MODERN DEVELOPMENT OF MAGNETIC RESONANCE

program

2014

KAZAN * RUSSIA


MODERN DEVELOPMENT OF MAGNETIC RESONANCE
KAZAN 2014

MODERN DEVELOPMENT OF MAGNETIC RESONANCE

PROGRAM OF THE
INTERNATIONAL CONFERENCE

KAZAN, SEPTEMBER 23–27, 2014

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The conference is organized under the auspices of
the AMPERE Society

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The Academy of Sciences of the Republic of Tatarstan
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SUPPORTED BY

The Government of the Republic of Tatarstan
The Russian Foundation for Basic Research
Bruker BioSpin Moscow

CONFERENCE LOCATION

The Academy of Sciences of the Republic of Tatarstan
Kazan, ul. Baumana 20

TIME SCHEDULE

TUESDAY, September 23rd, 2014

9:00	Registration
11:00–13:00	Excursion
13:00–14:00	Lunch
14:30–15:00	Opening of the Conference
15:00–17:00	Plenary Lectures
18:00	Welcome Party

WEDNESDAY, September 24th, 2014

9:00–11:00	Plenary Lectures
11:00–11:30	Coffee Break
11:30–13:00	Session: Chemical and Biological Systems
13:00–15:00	Lunch
15:00–16:50	Session: Modern Methods of Magnetic Resonance
18:00	Culture Program

THURSDAY, September 25th, 2014

9:00–11:30	Plenary Lectures
11:30–11:50	Coffee Break
11:50–13:00	Session: Chemical and Biological Systems. Electron Spin Based Methods for Electronic and Spatial Structure Determination in Physics, Chemistry and Biology
13:00–14:30	Lunch
14:30–15:10	Plenary Lecture
15:10–16:40	Session: Low-Dimensional Systems and Nano-Systems
16:40–17:00	Coffee Break
17:00–18:00	Session: Theory of Magnetic Resonance
18:00–20:00	Poster session (Coffee break sponsored by Bruker BioSpin)

FRIDAY, September 26th, 2014

9:00–11:30	Session: Other Applications of Magnetic Resonance. Related Phenomena
11:30	Closing of the Conference
12:30–13:30	Lunch
14:00–17:00	Zavoisky Award Ceremony
19:00	Conference Dinner

SCIENTIFIC PROGRAM

TUESDAY, September 23rd, 2014

Plenary Session
Chair: K. M. Salikhov

15:00 *A. V. Yurkovskaya, O. B. Morozova*: Time-Resolved and Field Dependent CIDNP of Biologically Important Molecules
15:40 *N. G. Romanov, P. G. Baranov*: ODMR as a Tools to Study Nanosystems
16:20 *F. S. Dzheparov*: Spin Relaxation in Disordered Media

WEDNESDAY, September 24th, 2014

Plenary Session
Chair: T. Prisner

9:00 *E. Bagryanskaya, O. Krumkacheva, M. Fedin, A. Kuzhelev, V. Tormushev, I. Kirilyuk, Y. Polienko, E. Babaylova, G. Karpova, G. Shevelev, A. Lomzov, D. Pyshny*: Distance Measurements in Nucleic Acids Using Advanced SDSL with Nitroxyl and Trityl Radicals
9:40 *G. Buntkowsky, T. Gutmann, H. Breitzke*: Solid State NMR Studies of Heterogeneous Catalysts
10:20 *K. B. Konov, N. P. Isaev, D. V. Leonov, S. A. Dzuba*: Molecular Motions in Frozen Phospholipid Bilayers in Presence of Cryoprotectors: Spin Label EPR Study

Session: Chemical and Biological Systems
Chair: I. V. Ovchinnikov

Invited Talk
11:30 *A. F. Vanin*: What Iron Electron Configuration – d^7 or d^9 is Characteristic of Electronic Structure of Dinitrosyl Iron Complexes with Thiolate Ligands in the Solutions
12:00 *O. I. Gromov, E. N. Golubeva, A. I. Kokorin*: Nitroxide Biradicals with Acetylene Groups in the Bridge: Structure, Internal Mobility, EPR, and DFT Calculations

Oral Talk

12:30 *R. B. Zaripov, G. R. Nureeva, L. I. Savostina, V. K. Voronkova, K. M. Salikhov, V. P. Gubskaya, I. A. Nuretdinov*: EPR Study of Tetranitroxide Derivatives of C60

Session: Modern Methods of Magnetic Resonance
Chair: I. A. Garifullin

Invited Talks

15:00 *O. B. Lapina, A. A. Shubin, V. V. Terskikh*: Solid-State NMR in Heterogeneous Catalysis

15:30 *I. V. Koptyug, V. V. Zhivonitko, K. V. Kovtunov, I. V. Skovpin, D. A. Barskiy, O. G. Salnikov*: Nuclear Spin Isomers of Molecules for Signal Enhancement in NMR and MRI

16:00 *G. Kothe, M. Lukaschek, G. Link, S. Kacprzak, B. Illarionov, M. Fischer, W. Eisenreich, A. Bacher, S. Weber*: Detecting a New Source for Photochemically Induced Dynamic Nuclear Polarization

Oral Talk

16:30 *Yu. E. Kandrashkin*: The Influence of the Magnetic Nuclei in Intersystem Crossing of Pentacene

THURSDAY, September 25th, 2014

Plenary Session
Chair: G. Buntkowsky

9:00 *A. V. Dvurechenskii, A. F. Zinovieva, A. V. Nenashev*: Electrons Localization in Ge/Si Nanoheterostructures Studied by ESR

9:40 *P. E. Spindler, P. Schöps, A. Marko, B. Endeward, T. F. Prisner*: Dipolar Spectroscopy: New Methodical Aspects and Applications

10:20 *G. Jeschke*: The Long Way that Leads from Short Distances to Biomolecular Structure

11:00 *E. A. Suturina, M. Atanasov, F. Neese*: Electronic Structure and Magnetic Anisotropy in 3d-Transition Metal Single Ion Magnets from the First Principles

Session: Strongly Correlated Electron Systems
Chair: D. Tayurskii

Invited Talk

11:50 *V. Kataev, S. Zimmermann, A. Alfonsov, E. Vavilova, M. Iakovleva, H.-J. Grafe, H. Luetkens, H.-H. Klauss, A. Maljuk, T. Dey, S. Wurmehl, B. Büchner*: Order-by-Disorder in the Frustrated Quantum Spin Magnet $CoAl_2O_4$

Oral Talks

12:20 *E. Vavilova, V. Kataev, G. Prando, A. Alfonsov, H.-J. Grafe, B. Büchner, H. Wu, Q. Huang, K. Baroudi, C. Yim, R. J. Cava*: Effects of Disorder in Doped Honeycomb Iridates

12:40 *R. M. Eremina, I. V. Yatsyk, D. V. Mamedov, T. P. Gavrilova, I. I. Fazlizhanov, V. I. Chichkov, N. V. Andreev*: Investigation of the Heterostructure $YbMnO_3/SrTiO_3$ by ESR Method

Plenary Session
Chair: M. S. Tagirov

14:30 *G. I. Likhtenshtein*: Spin Labeling: 50 Years of History

Session: Low-Dimensional Systems and Nano-Systems

Invited Talk

15:10 *A. M. Ziatdinov, N. S. Saenko*: Spin Splitting of Edge π-Electronic States of Nanographites at their Interaction with Acceptor Molecules: ESR, CESR and MS Studies

Oral Talks

15:40 *E. A. Zvereva, V. Y. Kudryashov, V. B. Nalbandyan, I. L. Shukaev, A. N. Vasiliev*: Peculiarities of Magnetic Properties of New 2D Honeycomb Lattice Tellurates $A_2Ni_2TeO_6$ (A = Li, Na)

16:00 *N. Useinov, L. Tagirov*: Tunnel Magnetoresistance of Magnetic Point Contacts

16:20 *R. Valiullin*: Potentials of NMR for Transport and Structural Characterization of Nanoporous Solids

Session: Theory of Magnetic Resonance
Chair: F. Dzheparov

Invited Talks

17:00 *N. Fatkullin, S. Stapf, M. Hofmann, R. Meier, E. A. Rössler*: Proton Spin Dynamics in Polymer Melts: New Perspectives for Experimental Investigations of Polymer Dynamics

17:30 *E. B. Fel'dman*: Entanglement and Quantum Discord in NMR Experimentss

FRIDAY, September 26th, 2014

Session: Other Applications of Magnetic Resonance. Related Phenomena
Chair: G. Kothe

Invited Talks

9:00 *R. N. Shakhmuratov*: Formation of the Train of Short Pulses from a Single Photon Field

Oral Talks

9:30 *A. Sukhanov, V. Voronkova, E. Mikhalitsyna, V. Tyurin, K. Salikhov*: Pulse EPR Study of Photo-Induced States of Systems on the Basis of Zinc Porphyrin

9:50 *M. S. Panov, O. B. Morozova, A. V. Yurkovskaya*: Mechanism of Photoreaction in Aqueous Solutions Involving Radicals of S-Methylcysteine and S-Methylglutathione Studied by Time Resolved and Magnetic Field Dependence CIDNP

10:10 *D. Akhmetzyanov, J. Plackmeyer, B. Endeward, V. Denysenkov, A. Marko, T. F. Prisner*: Pulsed Electron-Electron Double Resonance Spectroscopy on a High-Spin Mn^{2+} Ion Non-Covalently Attached to a Nitroxide Radical

10:30 *A. A. Bayazitov, Ya. V. Fattakhov, A. R. Fakhrutdinov, V. N. Anashkin, V. A. Shagalov, P. Chumarov*: Transceiver System for New Specialized Medical Magnet-Resonance Tomographs

10:50 *N. P. Isaev, R. I. Samoilova, M. De Zotti, F. Formaggio, C. Toniolo, J. Raap*: Aggregation of Antimicrobial Peptide Alamethicin in Bacteria Cell Observed by EPR

11:10 *V. N. Lisin, A. M. Shegeda*: Management of Relative Phases of Excited Dipoles with Pulse of Weak Magnetic Field and Photon Echo Measurement of *g*-factors both Ground and Excited States Er^{3+} in $LuLiF_4$

11:30 Closing of the Conference

14:00 Zavoisky Award Ceremony and Zavoisky Award 2014 Lectures
G. Jeschke: Measuring the Nanoworld
T. F. Prisner: RNA and DNA: Flexible Molecules for Cellular Regulation

POSTER SESSIONS

1. *M. M. Akhmetov, V. Yu. Petukhov, G. G. Gumarov, G. N. Konygin, D. S. Rybin, M. M. Bakirov, A. B. Konov*: EPR and NMR Investigations of the Thermal Annealing Effect on the Structure of MACG
2. *A. Baniodeh, R. Galeev, A. Sukhanov, R. Eremina, V. Voronkova, Ch. E. Anson, A. Mondal, A. K. Powell*: EPR Investigations of Disprosium Dimer with the Field-Induced Slow Magnetic Relaxation
3. *A. S. Berezin, V. A. Nadolinny, L. G. Lavrenova*: Self-Organization Features of the Copper(II) Bromide Compound with 3-Amino-4-Ethoxycarbonylpyrazole
4. *R. M. Eremina, I. V. Yatsyk, D. V. Mamedov, T. P. Gavrilova, A. G. Badelin*: Phase Separation in $La_{0.75}Gd_{0.25}MnO_3$ Detected by ESR
5. *M. L. Falin, V. A. Latypov, S. L. Korableva*: ESR of Nd^{3+} and Dy^{3+} Ions in $CsCaF_3$ Single Crystals
6. *M. L. Falin, V. A. Latypov, A. V. Lovchev, N. M. Khaidukov*: ESR of Er^{3+} Ions at Cubic Sites in $CsCaF_3$ and Cs_2NaYF_6 Single Crystals
7. *Kh. L. Gainutdinov, G. G. Iafarova, V. V. Andrianov, T. V. Baltina, V. S. Iyudin*: EPR Study of Nitric Oxide Production in Spinal Cord of Rats after Spinal Cord Injury in Acute and Chronic Periods
8. *R. T. Galeev, M. M. Bakirov, K. M. Salikhov*: Separation of the Contribution of Exchange Interaction to the Shape of EPR Spectra of Nitroxide Radicals in Solutions
9. *M. F. Iakovleva, E. L. Vavilova, M. I. Stratin, E. A. Zvereva, M. A. Evstigneeva, V. B. Nalbandyan, V. E. Kataev, A. Muller*: Spin Dynamics in Systems with Honeycomb Structure Probed by NMR and NQR
10. *M. I. Ibragimova, A. I. Chushnikov, G. V. Cherepnev, V. Yu. Petukhov, I. V. Yatsyk*: Evaluation of Serum Blood Cytochrome c Oxidase in Sportsmen by Low Temperature EPR
11. *T. A. Ivanova, L. V. Mingalieva, I. V. Ovchinnikov, I. F. Gilmutdinov, O. A. Turanova, G. I. Ivanova, V. A. Shustov*: Lability of the Spin State of Fe(III) Complexes with Tetradentate N_2O_2 Schiff Base Ligands

12. *A. Komarovskikh, V. Nadolinny, Yu. Palyanov, I. Kupriyanov*: Investigation of Posphorus-Related Centers in Synthetic Diamonds Grown at HPHT Conditions in P-C Medium
13. *K. B. Konov, N. P. Isaev, S. A. Dzuba*: The Influence of Sucrose and Trehalose on a Mobility of Lipid Membrane
14. *K. M. Salikhov, I. T. Khairuzhdinov, R. B. Zaripov*: PELDOR Theory for Overlapping EPR Spectra
15. *K. M. Salikhov, A. E. Mambetov, M. M. Bakirov, I. T. Hairuzhdinov, R. T. Galeev, R. B. Zaripov, B. Bales*: Spin Exchange between Charged Paramagnetic Particles in Diluted Solutions
16. *G. S. Shakurov, V. G. Thomas, D. A. Fursenko, E. S. Zhukova, B. P. Gorshunov*: High-Frequency EPR Spectroscopy of Iron in Beryl
17. *P. G. Skrylnik, A. M. Ziatdinov*: EPR and Group-Theoretical Studies of the Transition to Incommensurate Phase of $MgGeF_6 \cdot 6H_2O$ Crystals
18. *V. Tarasov, N. Solovarov, A. Sukhanov, R. Zaripov*: Combined Magneto-Electric Spin Resonance of Impurity Ions in Synthetic Forsterite
19. *A. Turanov, A. K. Khitrin*: NMR Characterization of Gasoline-Ethanol Blends
20. *V. A. Ulanov, R. R. Zainullin, E. R. Zhiteitsev, M. M. Zaripov*: EPR Study of Molecular Structure of Exchange Coupled (Mn^{2+}-Ag^{2+}) Pairs Formed in the BaF_2 Crystals
21. *V. A. Vazhenin, E. L. Rumyantsev, M. Yu. Artyomov, A. P. Potapov*: Paramagnetic Resonance and Structural Phase Transition in $Pb_5Ge_3O_{11}$
22. *V. Vorobyeva, N. Domracheva, A. V. Pyataev*: A Spin Crossover Dendrimeric Iron(III) Complex with Magnetic Ordering
23. *S. S. Yakushkin, G. A. Bukhtiyarova, O. N. Martyanov*: The Formation of Epsilon-Fe_2O_3/SiO_2 Nanoparticles: Investigation via FMR *in situ*
24. *R. R. Zainullin, G. S. Shakurov, V. A. Ulanov*: EPR of Tetragonal and Monoclinic Nickel Centers in BaF_2 Crystals
25. *A. M. Zuzin, V. V. Radaykin, M. A. Bakulin, S. A. Savostina*: Temperature Dependence of the Electron Paramagnetic Resonance Parameters of Semiconducting Compound

26. *A. M. Zuzin, V. V. Radaykin, S. N. Sabaev, M. A. Bakulin, S. V. Bezborodov*: Effect of Frequency on the Anisotropy of the Dispersion Curves in Two-Layer Magnetic Films
27. *A. M. Zuzin, V. V. Radaykin, S. N. Sabaev, M. A. Bakulin, N. V. Yantsen*: Spectra of Spin Wave Resonance in Films with a Linear Distribution of the Field Anisotropy Thickness

Ответственный редактор В. К. Воронкова; редакторы: С. М. Ахмин, Л. В. Мосина; технический редактор О. Б. Яндуганова. Издательство КФТИ КазНЦ РАН,
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