

INTERNATIONAL SYMPOSIUM



**MAGNETIC
RESONANCE IN
CONDENSED MATTER**

P R O G R A M

CHISINAU, 11-12 OCTOBER 2007



Dedicated to the 70th anniversary of the corresponding member of the Academy of Sciences of Moldova, Professor Ion I. Geru - pioneer of the EPR investigations in Republic of Moldova (1961).

**MAGNETIC
RESONANCE IN
CONDENSED MATTER**

PROGRAM OF THE
INTERNATIONAL SYMPOSIUM

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The International Symposium
“Magnetic Resonance in Condensed Matter”

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TIME SCHEDULE

THURSDAY, October 11th, 2007

08:00 – 09:00 Registration

09:00 – 09:30 Opening of the Symposium (168, Stefan cel Mare str., Assembly Hall)

Assembly Hall

Plenary Lectures

Chair: *V.F. Tarasov*

09:30 *B.D. Shanina, A. Veynger, A.M. Danishevskii, and S.K. Gordeev*
MAGNETIC PROPERTIES OF TRANSITION METAL ATOMS
ENCAPSULATED IN PORES OF NANOPOROUS CARBON

09:55 Discussion

10:00 *V. Bratus'*
ORIGIN OF PARAMAGNETIC DEFECTS IN SILICON-BASED
STRUCTURES WITH NANOCRYSTALLITES

10:25 Discussion

10:30 *A. Gulea, F. Riblet, Gh. Novitchi, L. Helm, and A.E. Merbach*
¹⁹F NMR SPECTROSCOPY. VARIABLE PRESSURE (VP) AND
VARIABLE TEMPERATURE (VT) INVESTIGATION

10:55 Discussion

11:00 Coffee Break

Oral Talks

Chair: *V.F. Tarasov*

11:20 *A.A. Konovalov, V.F. Tarasov*
STRUCTURE OF CHROMIUM IMPURITY CENTERS IN SYNTHETIC
FORSTERITE. STUDY BY TUNABLE-FREQUENCY EPR
SPECTROSCOPY

11:35 Discussion

11:40 *T.A. Ivanova, I.V. Ovchinnikov, A.R. Mustafina, T.B. Makeeva,
V.A. Mamedov, A.N. Turanov*
STRUCTURAL AND MAGNETIC PROPERTIES OF
3-ACETYLQUINOXALIN-2(1H)-ON WITH Cu(II)

11:55 Discussion

12:00 *A. Kovalenko, M. Bulaniy, S. Omelchenko*

ODMR-INVESTIGATIONS OF RESONANCE ENERGY TRANSMISSIONS TO LUMINESCENCE Mn^{2+} CENTERS IN ZnS CRYSTALS

12:15 Discussion

12:20 *S.N. Podyachev, S.N. Sudakova, T.A. Ivanova, O.A. Turanova*
THE COMPLEX Fe (III) WITH
4-TERT-BUTYLPHENOXYACETYLHYDRAZONE OF
PYRIDINE-2-CARBALDEHYDE. SYNTHESIS AND MAGNETIC
PROPERTIES

12:35 Discussion

12:40 *K.G. Dergachev, M.I. Kobets, E.N. Khatsko*
EPR SPECTRUM AND SPIN DYNAMICS IN QUASI-TWO-
DIMENSIONAL ANTIFERROMAGNET $Mn[C_{10}H_6(OH)(COO^-)_2 \cdot 2H_2O$

12:55 Discussion

13:00 Lunch

Lecture Hall 214

Oral Talks

Chair: *I.I. Geru*

14:00 *S. Omelchenko, O. Khmelenko, A. Kovalenko, L. Shevchenko*
ESR-INVESTIGATIONS INFLUENCE OF ELECTRIC FIELDS OF
DISLOCATIONS ON ENERGY STATE OF IONS Mn^{2+} IN $ZnSe$
CRYSTALS

14:15 Discussion

14:20 *V.V. Trachevsky, S.V. Zymina, A.P. Shpak*
NMR STUDY OF OUTER-SPHERE INTERACTIONS

14:35 Discussion

14:40 *I. Geru, V. Arion, S. Shova, V. Olednic, I. Siretanu, V. Shofransky, C. Turta*
EPR SPECTRA, STRUCTURE AND SYNTHESIS OF
[CuBa(SalH)₄(DMAA)₄(H₂O)] COMPLEX

14:55 Discussion

15:00 *S. Manole, M. Cocu, E. Rybak-Akimova*
¹H NMR APPLICATION FOR THE SYNTHESIS AND CONDUCT OF
3D-ELEMENTS COMPLEXES BASED ON
S-ALKYLISOTHIOSEMICARBAZIDE

15:15 Discussion

15:20 *K. Omelchenko, M. Volnyansky*
ESR OF Mn CENTERS IN $LiNaGe_4O_9$ CRYSTALS

15:35 Discussion

16:00 *V. Bayev, N. Lapchuk*

RESONATOR QUALITY CHANGING AT THE P1-CENTRE IN-PHASE
ESR SIGNAL INVERSION IN DIAMOND AND POLYCRYSTALLINE
DIAMONDS FILMS

14:15 Discussion

16:20 Coffee Break

FRIDAY, October 12th, 2007

Lecture Hall 214

Plenary Lectures

Chair: *V.V. Trachevsky*

09:00 *U. Eichhoff, D. Gross, K. Zick*

NMR MICROSCOPY: PRINCIPLE AND APPLICATIONS

09:25 Discussion

09:30 *U. Eichhoff, P. Höfer*

RECENT DEVELOPMENT IN SPIN LABEL EPR

09:55 Discussion

10:00 *N.M. Sergheev*

WATER SPIN ISOMERS

10:25 Discussion

10:30 *I.I. Geru*

ELECTRON SPIN DYNAMICS IN QUANTUM DOTS

10:55 Discussion

11:00 Coffee Break

Oral Talks

11:20 *G. Malovichko, M. Munro, V. Grachev, V. Bratus', S. Okulov,*

Ed. Kokanyan

AXIAL AND LOW-SYMMETRY Nd^{3+} AND Yb^{3+} CENTERS IN
CONGRUENT AND NEARLY STOICHIOMETRIC LiNbO_3

11:35 Discussion

11:40 *S. Omelchenko, A. Gorban, M. Bulaniy*

USE OF ESR METHOD FOR DISLOCATION ELECTRIC PROPERTIES
IN ZnS CRYSTALS

11:55 Discussion

- 12:00 *A. Nicolescu, M. Balan, and C. Deleanu*
HMBC AND HSQC SPECTRA AS TOOLS IN PROVING STRUCTURE
OF COMPOUNDS CONTAINING SE←N INTRAMOLECULAR
BONDING
- 12:15 Discussion
- 12:20 *U. Eichhoff, D. Müller*
MODERN NMR METHODS IN POLYMERS AND MATERIAL
SCIENCES
- 12:35 Discussion
- 12:40 *S.A. Baranov*
FERROMAGNETIC RESONANCE IN AMORPHOUS MICROWIRE
- 12:55 Discussion
- 13:00 Lunch

Poster Session

Chair: *A.P. Gulea*

14:00 Poster presentation

16:00 Closing of the Symposium

16:15 Symposium Dinner

SATURDAY, October 13th, 2007

National Wine Day

SUNDAY, October 14th, 2007

National Wine Day & Day of City

Poster Session

1. *V. Bayev*
METHOD OF THE MAGNETIC COMPONENT MAGNITUDE OF THE
MICROWAVE FIELD IN ELECTRON SPIN RESONANCE
SPECTROMETER DETERMINATION
2. *Yu.S. Gromovoj, S.V. Plyatsko, F.F. Sizov*
EPR INVESTIGATION OF Mn^{2+} AND Eu^{2+} IN PbTe THIN FILMS
3. *D. Gross, K. Zick, V. Lehmann*
3D VELOCITY MAPPING WITH RHEO-NMR ACCESSORY
4. *D. Gross, K. Zick, V. Lehmann*
NEW SIGNAL-TO-NOISE HORIZONS IN MR IMAGING
5. *S. Klokishner, S. Ostrovsky, O. Reu, A. Palii, B. Tsukerblat, K. Dunbar*
THEORETICAL MODELING OF SINGLE MOLECULE MAGNETS AND
SINGLE CHAIN MAGNETS CONTAINING METAL IONS WITH
UNQUENCHED ORBITAL ANGULAR MOMENTA
6. *Ig.V. Ovchinnikov, T.A. Ivanova, A.N. Turanov, Vl.O. Volotskoy*
THE FEATURES OF EPR SPECTRA OF SOME MESOGENIC SPIN
CROSSOVER COMPLEXES
7. *S.V. Plyatsko, F.F. Sizov, Yu.S. Gromovoj, E.I. Slyn'ko, S.K. Kadyshev*
THE ESR OF PbGeTe SOLID SOLUTIONS DOPED WITH MANGANESE
UNDER THE IR-LASER RADIATION TREATMENT
8. *A.V. Pop, L.V. Giurgiu, Al. Darabont, and I.I. Geru*
ELECTRON SPIN RESONANCE — METHOD FOR MEASUREMENT OF
THE EFFECTIVE SUSCEPTIBILITY AT THE SURFACE OF Y:123
SUPERCONDUCTOR
9. *O. Reu, S. Ostrovsky, S. Klokishner, A. Palii, A. Fishman, Ph. Tregenna-Piggott*
MAGNETIC ANISOTROPY OF 3D-4F CLUSTERS EXHIBITING SINGLE
MOLECULE MAGNET BEHAVIOR
10. *V.A. Severyugin, N.E. Zhuravleva, V.V. Loskutov*
THE ANALYTICAL DESCRIBING OF DIFFUSION DECAYS ON THE
INTERNAL MAGNETIC FIELD GRADIENT IN POROUS MEDIUM
11. *E. Skuratoskaya, M. Bulaniy, A. Kovalenko, S. Omelchenko*
THE ESR OF PHOTSENSITIVE PARAMAGNETIC CENTERS IN
ZnS:Li SINGLE CRYSTALS
12. *V. Timar, R. Ciceo-Lucacel, O. Hulpus, and I. Ardelean*
EPR INVESTIGATIONS OF $CuO-B_2O_3-PbO-Ag_2O$ GLASSES
13. *V.V. Trachevsky, S.V. Zymina*
RADIO SPECTROSCOPY OF METAL THIOSULFATES
14. *G.L. Ailiesei and V. Barboiu*
STUDY OF POLY(N-VINYLCARBAZOLE) CHAIN MICROSTRUCTURE
BY NMR
15. *P.T. Levkowski, A.P. Levkowski, V.F. Lapshin*
RESEARCH OF N-InSb EXPOSED TO γ -RADIATION BY MEANS OF
HELICON RESONANCE