

“MAGNETIC RESONANCE - CURRENT STATE AND FUTURE PERSPECTIVES” (EPR-80) | ORAL SESSIONS

	1. Spin physics and spin chemistry. Invited speakers
1-11	M.K. Bowman: Impact of random processes on coherences
1-12	A.A. Bukharaev, D.A. Bizyaev, N.I. Nurgazizov, A.P. Chuklanov: Influence of the thermally induced magnetoelastic effect on magnetization switching in Ni microparticles with configuration anisotropy
1-13	G.R. Eaton, S.S. Eaton, S. Mahapatro: Electron spin relaxation of manganese in the +2, +3, and +4 oxidation states
1-14	S.S. Eaton, G.R. Eaton, L.A. Mariano, V.H. Anh Nguyen, A. Lunghi: Spin-lattice relaxation of Cr(V) nitrido complexes: experiments and calculations
1-15	E.A. Konstantinova, E.V. Kytina, Yu.V. Nazarkina, V.B. Zaitsev: On the question of the role of spin centers in radiative recombination processes in nanomaterials
1-16	V.R. Shaginyan: Strongly correlated quantum spin liquids versus heavy fermion metals
1-17	L.A. Siurakshina, V.Yu. Yushankhai: Anisotropic spin Hamiltonians for iridium oxides: justification from the embedded cluster approach
1-18	A. A. Sukhanov, J. Zhao, V. K. Voronkova: Features of Photo-Excited Charge Separation States in TADF molecules
1-19	J. Zhao, X. Zhang, X. Chen: Study of the electron spin polarization of the triplet excited states of bodipy compounds with time-resolved electron paramagnetic resonance spectroscopy
	1. Spin physics and spin chemistry. Oral session
1-01	E.K. Abdrakhimova, A.A. Evseev, I.I. Gumarova, O.V. Nedopekin: First-principles investigation of the Rashba-Dresselhaus giant spin splitting in the structure of OsH ₂ (bipyridine_CN)
1-02	G.Iu. Andreev, I.V. Romanova, S.L. Korableva, M.A. Cherosov, A.G. Kiiamov, H. Suzuki, M.S. Tagirov: Magnetic properties of LiErF ₄ dipolar magnet
1-03	K.A. Baryshnikov, N.S. Averkiev: Restoration of optical orientation of manganese ions spins in cubic ZnSe crystal in magnetic field
1-04	Z.I. Minnegulova, I.I. Gumarova: Ab initio research of impurity ferromagnetism of paramagnetic palladium ions
1-05	R.A. Podarov, M.I. Kolokolov, E.V. Tretyakov, M.V. Fedin, O.A. Krumkacheva: Dipolar EPR spectroscopy of fullerene and porphyrin symmetric pairs
1-06	A.A. Samsonenko, N.A. Artiukhova, S.L. Veber: Microgravity-like crystallization of paramagnetic species in strong magnetic fields
1-07	S.V. Sviyazov, D.B. Burueva, N.V. Chukanov, I.A. Razumov, E.Y. Chekmenev, O.G. Salnikov, I.V. Koptuyg: ¹⁵ N Hyperpolarization of metronidazole antibiotic in aqueous media using phase-separated signal amplification by reversible exchange with parahydrogen
1-08	V.F. Tarasov, R.B. Zaripov, V.A. Ulanov: Unusual epr spectra of Cr ²⁺ dimer associates in BaF ₂ single crystal
1-09	V.D. Zhaketov: Polarized neutron reflectometry for investigation of low-dimensional 2D magnetic & superconducting heterostructures
	2. Advances in magnetic resonance theory and instrumentation. Oral session
2-01	A.A. Gol'dberg, V.V. Davydov, S.A. Klimova, R.V. Davydov: Features of modeling the NMR signal shape recorded using the modulation technique from liquid media
2-02	Yu.E. Kandrashkin: On some properties of the ion spin system in pulsed EPR experiments
2-03	S.A. Klimova, A.A. Gol'dberg, V.V. Davydov, R.V. Davydov: Analysis of the trajectory of a symmetrical spinning top in the Earth's magnetic field

2-04	V.M. Nekrasov, A.G. Matveeva, V.N. Syryamina, S.A. Agarkin, E.A. Golysheva, I.A. Kirilyuk, M.K. Bowman: Analytical prediction of mean interspin distance and its uncertainties in PDS measurements by EPR
2-05	S.O. Nazarov: The documentary legacy of academician E.K. Zavoisky in the Archives of RAS
2-06	R.P.Mironov, O.V. Solovyov: Influence of the «frequency effect» on the Condon form of the electron oscillatory absorption spectrum of the impurity center in the case of a single-oscillator model

	3. Magnetic resonance of the solid state: from crystals to quantum dots. Invited speakers
3-11	N. V. Kozyrev, B. R. Namozov, Yu. G. Kusrayev, N.S. Averkiev: Multiple-spin Raman paramagnetic resonance induced by the hole exchange field in CdSe/ZnMnSe quantum dots
3-12	A.I. Smirnov, T.A. Soldatov: Pseudospin paramagnet and spin liquid in a chain antiferromagnet Cs_2CoCl_4
3-13	Yu. M. Shukrinov, M. Nashaat, E. Kovalenko: Resonance features of anomalous Josephson junctions
3-14	I.V. Yanilkin, I.A. Golovchanskiy, A.I. Gumarov, B.F. Gabbasov, R.V. Yusupov, L.R. Tagirov: Graded thin ferromagnetic epitaxial Pd-Fe films: FMR measurements
	3. Magnetic resonance of the solid state: from crystals to quantum dots. Oral session
3-01	E.M. Alakshin, A.M. Garaeva, E.I. Boltenkova, V. V. Kuzmin, K.R. Safiullin, I.V. Romanova: Magnetic Properties of Rare-earth Trifluoride Nanoparticles
3-02	S. A. Andreeva, A. V. Shchepetilnikov, A. R. Khisameeva, G. Nikolaev, I.V. Kukushkin: Pseudospin Quantum Phase Transition Probed by ESR
3-03	R.M. Eremina, I.V. Yatsyk, T.I. Chupakhina, Yu.A. Deeva: Study of peculiarities Co^{2+} and Co^{3+} EPR spectra in different spin states
3-04	K.V. Evseev, R.F. Mamin, I.I. Piyanzina, O.V. Nedopekin: DFT investigation of magnetoelectric coupling in Fe/BaTiO ₃
3-05	B.F. Gabbasov, R.V. Yusupov: Surface induced anisotropy in MgO single crystals observed by EPR spectroscopy
3-06	V.N.Glazkov, Ya.V.Rebrov, M.M.Markina, A.F.Murtazoev, V.A.Dolgikh, P.S.Berdonosov: Low-temperature spin dynamics and microwave dielectric response of 2D square kagomé lattice nabokoite family compounds
3-07	F. F. Murzakhanov, G. V. Mamin, D. V. Shurtakova, I. N. Gracheva, M. A. Sadovnikova, M. R. Gafurov: Electron-nuclear interactions in optically active NV ⁻ centers in 6H-SiC - a promising material platform for quantum technologies
3-08	F. Mikailzade, S. Gökçe, M.Yu. Seyidov, T.G. Mammadov, A.I. Nadjafov: Magnetic resonance study of Fe doped TlInTe ₂ crystal
3-09	D.S. Rybin, G.N. Konygin, V.E. Porsev, D.R. Sharafutdinova, G.G. Gumarov, A.A. Zhigalova, K.A. Novozhilov, M.M. Akhmetov, A.R. Gafarova: Free radical mechanisms of amorphization of bioinorganic compounds
3-010	D.A. Saritsky, V.V. Zhelezov, D.P. Opra, A.M. Ziatdinov: Electron paramagnetic resonance in nanocrystalline potassium tetratitanate doped with copper ions
3-011	K.B. Tsiberkin, E.I. Kovycheva, V.K. Henner: Numerical simulation of long-time dynamics of finite dipole ensembles
3-012	V.A. Ulanov, I.V. Yatzyk, R.R. Zainullin: Mutual dependences of dynamical properties of Mn^{2+} and Gd^{3+} impurity centers in $\text{Pb}(1-x-y-z)\text{Cu}(x)\text{Mn}(y)\text{Gd}(z)\text{S}$ narrow-band semiconductor: results of EPR study
3-013	E.L. Vavilova, T.M. Vasilchikova, A.N. Vasiliev: Static and resonant properties and magnetic phase diagram of $\text{LiMn}_2\text{TeO}_6$
3-014	R.V. Yusupov, A.V. Petrov, A.Kh. Kadikova, I.V. Yanilkin, A.I. Gumarov, L.R. Tagirov: Ultrafast light-induced magnetization precession - a complementary tool to FMR for studies of thin ferromagnetic films
3-015	A.M. Ziatdinov, D.A. Saritsky, N.S. Saenko, D.P. Opra, A.A. Sokolov, S.V. Gnedenkov: New properties of titanium dioxide heat-treated in various environments according to electron magnetic resonance data

4. Magnetic resonance in chemical and biological systems. Invited speakers	
4-I1	<u>M.V. Fedin</u> : EPR of Radical-Functionalized Materials
4-I2	<u>A.I. Kokorin</u> : EPR of Copper(II) complexes with polymer ligands
4-I3	<u>V.I. Volkov</u>, I.A. Avilova : Cupper (II) EPR in amino phosphonic polyampholytes
4. Magnetic resonance in chemical and biological systems. Oral session	
4-01	<u>S.N. Arellano-Ahumada</u>, E.A. Aguilar-Roman, C. Villanueva, J.J. Martínez-Maldonado, D. Ramírez-Rosales : Paramagnetic markers in polycystic ovarian syndrome as a possible infertility cause: an EPR study
4-02	<u>D. Ramírez-Rosales</u>, J. Vazquez-Samperio, S.N. Arellano-Ahumada, M. A. Martínez-Cruz, I. González : Electrochemical test cell for in situ and in operando EPR characterization of Li-ion insertion battery electrodes
4-03	<u>N.A. Chumakova</u>, D.A. Astvatsaturov, T.S. Yankova : Phase state of polar liquids inside graphene oxide materials according to spin probe technique
4-04	<u>S.A. Dementev</u>, R.A. Podarov, N.E. Sannikova, Y.F. Polienko, I.A. Kirilyuk, O.A. Krumkacheva : Effective spin traps for singlet oxygen detection in physiological conditions
4-05	<u>A.V. Ilyasov</u> : Development of free radical EPR in Kazan
4-06	<u>T.A. Khlynova</u>, N.E. Sannikova, M.I. Kolokolov, O.A. Krumkacheva : Investigation of the HTel-22 G-quadruplex Complex with Cationic Porphyrin by EPR and Optical Spectroscopy Methods
4-07	<u>N.E. Litovskikh</u>, A.V. Shernyukov, D.O. Zharkov, N.A. Bulgakov, E.G. Bagryanskaya : Structure of Zinc Finger of the E. Coli FPG in the Solution
4-08	<u>M.V. Matveev</u>, N.A. Chumakova, N.A. Marnautov : Joint use of spin probe technique and scanning electron microscopy to study the internal structure of graphene oxide membranes
4-09	<u>G. A. Simenido</u>, E. M. Zubanova, E. N. Golubeva : PNIPAM chains collapse in aqueous solutions in presence of proteins: spin probe and spin label study
4-010	<u>A.A. Timralieva</u>, A.I. Kokorin, E.V. Skorb : Light-induced two-cycle radical formation in supramolecular crystalline matrix
4-011	<u>S.Y. Trakhinina</u>, A.I. Taratayko, N.B. Asanbaeva, D.A. Kuznetsov, E.G. Bagryanskaya, I.A. Kirilyuk : Study of 3,3-bis-hydroxymethyl sterically shielded nitroxyl radicals of the pyrrolidine series by EPR spectroscopy
4-012	<u>S.V. Yurtaeva</u>, I. V. Yatsyk, A.I. Valieva, A.N. Akulov, N.I. Rummyantseva : Variation of the EPR spectra of non-morphogenic buckwheat cell culture during growth and cell division

5. Spin-based information processing and optical quantum technologies. Oral session	
5-01	<u>A.R. Safin</u>, A.Yu. Mitrofanova, A.A. Matveev, S.A. Nikitov : Electrically tunable sub-terahertz resonance in antiferromagnet-based heterostructure
5-02	<u>A.V. Leontyev</u>, R.M. Gataullina, A.N. Solodov, L.A. Nurtdinova, A.G. Shmelev, D.K. Zharkov, V.G. Nikiforov : Core-shell NaYF ₄ :Yb ³⁺ /Tm ³⁺ @NaGdF ₄ :Ce ³⁺ /Tb ³⁺ nanoparticles for dual-mode fluorescence-based temperature sensing and anti-counterfeiting
5-03	<u>L.A. Nurtdinova</u>, V.G. Nikiforov, A.V. Leontyev, A.G. Shmelev, D.K. Zharkov, R.M. Gataullina, E.O. Mitushkin, A. N. Solodov, R. R. Zairov, A.R. Mustafina, V. V. Andrianov, L. N. Muranova, Kh. L. Gainutdinov : Visualisation of the surface of isolated nervous system of a grape snail with fluorescent nanoprobes

6. Applications of magnetic resonance in medical physics. Oral session	
6-01	<u>E.I. Boltenkova</u>, A.M. Garaeva, A.V. Bogaychuk, E.M. Alakshin : The different types of treatment effect on the DyF ₃ nanoparticles agglomeration

6-02	<u>M.Ya. Fattakhova</u> , A.A. Bayazitov, V.L. Odivanov, Ya.V. Fattakhov, V.N. Krasnozhen, A.F. Akhatov, E.S. Bekmacheva: Recovery of teacher's voice function after chronic diseases using spectral voice analysis and MRI
6-03	<u>Kh. L. Gainutdinov</u> , V. V. Andrianov, G. G. Yafarova, L. V. Bazan, T. K. Bogodvid, I. B. Deryabina, V. S. Iyudin, L. N. Muranova, D. I. Silantyeva, S. G. Pashkevich, T. A. Filipovich, V. A. Kulchitchky: Investigation of NO and Copper Content in Injured and Non-Injured Areas of the Rats Brain by EPR Spectroscopy 24 Hours and 7 Days after Combined Brain and Spinal Cord Injury
6-04	<u>N. Isaev</u> , K. L. Presti, W. Frieß: Potential pharmaceutical pulse EPR applications for detection protein folding and environment upon lyophilization
6-05	<u>A. F. Shaidullina</u> , M. Yu. Volkov, A. R. Sharipova, O. A. Turanova, L. I. Savostina, A. N. Turanov: Structure determination and study of the internal dynamics of a β -enaminone by NMR, UV spectroscopy and DFT

	7. Mössbauer spectroscopy and its applications. Invited and Oral session
7-11	<u>K.V. Frolov</u> , E.S. Smirnova, O.A. Alekseeva, E.V. Sidorova, I.A. Gudim: Mössbauer spectroscopy of the rare earth ferrobates $RFe_3(BO_3)_4$ (R = Pr, Eu, Tb, Dy)
7-01	<u>M. Gracheva</u> , Z. Klencsár, Z. Homonnay, Á. Solti, K. Kovács: Iron citrate complexes at biologically relevant conditions
7-02	<u>S.K. Dedushenko</u> , V.G. Kostishin, S.V. Stepanov: The effect of the second coordination sphere of iron on the ^{57}Fe -mössbauer isomer shifts in oxides
7-03	<u>F.G. Vagizov</u> , A.L. Zinnatullin, R.N. Shakhmuratov: Transmission of information using Mössbauer photons
7-04	<u>E.V. Voronina</u> , A.F. Abdullin: On the magnetic structure of ternary ordered Fe-Al-B alloys
7-05	<u>A.A. Zalutskij</u> , V.V. Morozov, A.Y. Sokolov, E.N. Shkolnikov: Separation of contributions from exchangeable and structural forms of iron in natural clays
7-06	<u>K.V. Frolov</u> , E.S. Smirnova, O.A. Alekseeva, E.V. Sidorova, I.A. Gudim: Mössbauer spectroscopy of the rare earth ferrobates $SmFe_{3-x}M_x(BO_3)_4$ (M = Al, Sc)
7-07	<u>V.F. Musin</u> , A.L. Zinnatullin, F.G. Vagizov: High-entropy system $Mg_{0.2}Co_{0.2}Fe_{0.2}Ni_{0.2}Zn_{0.2}O$: synthesis, X-ray diffraction and Mössbauer studies