Ivan Franko Lviv National University, Physical Faculty, Lviv, Ukraine

15.00-19.00 Poster Session DS.
Section 4. Electrooptic and Magnetooptic materials

Chairmen: Edelman I.S., Belyaeva A.I.

DS-4P/1 Optical Properties of Magnetic Media with Spin-Toroidal Ordering
Kalish A.N.[1,2], Belotelov V.I.[1,2], Zvezdin A.K.[2]
[1]Faculty of Physics, M.V. Lomonosov Moscow State University, Moscow, Russia
[2]General Physics Institute of the Russian Academy of Sciences, Moscow, Russia

DS-4P/2 Trapping atoms and all-optical switching using ferrite garnet thin films
Korppi M., Shevchenko A., Lindfors K., Heiliö M., Lindvall T., Kaivola M., Il'yashenko E.[1], Johansen T.H.[1]
Center for New Materials, Helsinki University of Technology, Finland
[1]Department of Physics, University of Oslo, Oslo, Norway

DS-4P/3 High Coercive Garnet Films for Atomic Chips Technique and Contact Printing Imaging
Berzhansky V., Vishnevskii V., Nedviga A., Nesteruk A., Khrenov A.
V.Vernadsky Taurida National University, Simferopol, Ukraine

DS-4P/4 Chromatic Effects of Magneto-optic Imaging with Use of "Light Plane" Anisotropy Garnet Films
Vishnevskii V., Vinogradov A., Shumilov A.
V.Vernadsky Taurida National University, Simferopol, Ukraine

DS-4P/5 Equatorial Kerr effect in $TbCo_2$/FeCo nanostructure
Klimov A.[1,2], Pernod Ph.[2], Preobrazhensky V.[2,3], Tiercelin N.[2]
LEMAC- Laboratoire Européen en Magnéto-ACoustique non linéaire de la matière condensée
[1] MIREA, Moscow, Russia
[2] IEMN-DOAE – UMR CNRS 8520 Cité scientifique, Villeneuve d'Ascq, France
[3] Wave Research Center of General Physics Institute RAS, Moscow, Russia

DS-4P/6 **Magneto-optics of Fe/Cr nanostructures with ultrathin iron layers**
Lobov I.D., Kirillova M.M., Romashev L.N., Ustinov V.V., Maevskii V.M., Milyaev M.A.
Institute of Metal Physics, Ural Division of RAS, Ekaterinburg, Russia

DS-4P/7 **Magnetic and magneto-optic properties of Bi-layer Ni-Ge films**
Patrin G.S., Edelman I.S., Velikanov D.A., Chernichenko A.V., Turpanov I.A., Bondarenko G.V.
L.V. Kirensky Institute of Physics SB RAS, Krasnoyarsk, Russia

DS-4P/8 **Polarized spectroscopy of Tm^{3+} ions in $TmAl_3(BO_3)_4$ single crystal.**
Sokolov A.E., Malakhovskii A.V., Edelman I.S., Temerov V.L., Sukhachov A.L., Seredkin V.A.
L.V. Kirensky Institute of Physics Siberian Branch RAS

DS-4P/9 **Magnetization reversal in a square patterned ferro/antiferromagnet structure**
Kabanov Yu.P., Nikitenko V.I., Tikhomirov O.A., Egelhoff W.F.[1], Shapiro A.J.[1], Shull R.D.[1]
Institute of Solid State Physics, Chernogolovka, Russia
[1] National Institute of Standards, Gaithersburg, MD, USA

DS-4P/10 **Magnetic anisotropy photoinduced changes at an arbitrary direction of the polarized optical irradiation propagation in cubic crystals**
Mozhyrovskyi M.V., Tychko O.V.
Taras Shevchenko Kiev National University, Kyiv, Ukraine

DS-4P/11 **All-optical switching in photorefractive crystals**
Kabakova I.V., Sukhorukov A.P., Tolstik A.L.[1]
Lomonosov Moscow State University, Moscow, Russia
[1] Belarusian State University, Minsk, Belarus

DS-4P/12 **Modified fluoride glasses**
Brekhovskikh M.N., [1]Dmitruk L.N., [1]Moiseeva L.V., [1]Petrova O.B., Fedorov V.A.
N.S.Kurnakov Institute of General and Inorganic Chemistry RAS
[1]A.M.Prokhorov Institute of General Physics RAS

DS-4P/13 **New nonlinear optical glass-ceramics**
Yavetskiy R.P., Korshikova T.I., Tolmachev A.V., Parkhomenko S.V., Tkachenko V.F.
Institute for Single Crystals NASU, Kharkov, Ukraine

DS-4P/14 **Third-order optical nonlinearities of Co nanoparticles in silicate glass**
Ryasnyanskiy A.I.[1,2], Palpant B.[1], Khaibullin R.I.[3], Stepanov A.L.[3,4]
[1] Université Pierre et Marie Curie - Paris 6, Université Denis Diderot-Paris 7, CNRS, Paris, France
[2]Samarkand State University, Samarkand, Uzbekistan
[3]Kazan Physics-Technical Institute, RAS, Kazan, Russia
[4]Lazer Zentrum Hannover, Hanover, Germany

DS-4P/15 The valence band in the case of the magnetic thin films of RNi_5 (R=Ce,Y,La) compounds
Todoran R., Todoran D.
North University of Baia Mare, Baia Mare, Romania

DS-4P/16 Forming method and proportions of new electro-optics material DAST nanocrystals in UV-cured matrix
Burunkova J.E., Fokina M.I.[1], Arefeva N.N., Denisuk I.Y.
Saint-Petersburg State University of Information Technologies, Mechanics and Optics, Saint-Petersburg, Russia

DS-4P/17 1,2,4-benzothiadiazine derivatives - new optical active materials: synthesis, structure and properties
Briukhovetska N.V., Buth S.A.
Institute of Organic Chemistry NASU, Kiev, Ukraine

DS-4P/18 Dielectric film as optical logic gate
Dzedolik I.V.
V.I. Vernadsky Taurida National University, Simferopol, Ukraine

DS-4P/19 Low-threshold lasing for edge mode in chiral liquid crystals
Belyakov V.A., Semenov S.V.[1]
L.D.Landau Institute for Theoretical Physics, Moscow, Russia
[1]Russian Research Center "Kurchatov Institute", Moscow, Russia

DS-4P/20 Absorption edge of $As_{40}S_{60-x}Se_x$ glasses
Guranich O.G., Rubish V.M., Gera E.V., Guranich P.P.[1], Shtets P.P., Gasinets S.M., Mykulanynets–Meshko O.S., Horvat Yu.A.
Uzhgorod Scientific-Technological Center of the Institute for Information Recording NASU, Uzhgorod, Ukraine
[1]Uzhgorod National University, Uzhgorod, Ukraine

DS-4P/21 The research of internal tension in ferromagnetic materials by method of magneto-optical visualization of magnetograms
Agalidy U.S., Leviy S.V., Machnyev A.M.
National Technical University «The Kiev Polytechnic Institute», Kiev, Ukraine

DS-4P/22 Asymmetrical behavior of cores at optical spliter making
Basiladze G.D., Berzhansky V.N., Dolgov A.I.
V.Vernadsky Taurida National University, Simferopol, Ukraine

DS-4P/23 Correlation of structure and optical properties of the carbon nitride films
Prudnikov A.M., Shalaev R.V., Varyukhin V.N., Ulyanov A.N., Linnik A.I.
Donetsk Phys.&Tech. Institute NASc Ukraine, Donetsk, Ukraine

DS-4P/24 Magnetoreflective polarization properties of granular films possessing the tunneling magnetoresistance effect
Kravets V.G., Poperenko L.V.[1]
Institute for Information Recording NAS of Ukraine, Kiev, Ukraine
[1]Department of Physics, Taras Shevchenko Kyiv University, Glushkov, Kyiv, Ukraine

DS-4P/25 Technology and optical properties of PbTe, PbSe, PbS/ p-Si(100) films
Levytskyi S.M., Vlasenko A.I., Gentsar P.A., Krys'kov Ts.A.[1]
V.E.Lashkarev Institute of Semiconductor Physics, NASU, Kiev, Ukraine
[1]Kamyanets-Podolsky State University, Physical Depart., Kamyanets-Podolsk, Ukraine

DS-4P/26 Tailoring $FeBO_3$ Properties via Nanoengineering
Yin S., Yang C.-E., Chen Q., Shang S., Liu Z.-K.
Department of Electrical Engineering
The Pennsylvania State University
Department of Materials Science and Engineering

DS-4P/27 Nanocomposite solar cells, based on CdS/Cu_2S heterostructures
Godovsky D.[1], Schilinsky P.[2], Caseri W.[3], Vasileska D.[4]
[1]LG Technology Centre, Moscow, Russia
[2] Konarka Co, Austrian Branch, Linz, Austria
[3]ETH Zurich, Switzerland
[4]Arizona State University, Arizona, US

Friday, October 5

9.00-11.30 Oral Session EC. Section 2. Soft and Hard Magnetic Materials

Chairmen: Gonzalez J., Zhukov A.

EC-2L/1 Magnetic properties and GMI effect in ultra-thin magnetically soft amorphous microwires (invited)
Zhukova V., Ipatov M.[1], Gonzalez J., Blanco J.M., Zhukov A.[1,2]
Dpto. de Física Aplicada, EUPDS, UPV/EHU, San Sebastián, Spain
[1]Dpto. Fisica de Materiales, Fac. Quimicas, UPV/EHU, San Sebastian, Spain
[2]TAMAG Ibérica S.L., Parque Tecnológico de Miramón, San Sebastián, Spain

EC-2L/2 Soft Magnetcic Character of Nanocrystalline $Fe_{73.5-x}Ni_xSi_{13.5}B_9Nb_3Cu_1$ alloy ribbons (x =5, 10 and 20) (invited)
Iturriza N.[1,2], Murillo N.[2], del Val J.J.[1,3], Vara G.[4], Pierna A.R.[4], Zhukov A.[1], González J.[1]
[1]Department Materials Physics, Faculty of Chemistry, UPV/EHU, San Sebastián, Spain
[2]New Materials Department, CIDETEC, San Sebastián. Spain
[3]Unidad de Física de Materiales, Centro Mixto CSIC-UPV/EHU, San Sebastián, Spain
[4]Escuela Universitaria Politécnica, San Sebastián, Spain

EC-2L/3 Short - range order in amorphous Fe- B alloys: ^{11}B and ^{57}Fe NMR study (invited)
Pokatilov V.S., Pokatilov V.V.
Moscow State Institute of Radioengineering, Electronics and Automation, Moscow, Russia

Metals& Alloys

EC-2O/1 **Hyperfine structure of Fe powder processed by power ultrasonics**
Nadutov V.M., Perekos A.O., Mordyuk B.N., Svystunov Ye.O., Rud' O.D.
G.V. Kurdyumov Institute for Metal Physics of the NASU, Kiev, Ukraine

EC-2O/2 **Effects of insulation agent on the core loss of Fe-Si-Al powder compressed cores**
Jang P., Lee B.
Division of applied science, Cheongju University, Cheongju, Korea

EC-2O/3 **Morphology and magnetic properties of ultrathin iron films grown on Si(111) and SiO_2/Si(100) subsrates**
Nikulin Yu.V., Dzhumaliev A.S., Filimonov Yu.A., Vysotsky S.L., Kozhevnikov A.V.
Saratov Branch of Institute of Radio Engineering and Electronics of RAS, Saratov, Russia

EC-2O/4 **New Performance of High Anisotropic Permanent Magnet Systems: Increase of Region of Localization of Strong Stray-Fields**
Belozorov D.P.[1], Ravlik A.G., Samofalov V.N.
National Technical University "Kharkiv Polytechnic Institute", Kharkiv, Ukraine
[1]Nat. Scient. Centre "Kharkiv Institute of Physics and Technology" NASU, Kharkiv, Ukraine

11.30-14.00 Oral Session EB.

Section 7. Metamaterials. Photonic, magnonic & phononic crystals

Chairmen: Veselago V.G., Shabat M.M.

EB-7L/1 **Metamaterials as a source of some problems in teaching of electrodynamics** (invited)
Veselago V.G.
Moscow Institute of Physics and TechnologyA.M.Prokhorov Institute of General Physics RAS

EB-7L/2 **New metamaterials for plasmonics and magnetophotonics** (invited)
Belotelov V.I. [1,2], Doskolovich L.L. [3], Zvezdin A.K. [1]
[1] A.M. Prokhorov General Physics Institute RAS, Moscow, Russia
[2]M.V. Lomonosov Moscow State Univ., Moscow, Russia
[3]Image Processing Systems Institute RAS, Samara, Russia

EB-7L/3 **Metaoptics. Subwave imaging by metamaterials.** (invited)
Vinogradov A.P., Dorofeenko A.V., Merzlikin A.M.
Institute for Theoretical and Applied Electromagnetism, Russian Academy of Sciences, Moscow, RF

EB-7L/4 **Metamaterials with tunable negative refractive index fabricated from amorphous ferromagnetic microwires and optical Magnus effect** (invited)
Ivanov A.V.[1], Shalygin A.N.[2], Galkin V.Yu.[2], Vedyayev A.V.[1], Ivanov V.A.[2,3]
[1]*M. V. Lomonosov Moscow State University, Moscow, Russia*
[2]*R&P Vichel (high-frequency systems), Moscow, Russia*
[3]*N. S. Kurnakov Institute of General and Inorganic Chemistry of the RAS, Moscow, Russia*

EB-7O/1 **Optical bistability in one-dimensional magnetic photonic crystal with defect layers**
[1]Lyubchanskii I.L., [1]Dadoenkova N.N., [1]Zabolotin A.E., [2]Lee Y.P., [3]Rasing Th.
[1]*Donetsk Physical & Technical Institute NASU, Donetsk, Ukraine*
[2]*q-Psi and Department of Physics, Hanyang University, Sungdong-Ku, Seoul, Korea*
[3]*Institute for Molecules and Materials, Radboud University Nijmegen, Nijmegen, the Netherlands*

EB-7O/2 **Switchable nonlinear metallo-ferroelectric photonic crystals**
Mishina E. [1], Zaitsev A. [1], Sherstyuk N. [1], Sigov A. [1], Muhortov V. [2], Rasing Th. [3]
[1]*Moscow State Institute of Radioengineering, Electronics and Automation, Moscow, Russia*
[2]*South Center RAS, Rostov-on-Don, Russia*
[3]*Institute for Molecules and Materials, Radboud University Nijmegen, Nijmegen, The Netherlands*

EB-7O/3 **Nonlinear planar waveguide sensors using metamaterials**
Shabat M.M. [1, 2], Taya S. [2]
[1] *Max-Planck-Institut für Physik komplexer Systeme Nöthnitzer Str. 3801187 Dresden, Germany*
[2] *Physics Department, Islamic University, Gaza, Gaza Strip, Palestinian Authority*
[2]*Physics Department, Al Aqsa University, Gaza, Gaza Strip, Palestinian Authority*

EB-7O/4 **Microwave metamaterials with resonant elements**
Maly S.V.
Belarusian State University, Minsk, Belarus

9.00-14.00 Poster Session EP.
Section 5. Piezoelectric and Magnetoelectric Materials

Chairmen: Fetisov Y.K., Bichurin M.I.

EP-5P/1 **Modeling the Magnetoelectric Interaction in Ferrite-Piezoelectric Structures**
Bichurin M.I., Petrov V.M., Srinivasan G.[1]
Novgorod State University, Veliky Novgorod Russia
[1]*Oakland University, Rochester MI, USA*

EP-5P/2 **Mutual control of electric and magnetic order parameters in $BiFeO_3$ thin films**

Zvezdin A.K.[1], Shust V.A.[2], Pyatakov A.P.[1,2]
[1]*Institute of General Physics RAS, Moscow, Russia*
[2]*Physics department, M.V. Lomonosov, Moscow State University, Moscow, Russia*

EP-5P/3 **Low-frequency magnetoelectric effect in double layer metal-piezoelectric disks**

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

EP-5P/4 **Freqency dependences of electrical and magnetoelectrical parameters of multilayer ferrite-piezoelectric structures**

Kamentsev K., Fetisov L., Lebedev S.
Moscow State Institute of Radio Engineering, Electronics and Automation, Moscow, Russia

EP-5P/5 **Microwave Magnetoelectric Interaction in Ferrite-Piezoelectric Nanobilayers**

Petrov V.M., Bichurin M.I., Berezin D.N., Srinivasan G.[1]
Novgorod State University, Veliky Novgorod, Russia
[1]*Oakland University, Rochester MI, USA*

EP-5P/6 **Dual-Tunable Planar Ferrite-Ferroelectric Hybrid Wave Phase Shifters**

Ustinov A.B., Srinivasan G.[1], Drozdovsky A.V., Kalinikos B.A.
St. Petersburg Electrotechnical University, St. Petersburg, Russia
[1]*Department of Physics, Oakland University, Rochester, Michigan*

EP-5P/7 **Antiferromagnetic resonance in hematite - piezoelectric structures**

Meshcheryakov V.F.[1,2], Kamentsev K.E.[1], Fetisov Y.K.[1]
[1]*Moscow State Institute of Radio Engineering, Electronics and Automation, Russia*
[2]*Shubnikov Institute of Crystallography, Moscow, Russia*

EP-5P/8 **The magnetoelectric phenomena in the structures containing ferrimagnetic and piezoelectric components**

Koronovskyy V.E.
Taras Shevchenco Kiev National University, Kiev, Ukraine

EP-5P/9 **Electric Field Induced Micromagnetic Structure Transformation in Ferrite Garnet Films**

Pyatakov A.P.[1,2], Nikolaev A.V.[1], Meshkov G.A.[1], Logginov A.S.[1]
[1]*Physics department, M.V. Lomonosov, Moscow State University, Moscow, Russia*
[2]*Institute of General Physics RAS, Moscow, Russia*

EP-5P/10 **Acoustic losses in langatate - perspective piezoelectric material**

Alekseev S.G., Kotelyanskii I.M., Mansfeld G.D., Polzikova N.I., Raevskii A.O., Sergeev F.O.
Institute of Radioengineering and Electronics, RAS, Moscow, Russia

EP-5P/11 Ways of improvement of quality piezoceramic for ultrasonic radiators of the big capacity
Saley V.S., Prilipko Yu.S.
STC "Reaktivelektron", NASU, Donetsk, Ukraine

EP-5P/12 Enormous torsional strain of one dimensional conductors under electric field: an alternate for the piezoelectric actuators?
Pokrovskii V.Ya., Zybtsev S.G., Gorlova I.G.
Institute of Radioengineering and Electronics of RAS, Moscow, Russia

EP-5P/13 Barium titanate nanofilms on various substrates
Cherkasov A.P., Dambis M.K., Dolgov A.V., Filikov V.A., Gordeev V.N., Maslova L.A., Vasilyeva N.D.
Moscow Power Engineering Institute, Moscow, Russia

EP-5P/14 Investigation of the Anomalous Temperature and Electric Field Dependence of Birefringence in PZNT Single Crystals
Merkulov V.S., Bychkov G.L.
Joint Institute of Solid State and Semiconductor Physics of NASB, Minsk, Belarus

EP-5P/15 The influence of electric polarization on the vector of modulation of antiferromagnetic structure in $TbMnO_3$
Chupis I.E.[1], Ushakova I.V.[2]
[1]*ILTPE-B.Verkin Institute for Low Temperature Physics and Engineering, NASU*
[2]*V. Karazin Kharkov National University*

EP-5P/16 Possible display of electromagnons in antiferromagnetic modulated states of $TbMnO_3$
Chupis I.E.
B.Verkin Institute for Low Temperature Physics and Engineering, NASU, Kharkov, Ukraine

EP-5P/17 Spectral Studies of Band Gap of Strontium Titanate Single Crystal
Popović D., Maletić S., Dojčilović J.
University of Belgrade, Belgrade, Serbia

EP-5P/18 High-sensitive piezoceramic elements for medical apparatuses of ultrasonic investigation
Spiridonov N.A., Gusakova L.G., [1]Ischuk V.M., Pogibko V.M.
Scientific and technological Centre "Reactivelectron" NASU, Donetsk
[1]*Institute for Single Crystals, NASU, Kharkov, Ukraine*

EP-5P/19 Management piezoelectric parameters in phase transition through the transient state
Spiridonov N.A., Ischuk V.M.[1]
STC "Reactivelectron", NASU, Donetsk, Ukraine
[1]*Institute for Single Crystals, NASU, Kharkov, Ukraine*

EP-5P/20 Re-investigations of the temperature dependence of spontaneous polarization of $BaTiO_3$ single crystals
Yatsenko A.A., Yevdokimov S.V., Yatsenko A.V.
Taurida National University, Simferopol, Ukraine

EP-5P/21 **Analysis of the temperature dependence of spontaneous polarization in lithium niobate crystals**
Shostak R.I., Yatsenko A.V., Yevdokimov S.V.
Taurida National University, Simferopol, Ukraine

EP-5P/22 **On the nature of the thermooptic memory effect in $LiNbo_3$**
Yevdokimov S.V., Yatsenko A.V.
Taurida National University, Simferopol, Ukraine

EP-5P/23 **Peculiarities of dark conductivity of $BaTiO_3$ single crystals in tetragonal phase**
Yatsenko A.A., Yevdokimov S.V., Yatsenko A.V.
Taurida National University, Simferopol, Ukraine

EP-5P/24 **Simulation of the pyroelectric properties of an ά-modificatin of lithium iodate crystals**
Yatsenko A.V., Lobzenko S.V.
Taurida National University, Simferopol, Ukraine

EP-5P/25 **Simple low-cost precision device for low temperature pyroelectric measurements**
Yatsenko A.A., Yevdokimov S.V., Yatsenko A.V., Fedorovskii A.F., Levchenko D.A.
Taurida National University, Simferopol, Ukraine

EP-5P/26 **Formation of nanosize ferroelectric inclusions in chalcogenide glass matrix**
Shpak A.P., Guranich P.P.[1], Rubish V.M.[2], Guranich O.G.[2], Stefanovich V.A.[1], Mykaylo O.A.[1], Gorina O.V.[2], Rigan M.Yu.[2]
G. Kurdyumov Institute for Metal Physics NASU, Kiev, Ukraine
[1]Uzhgorod National University, Uzhgorod, Ukraine
[2]Uzhgorod Scientific-Technological Center of the Institute for Information Recording, Uzhgorod, Ukraine

EP-5P/27 **Pyroelectric effect in mesomorphic compound with rigid bent core**
Zharova M.A., [1]Yablonsky S.V., Bykova V.V., Usol'tseva N.V.
Ivanovo State University, Ivanovo, Russia
[1]Institute of Crystallography Academy of Science, Moscow, Russia

EP-5P/28 **Crystal Growth of compounds $A_2B^+B^{3+}F_6$ and $A_3B^{3+}F_6$ with elpasolite and cryolite structure**
Voronov V.N.
Kirensky Institute of Physics, Krasnoyarsk, Russia

EP-5P/29 **Investigation of concentration dependence of the Curie temperature for deuterated mixed KDP-type crystals**
Barabash A.I.
Kiev University of Economics and Technologies of Transport, Kiev, Ukraine

9.00-14.00 Poster Session EQ.
Section 8. Spin Dynamics. Microwave Materials

Chairmen: Ignatchenko V.A., Serga A.A.

EQ-8P/1 Magnetostatic Waves in Magnetic Crystals
Annenkov A.Yu.[1], Gerus S.V.[1], Vinogradov A.P.[2]
[1]*Institute of Radioengineering and Electronics, RAS, Fryazino, Moscow Province, Russia*
[2]*Institute of Theoretical and Applied Electrodynamics, RAS, Moscow, Russia*

EQ-8P/2 Self-generation of black spin wave envelope soliton trains with high density
Ustinov A.B.[1,2], Demidov V.E.[1,2], Kalinikos B.A.[1], Demokritov S.O.[2]
[1]*St. Petersburg Electrotechnical University, St. Petersburg, Russia*
[2]*Institute for Applied Physics, University of Muenster, Germany*

EQ-8P/3 Electromagnetic surface waves in metal-dielectric-Ferrite- left handed Waveguide layered structure
El-Astal A.H.[1], Hamada M.S.[1], Shabat M.M.[2, 3]
[1]*Department of Physics, Al-Aqsa University, Gaza, Palestinian Authority*
[2]*Department of Physics, Islamic University of Gaza, Gaza, Palestinian Authority*
[3]*Present address: Max-Planck-Institut für Physik komplexer Systeme, Dresden, Germany*

EQ-8P/4 Interaction of magnetostatic surface waves with drifting carries in a LHM-YIG-semiconductor waveguide system
Al-Sahhar Z.I.[1], Shabat M.M.[2]
[1]*Physics Department, Al-Aqsa University, Gaza, Palestinian Authority*
[2]*Max Planck Institute for the Physics of Complex Systems, Dresden, Germany*
Islamic University, Gaza, Palestinian Authority

EQ-8P/5 Transformation of Magnetostatic Surface Wave into Electromagnetic Wave in Ferrite-Dielectric Structure
Lock E., Vashkovsky A.
Institute of Radioengineering and Electronics RAS (Fryazino branch), Moscow region, Russia

EQ-8P/6 Influence of damping parameter on reflection of bulk spin waves from a boundary of homogeneous and multilayer uniaxial dielectric ferrites
Gorobets Yu.I.[1], Reshetnyak S.A.[2], Homenko T.A.[2]
[1]*Institute of Magnetism of NASU, Kiev, Ukraine*
[2]*National Technical University of Ukraine "Kyiv Polytechnic Institute", Kyiv, Ukraine*

EQ-8P/7 Propagation of electromagnetic waves in composite medium containing magnetic and electric elements
Shcheglov V.I.
Institute of Radioengineering and Electronics of RAS, Moscow, Russia

EQ-8P/8 The backward magnetostatic surface waves in composite medium ferrite - dielectric - metal stripe grating
Shcheglov V.I., Zubkov V.I.
Institute of Radioengineering and Electronics of RAS, Moscow, Russia

EQ-8P/9 Forward and backward electromagnetic waves in biisotropic magnetodielectric resonance medium
Shcheglov V.I., Zubkov V.I.
Institute of Radioengineering and Electronics of RAS, Moscow, Russia

EQ-8P/10 Propagation of magnetostatic waves in nonuniform magnetized structure ferrite - dielectric - metal grating
Shcheglov V.I., Zubkov V.I.
Institute of Radioengineering and Electronics of RAS, Moscow, Russia

EQ-8P/11 Collective modes and local magnon states for magnetic dot arrays with perpendicular anisotropy.
Bondarenko P.V.[1], Galkin A.Yu.[2], Zaspel C.E.[3], Ivanov B.A.[1]
[1]*Institute of Magnetism NASU, Ukraine*
[2]*Institute of Metal Physics NASU, Ukraine*
[3]*University of Montana-Western IMag; NASU, Kiev, Ukraine*

EQ-8P/12 Relaxation peculiarities of nonlinear magnetoelastic dynamics in thin ferrite film
Vlasov V.S.[1], Kotov L.N.[1], Asadullin F.F.[1], Sheglov V.I.[2], Shavrov V.G.[2]
[1]*Syktyvkar State University, Syktyvkar, Russia*
[2]*Institute of Radioengineering and Electronics of RAS, Moscow, Russia*

EQ-8P/13 Spatial localization of nonlinear waves in periodic structures
Gerasimchuk I.V.[1], Kovalev A.S.[2]
[1]*Institute for Theoretical Physics, NSC "Kharkov Institute of Physics and Technology", Kharkov, Ukraine*
[2]*B.Verkin Institute for Low Temperature Physics and Engineering, Kharkov, Ukraine*

EQ-8P/14 Spin wave filters on the base of sputtered garnet films for microwave applications
Grishin A.M.[1], Lutsev L.V.[2], Yakovlev S.V.[2], Khartsev S.I.[1]
[1]*Department of Condensed Matter Physics, Royal Institute of Technology, Stockholm-Kista, Sweden*
[2]*Research Institute "Ferrite-Domen", Saint Petersburg, Russia*

EQ-8P/15 Reflection of the electromagnetic wave from the surface of metal-ferromagnetic structure
Bychkov I.V., Buchelnikov V.D., Butko L.N.
Chelyabinsk state university, Chelyabinsk, Russia

EQ-8P/16 Structure of domain walls in weak ferromagnets in microwave magnetic field
Gerasimchuk V.S.[1], Shitov A.A.[2]
[1]*Donetsk National Technical University, Donetsk, Ukraine*
[2]*Donbass National Academy of Civil Engineering, Makeevka, Ukraine*

EQ-8P/17 Absorption and reflection of a composite with ferrite in ultrahigh frequency
Fediy A.A., Futerman D.E., Bychkov I.V., Buchelnikov V.D.
Chelyabinsk State University, Chelyabinsk, Russia

EQ-8P/18 Numerical simulation of mode interaction in FMR spectra of microstripe array
Vysotsky S.L., Filimonov Yu.A., Khivuntsev Yu.V.
Saratov branch of IRE RAS, Saratov, Russia

EQ-8P/19 Properties of hexagonal ferrites Co_xZn_{2-x} Z
Serebryannikov S.V., Smirnov D.O., Cheparin V.P., Eremtsova L.L.
MPEI (TU), Moscow, Russia

EQ-8P/20 The analysis of electromagnetic properties of metamaterials by the minimal autonomous blocks method
Maly S.V.
Belarusian State University, Minsk, Belarus

EQ-8P/21 Giant magnetic impedance in the GHz frequencies range
Berzhansky V.N., Ponomarenko V.I., Popov V.V., Vinogorodsky D.F.
Taurida National University, Simferopol, Ukraine

EQ-8P/22 Microwave properties of Fe powders milled in various media
Yelsukov E.P.[1], Rozanov K.N.[2], Lomayeva S.F.[1], Osipov A.V.[2], Petrov D.A.[2], Shuravin A.S.[1], Chulkina A.A.[1], Konygin G.N.[1]
[1]*Physical-Technical Institute UrB RAS, Izhevsk, Russia*
[2]*Institute for Theoretical and Applied Electromagnetics RAS, Moscow, Russia*

EQ-8P/23 Electromagnetic shielding effectiveness of graphite-epoxy composites
Vovchenko L., Matzui L., Oliynik V., Launetz V.
Kyiv National Shevchenko University, Kyiv, Ukraine

EQ-8P/24 Properties and technology of broadband microwave absorbing covers on the base of hydrogenated carbon with 3d-metal nanoparticles
Nikolaychuk G.A., Lutsev L.V., Yakovlev S.V., Petrov V.V.
Research Institute "Ferrite-Domen", Saint Petersburg, Russia

EQ-8P/25 Micro-undulator for FEL THz source
Seomoon K., Jang P.
Division of Applied Science, Cheongju University, Cheongju, KOREA

EQ-8P/26 Unstructured modeling of microwave-bandwidth semiconductor laser
Belkin M.E.
Moscow State Technical University of Radio Engineering, Electronics and Automatics, Moscow, Russia

DA-8O/1 The spin wave damping in magnetic materials with degenerate states
Baryakhtar V.G.[1,2], Danilevich A.G.[1]
[1]*Institute of Magnetism, Kyiv, Ukraine*
[2] *National Technical University of Ukraine "KPI", Kyiv, Ukraine*

15.00-17.15 Oral Session EA.
Section 4. Electrooptic and Magnetooptic materials

Chairmen: Adachi N., Pavlov V.V.

EA-4L/1 **Magneto-optic observation of the spontaneous spin-reorientation phase transition in $ErFeO_3$** (invited)
Belyaeva A.I., Baranova K.V.[1]
National Technical University "KPI", Kharkov, Ukraine
[1]Institute of electrophysics & radiation technologies NASU,, Kharkov, Ukraine

EA-4L/2 **Magneto-optical and magnetic properties of compounds activated by RE ions** (invited)
Malakhovskii A.V.
L. V. Kirensky Institute of Physics SB RAS, Krasnoyarsk, Russia

EA-4O/1 **Magnetic-field-induced second harmonic generationin semiconductors GaAs and (Cd, Mn) Te**
Pavlov V.V.[1], Pisarev R.V.[1], Kalashnikova A.M.[1], Sänger I.[2], Yakovlev D.R.[1,2], Kaminski B.[2], Bayer M.[2]
[1]Ioffe Physico-Technical Institute of RAS, St. Petersburg, Russia
[2]Experimental Physics II, Dortmund University, Dortmund, Germany

EA-4O/2 **Magnetic and Magnetooptical Properties of the Magnetic Garnet Film for the High Frequency Magnetic Field Sensor**
Adachi N., Uematsu D., Ota T., Takahashi M.[1], Kawasaki K.[2], Ota H.[2], Arai K.[2]
Nagoya Institute of Technology
[1]TAIYO YUDEN Co., LTD
[2]National Institute of Information and Communications Technology

EA-4O/3 **Efficiency increasing of electro-, piezo- and acousto-optical interactions of light in anisotropic materials**
Andrushchak A.S., [1]Mytsyk B.G., [1]Demyanyshyn N.M., Kaidan M.V., Laba H.P., Ostrovskij I.P., Yurkevych O.V.
Lviv Polytechnic National University, Lviv, Ukraine
[1]Institute of Physics and Mechanics of NASU, Lviv, Ukraine

EA-4O/4 **Photon pressure and drift of polarized electrons in multilayer magnetic nanofilms**
Krupa M.M.
Institute of Magnetism, NASU, Ukraine

EA-4O/5 Structure, Magnetism and Magnetochiral Effect in the Two Enantiomers of Optically Active 2D Molecular Magnet

Train C., Gheorghe R., Chamoreau L.-M., Ovanesyan N.S.[1], Shilov G.V.[1], Makhaev V.D.[1], Krstic V.[2], Rikken G.L.J.A.[2], Gruselle M., Verdaguer M.

Lab. Chimie Inorg. et Matér. Moléculaires, UMR CNRS 7071,Université Pierre et Marie Curie,Paris, France

[1]Institute of Problems of Chemical Physics, RAS, Chernogolov, Russia

[2]Laboratoire National des Champs Magnétiques Pulsés, Toulouse Cedex 04, France

17.30-19.00 Oral Session ED. Section 9. Ionizing Radiation Sensing Materials

Chairmen: Starzhinskiy N., Nedilko S.

ED-9O/1 Development of radiation detectors based on II-VI compounds

Starzhinskiy N.[1], Grinyov B.[1], Katrunov K.[1], Malyukin Yu.[1], Gal'chinetskii L.[1], Gashin P.[2], Galan A.[1], Zenya I.[1]

[1]Institute for Scintillation Materials NASU, Kharkov, Ukraine

[2]Kishinev State University, Kishinev, Moldova

ED-9O/2 Borate phosphors for thermal neutron detection

Dotsenko V.P.[1], Berezovskaya I.V.[1], Efryushina N.P.[1], Dorenbos P.[2], Sidorenko A.V.[2]

[1]Physico-Chemical Institute, Ukrainian Academy of Sciences, Odessa, Ukraine

[2]Delft University of Technology, Delft, The Netherlands

ED-9O/3 Luminescence of phosphates $MAlP_2O_7$ and molybdates $MAl(MoO_4)_2$ doped with chromium and titanium ions: perspectives of applications

Nedilko S.[1], Bojko V.[2], Bojko R.[2], Gomenyuk O.[3], Hizhnyi Yu.[1], Nagorniy P.[1], Nedyelko I.[1], Scherbatskii V.[1], Sheludko V.[3]

[1]Kyiv National Taras Shevchenko University, Kyiv Ukraine

[2]National Agriculture University, Kyiv, Ukraine

[3]State Pedagogical University, Hluhiv, Ukraine

ED-9O/4 Aqueous synthesis of lantanide-doped nanocrystals and core-shell luminescent structures

Kryzhanovskaya A.S., Babayevskaya N.V., Tolmachev A.V.

Institute for Single Crystals NASU, Kharkov, Ukraine

ED-9O/5 Non-linearity of organic stilbene scintillators response on alpha-excitation

Galunov N.Z., Karavaeva N.L., Martynenko E.V.

Institute for Scintillation Materials, STC "Institute for Single Crystals" NASU, Kharkiv, Ukraine

ED-9O/6 **Investigation on influence of preparation conditions for structural and luminescent properties of $SrTiO_3:Pr^{3+}$ phosphors**
Marchylo O.M., Zavjalova L.V., Kominami H., Korchevoj A.A., Nakanishi Y., Svechnikov S.V.
V.E. Lashkaryov Institute of Semiconductor Physics NASU, Kyiv, Ukraine
Research Institute of Electronics, Shizuoka University, Japan

15.00-19.00 Poster Session CP.
Section 1. Fundamental Physics of Functional Materials

Chairmen: Runov V.V., Morosov A.I.

CP-1P/1 **Influence of the indirect antiferromagnetic exchange interaction of the d-electrons on the spin-wave spectrum in a narrow-band Hubbard magnet**
Myronova S.F., Zubov E.E.
Donetsk Institute for Physics and Engineering after O.O. Galkin NASU, Donetsk, Ukraine

CP-1P/2 **Longitudinal solitons for spin S = 1 ferromagnet with biquadratic interaction**
Khymyn R.S.[1], Ivanov B.A.[1,2]
[1]*National Taras Shevchenko Kiev University*
[2]*Institute of Magnetism NASU*

CP-1P/3 **Phase diagram of S = 3/2 non-Heisenberg magnetic**
Fridman Yu.A., Kosmachev O.A., Ivanov B.A.[1]
V.I. Verandskiy Taurida NationalUniversity, Simferopol, Ukraine
[1]*Institute of magnetism, NASU, Kiev, Ukraine*

CP-1P/4 **Phase transitions on temperature in ultrathin non-Heisenberg films**
Fridman Yu.A., Matunin D.A.
V.I. Verandskiy Taurida NationalUniversity, Simferopol, Ukraine

CP-1P/5 **Magnon relaxation in non-Heisenberg magnet with S = 1**
Butrim V.I., Boedjiev A.S., Ivanov B.A.[1]
V.I. Verandskiy Taurida NationalUniversity, Simferopol, Ukraine
[1]*Institute of magnetism, NASU and Ministry of Education, Kiev, Ukraine*

CP-1P/6 **Quantum effects in anisotropic ferrimagnetic**
Fridman Yu.A., Kosmachev O.A.
V.I. Verandskiy Taurida NationalUniversity, Simferopol, Ukraine

CP-1P/7 **Phase transitions on concentration in ultrathin films of $Fe_{1-x}Co_x$**
Fridman Yu.A., Klevets Ph.N.
V.I. Verandskiy Taurida NationalUniversity, Simferopol, Ukraine

CP-1P/8 **Magnetic field induced distortions in thin antiferromagnetic layer**
Morosov A.I., Morosov I.A., Sigov A.S.
Moscow State Institute of Radioengineering, Electronics and Automation, Moscow, Russia

CP-1P/9 Domain structure of weak ferromagents: competition between demagnetization and destressing factors
Korniienko Ie.[1], Gomonay H.V.[1,2]
[1]*National Technical University of Ukraine "KPI", Kyiv, Ukraine*
[2]*Bogolyubov Institute for Theoretical Physics NASU, Kyiv, Ukraine*

CP-1P/10 Spin torque effects in an antiferromagnet
Gomonay H.V.
National Technical University of Ukraine ``KPI``, Kyiv, Ukraine

CP-1P/11 Dynamics of antiferromagnetic vortices with different topological charges in the yttrium orthoferrite domain wall
Chetkin M.V., Kurbatova Yu.N., Shapaeva T.B.
Physics Department of M.V.Lomonosov Moscow State University, Moscow, Russia

CP-1P/12 Nonlinear dynamics of the nucleus of the new phase at presence of inhomogeneity of magnetic anisotropy
Lomakina I.Yu., Shamsutdinov M.A., [1]Nazarov V.N.
Bashkir State University, Ufa, Russia
[1]*Institute of Molecule and Crystal Physics, Ufa, Russia*

CP-1P/13 Surface magnetism of non-ideal Iron Borate monocrystals
Maksimova E.M., Nauhatskij I.A., Strugatsky M.B.
Vernadsky Taurida National University, Simferopol, Ukraine

CP-1P/14 Physics of the high-excited states in the functional materials on the basis of dyes
Kondratenko P.A.[1], Lopatkin Yu.M.[2], Sakun T.N.[1]
[1] *National aviation university, Kiev, Ukraine*
[2] *RI of physics of Odessa National I.I.Mechnikov University, Odessa, Ukraine*

CP-1P/15 Switching of the nanoparticle's magnetization by a rotating magnetic field
Denisov S.I.[1,2], Lyutyy T.V.[1]
[1]*Sumy State University, Sumy, Ukraine*
[2]*Institut für Physik, Universität Augsburg, Augsburg, Germany*

CP-1P/16 Thermoelectric Properties of the Layered Oxides $LnBaCu(Co)FeO_{5+\delta}$ (Ln = La, Nd, Sm, Gd)
Klyndyuk A.I., Chizhova Ye.A.
Belarus State Technological University, Minsk, Belarus

CP-1P/17 Some features of gyroscopic dynamics of the"thin" structure domain walls in two-sublattice magnetics
Ekomasov E.G., Bogomazova O.B.
Bashkir State University, Ufa, Russia

CP-1P/18 The study of the origin and evolution of the magnetic inhomogenities of soliton, breather and pulson type in magnetics with anisotropy local inhomogenities
Ekomasov E.G., Azamatov Sh.A., Murtazin R.R.
Bashkir State University, Ufa, Russia

CP-1P/19 First principle band structure of $Fe_{2-x}Mn_xAs$ alloys
Valkov V.I., Golovchan A.V.
National Academy of Sciences, A.Galkin, Donetsk Physico-Technical Institute

CP-1P/20 Influence of pressure and magnetic field on phase transitions in an alloy $Mn_{1.5}Fe_{0.5}As_{0.5}P_{0.5}$
Varyukhin D.V., Valkov V.I., Todris B.M.
National Academy of Sciences, A.Galkin, Donetsk Physico-Technical Institute

CP-1P/21 Electronic mechanism of magnetic order-order phase transition in system Fe{a-x}Mn{x}As
Valkov V.I., Golovchan A.V.
National Academy of Sciences, A.Galkin, Donetsk Physico-Technical Institute

CP-1P/22 Ordering kinetics in BCC alloys with the account for diffusion processes
Gumennyk K.V., Stefanovich L.I., [1]Feldman E.P.
Donetsk Institute of Physics and Engineering, NASU, Donetsk, Ukraine
[1]Donetsk Institute for Physics of Mining Processes, NASU, Donetsk, Ukraine

CP-1P/23 Processes of inhomogeneous magnetization reversal of real crystals
Vakhitov R.M., Yumaguzin A.R.[1]
Bashkir State University, Ufa, Bashkortostan, Russia
[1]Ufa Institute of RSUTE, Ufa, Bashkortostan, Russia

CP-1P/24 Adsorption of real polymer chains at penetrable interfaces and hard walls
Gerasimchuk I.V.[1], Sommer J.-U.[1,2]
[1]Leibniz Institute of Polymer Research Dresden, Dresden, Germany
[2]Institute for Theoretical Physics, Dresden Technical Universit, Dresden, Germany

CP-1P/25 Magnetic anisotropy in diluted ferrite $NiGa_{0.6}Al_{0.6}Fe_{0.8}O_4$ with frustrated magnetic strucrute
Antoshina L.G., Korshak A.B.
M.V.Lomonosov Moscow State University, Moscow, Russia

CP-1P/26 Anomalous coherent state in the thin film structures
D′yachenko A.I., Boilo I.V.
Donetsk Institute for Physics and Engineering of the NASU, Donetsk, Ukraine

Superconductors

CP-1P/27 Electron-phonon interaction and its interplay with magnetic coupling in cuprates in the strong correlation limit
Shneyder E.I., Ovchinnikov S.G.
Kirensky Institute of Physics, Siberian Branch of RAS, Krasnoyarsk, Russia

CP-1P/28 Excess current in contacts of MgB_2 - Ag, Bi2223 – Ag
Sidorov S.L., Tarenkov V.U., Dyachenko A.I., Boichenko D.I.
Donetsk Physics & Engineering Institute NASU, Donetsk, Ukraine

CP-1P/29 Superconducting point-contact spectroscopy on (In,Mn)Sb dilute magnetic semiconductor

Varyukhin D.V., Tarenkov V.Yu., D'yachenko A.I., Krivoruchko V.N., Revenko Yu.F., Ivanov V.A.[1]
Donetsk Physics & Technology Institute NAS of Ukraine, Donetsk, Ukraine
[1]N. S. Kurnakov Institute of General and Inorganic Chemistry of RAS, Moscow, Russia

CP-1P/30 The real band diagram for the NbN–GaAs heterojunction

Shekhovtsov L.V., Venger E.F., Hotovy I.[1]
V. Lashkaryov Institute of Semiconductor Physics of the NASU, Kiev, Ukraine
[1]Slovak University of Technology, Bratislava, Slovakia

CP-1P/31 Nano-scaled superconducting interface in semiconducting $A^{IV}B^{VI}$ heterostructures: suppression of 2D-superconductivity by the magnetic field

Yuzephovich O., Bengus S., Mikhailov M., Volobuev V.[1], Sipatov A.[1], Buchstab E.[2], Fogel N.[2]
Institute for Low Temperature Physics & Engineering, Kharkov, Ukraine
[1]Kharkov Polytechnic University, Kharkov, Ukraine
[2]Solid State Institute, Technion, Haifa, Israel

CP-1P/32 Relaxation of the trapped magnetic field in the single-domain HTS

Kuroedov Yu.D., Krasnoperov E.P., Kartamishev A.A., Polushenko O.L.[1], Nizhelskiy N.A.[1]
Kurchatov Institute, Moscow, Russia
[1]Bauman MVTU, Moscow, Russia

CP-1P/33 Influence of HTCS ellipsoid aspect ratio on the angular dependence of its diamagnetic response

Vasyliev A.V., Melnichuk I.A.
PMP &HTSC division, Donetsk National University, Donetsk, Ukraine

CP-1P/34 Doping dependence of the electronic structure in $La_{2-x}Ba_xCuO_4$

Gavrichkov V.[1,2], Ambrosch-Draxl C.[3], Kokorina E.[4], Nekrasov I.[4], Ovchinnikov S.[1,2], Pchelkina Z.[5], Spitaler J.[1]
[1]L.V. Kirensky Institute of Physics, Siberian Branch of RAS, Krasnoyarsk, Russia
[2]Siberian Federal University, Krasnoyarsk, Russia
[3]University of Leoben, Leoben, Austria
[4]Institute of Electrophysics, Ural Branch of RAS, Ekaterinburg, Russia
[5]Institute of Metal Physics, Ural Branch of RAS, Ekaterinburg, Russia

CP-1P/35 Magnetic susceptibility of rare-earth elements cobaltites with different cobalt stoichiometry

Bashkirau L.A., Shauchenka S.V., Petrov G.S., Lubinski N.N.
Belarus State Technological University, Minsk, Belarus

CP-1P/36 **Electrical conductivity, thermal expansion and IR-spectra of non-stoichiometric rare-earth elements cobaltites**
Shauchenka S.V., Bashkirau L.A., Petrov G.S., Lubinski N.N., Sushkevich A.V.
Belarus State Technological University, Minsk, Belarus

AA-L1 **Pure and ultra-pure metals in nuclear power**
Azhazha V.M.
Institute of Solid State Physics, Material Science and Technology NSC KIPT, Kharkov, Ukraine

BA-L1 **Requirements to new generation absorbing materials and control rods**
Risovany V.D., Zakharov A.V., Klochkov Ye.P.
FSUE SSC RIAR, Dimitrovgrad

AB-1O/1 **New Method in the Theory of Parametric Resonance. Stabilization and Destabilization of Vibrations**
Baryakhtar V.G., Samar A.V.
Institute of Magnetism of NASU& MESU, National Technical University of Ukraine "KPI"

AB-1O/6 **First principle study of the ferromagnetic behavior in the magnetic refrigeration MnAs based alloys**
Golovchan A.V., Gribanov I.F.
A.Galkin, Donetsk Physico-Technical Institute of NASU, Donetsk, Ukraine

15.00-19.00 Poster Session CQ.
Section 12. NMR & EPR

Chairmen: Sergeev N.A., Berzhansky V.N.

CQ-12P/1 **Dynamics of paramagnets at zero temperature**
Farutin A.M., Marchenko V.I.
Kapitza Institute for Physical Problems, RAS, Russia

CQ-12P/2 **Low-energy spin dynamics of heisenberg pyrochlore magnets**
Prozorova L.A., Sosin S.S., Smirnov A.I., Petrenko O.A.[1], Zhitomirsky M.E.[2], Sanchez J.-P.[2]
P. Kapitza Institute for Physical Problems RAS, Moscow, Russia
[1]Department of Physics, Warwick University, Coventry, UK
[2] Commissariat `a l'Energie Atomique, Grenoble, France

CQ-12P/3 **The ESR line splitting in doped perovskite manganites in the course of magnetic phase transformation**
Dzhezherya Yu.I., Tovstolytkin A.I.
Institute of Magnetism, Kyiv, Ukraine

CQ-12P/4 **ESR spectra for solid solution semiconductor Hg1-xCrxSe (0.03<x<0.1)**
Bondarev A., Ivanchenko I., Lamonova K.[1], Orel S.[1], Pashkevich Yu.[1], Popenko N., Zhitlukhina E.[1]
Usikov Institute for Radiophysics and Electronic, NASU, Kharkiv, Ukraine
[1]O.O. Galkin Donetsk Institute for Physycs and Engineering, NASU, Donetsk, Ukraine

CQ-12P/5 EPR spectroscopy of the copper(II) spacer-armed binuclear complexes
Larin G.M., Shul'gin V.F. [1]
N.S. Kurnakov Institute of General and Inorganic Chemistry, RAS, Moscow, Russia
[1]*V.I. Vernadsky Taurida National University, Simferopol, Ukraine*

CQ-12P/6 Magnetic properties of bis[1,3-dithiole-2-thione-4,5-ditiolato] cuprate(II) complexes
Vasilets G.Y., Starodub V.A., Kamenskiy D.L. [1], Anders A.G. [1]
V.N. Karazin Kharkiv National University, Kharkiv, Ukraine
[1]*B.I. Verkin Institute of Low Temperature Physics and Engineering, Kharkiv, Ukraine*

CQ-12P/7 The spacer-armed copper(II) dimers structure
Chernega A.N., Rusanov E.B., Shul'gin V.F. [1], Larin G.M. [2]
Institute of the Organic Chemistry, NASU, Kiev, Ukraine
[1]*V.I. Vernadskii Taurida National University, Simferopol, Ukraine*
[2]*N.S. Kurnakov Institute of General and Inorganic Chemistry, RAS, Moscow, Russia*

CQ-12P/8 Binuclear copper(II) complexes with benzendicarboxylic acids acylbishydrazones
Shul'gin V.F., Trush Y.V. [1], Larin G.M. [1]
V.I. Vernadskii Taurida National University, Simferopol, Ukraine
[1]*N.S. Kurnakov Institute of General and Inorganic Chemistry, RAS, Moscow, Russia*

CQ-12P/9 Space-armed copper(II) complexes with the acylbishydrazones of the 5-hydroxy-3-methyl--4-formylpirazole
Shul'gin V.F., Obuch A.I. [1], Zub V.Ya. [1], Larin G.M. [2]
V.I. Vernadskii Taurida National University, Simferopol, Ukraine
[1]*Taras Shevchenko Kiev National University, Kiev, Ukraine*
[2]*N.S. Kurnakov Institute of General and Inorganic Chemistry, RAS, Moscow, Russia*

CQ-12P/10 Transport phenomena and solid-state NMR
Olszewski M.,, Sergeev N.A., Levchenko D.A. [1], Sapiga A.V. [1]
Institute of Physics, University of Szczecin, Szczecin, Poland
[1]*Tavrida National University, Simferopol, Crimea, Ukraine*

CQ-12P/11 ^{23}Na NMR in relaxor-ferroelectric $Na_{1/2}Bi_{1/2}TiO_3$. Two models of competing trigonal and tetragonal local ordering
Yablonskaya Yu.E., Aleksandrova I.P., Ivanov Yu.N., Sukhovsky A.A., Vakhrushev S.B. [1]
L.V. Kirensky Institute of Physics RAN, Krasnoyarsk, Russia
[1]*A. F. Ioffe Physico-Technical Institute RAN, St-Petersburg, Russia*

CQ-12P/12 Nuclear magnetic resonance in Co_2MnGa alloy
Golub V.O., Kotov V.V., Kudryavtsev Yu.V. [1], Pogorily A.N.
Institute of Magnetism NASU and MESU, Kiev, Ukraine
[1]*Institute of Metal Physics NASU, Kiev, Ukraine*

CQ-12P/13 The analysis of hyperfine magnetic fields on chromium nuclei with the help of ADF software package

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

CQ-12P/14 Investigation of the peculiarities of the absorbed water on TiO_2 by NMR-relaxation method

Barabash A.I., Chesnokov E.D., Ovcharenko A.I., Pogrebn'yak S.V., Vertegel I.G., Gaivoronski V.Y., Yatcenko A.V. [1]
Institute of Physics National Academy of Sciences of Ukraine, Kiev
[1]Tavrida National University, Simferopol, Crimea, Ukraine

CQ-12P/15 NQR investigation of the crystal structure peculiarities of the layered semiconductors $Pb_xCd_{x-1}J_2$

Gnatenko Yu.P., Beinik I.A., Barabash A.I., Vertegel I.G., Chesnokov E.D., Ovcharenko A.I., Ivanova L.S.
Institute of Physics NASU, Kiev, Ukraine

CQ-12P/16 NMR investigation of proton dynamics in ferroelectric $KIO_3 \cdot 2HIO_3$

Baisa D.F. [1], Chesnokov E.D., Ovcharenko A.I., Vertegel I.G.
Institute of Physics NASU, Kyiv, Ukraine
[1]Kyiv Institute of Management and Information Technologies, Kyiv, Ukraine

CQ-12P/17 $NaFe_4Sb_{12}$ and $FeSb_2$ as a promising thermoelectric materials: NQR study

Gippius A.A. [1,2], Alkaev E.A. [2], Morozova E.N. [1,2], Okhotnikov K.S. [1]
[1]Moscow State University, Moscow, Russia
[2]Institute of Crystallography RAS, Moscow, Russia

CQ-12P/18 Mobile measuring arrangement for adsorbtion-desorption flicker-noise spectroscopy

Vorobyev M.D., Yudaev D.N., Makoviychuk M.I. [1]
MPEI, Moscow, Russia
[1]IMRAS, Yaroslavl, Russia

CQ-12P/19 Magnetic- resonance properties of Fe and Co nanoparticles in fullerite matrix

Vnukova N.G. [1,2], Petrakovskaya E.A. [1], Bulina N.V. [1,2], Glushchenko G.A. [1], Berzhansky V.N. [3], Churilov G.N. [1,2]
[1]Kirensky Institute of Physics, SB RAS, Akademgorodok, Krasnoyarsk, Russia
[2]Polytechnic Institute of Siberian Federal University, Krasnoyarsk, Russia
[3]V.I. Verandskiy Taurida national university, Simferopol, Ukraine

CQ-12P/20 Electro-Magnetic Properties of Iron- and Cobalt-Fullerene Clusters

Petrakovskaya E.A. [1], Vnukova N.G. [1,2], Osipova I.V. [1], Grehova E.A. [2], Bulina N.V. [1,2], Glushenko G.A. [1], Chekanova L.A. [1], Denisova E.A. [1], Churilov G.N. [1,2]
[1] L.V. Kirensky Institute of Physic SB RAS, Krasnoyarsk, Russia
[2]Polytechnic Institute of Siberian Federal University, Krasnoyarsk, Russia

Closing

Author index

C

D

E

F

G

H

L

M

N

O

P

R

S

T

U

V

Y

Z

Notes