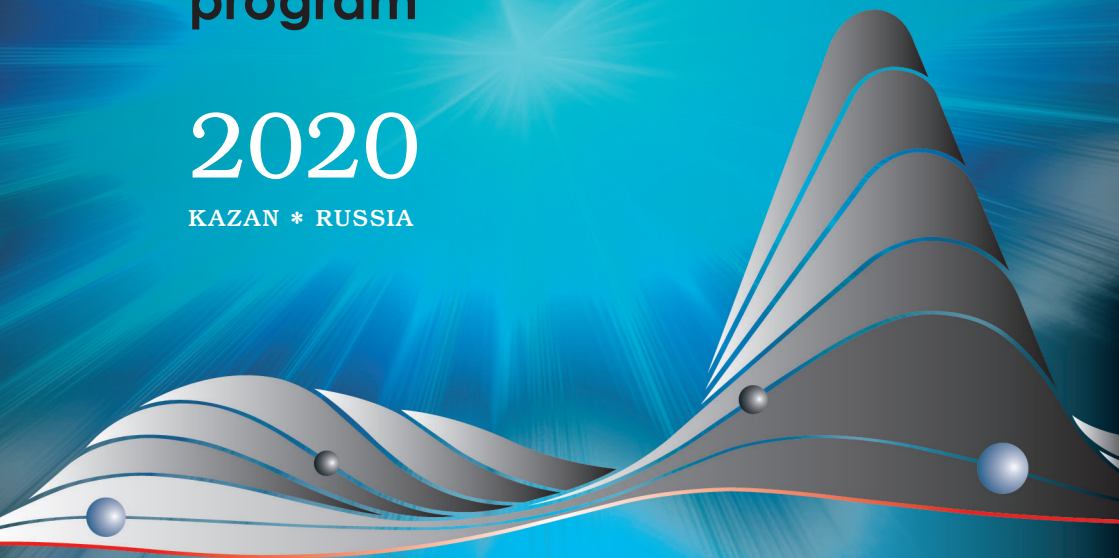


MODERN DEVELOPMENT OF MAGNETIC RESONANCE

program

2020

KAZAN * RUSSIA





MODERN DEVELOPMENT OF MAGNETIC RESONANCE

PROGRAM OF THE
INTERNATIONAL CONFERENCE
AND WORKSHOP "DIAMOND-BASED
QUANTUM SYSTEMS FOR SENSING
AND QUANTUM INFORMATION"

KAZAN, SEPTEMBER 28–OCTOBER 2, 2020

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CONFERENCE LOCATION

Zavoisky Physical-Technical Institute – Subdivision of the Federal
Research Center “Kazan Scientific Center of Russian Academy of
Sciences” (Kazan, Sibirsky tract 10/7)

TIME SCHEDULE

MONDAY, September 28th, 2020

09:00–14:00	Registration
13:00–14:00	Lunch
14:00–14:30	Opening of the Conference
14:30–15:50	Plenary Lectures
15:50–16:20	Coffee Break
16:20–17:40	Plenary Lectures
18:00	Welcome Party

TUESDAY, September 29th, 2020

09:00–11:00	Session: Chemical and Biological Systems
11:00–11:30	Coffee Break
11:30–12:50	Session: Chemical and Biological Systems
13:00–14:30	Lunch
14:30–17:00	Session: Strongly Correlated Electron System
17:00–17:30	Coffee Break
17:30–19:00	Workshop: Diamond-Based Quantum Systems for Sensing and Quantum Information
19:00–19:15	Coffee break
19:15–20:55	Workshop: Diamond-Based Quantum Systems for Sensing and Quantum Information

WEDNESDAY, September 30th, 2020

09:00–10:40	Session: Low-Dimensional Systems and Nano-Systems
10:40–11:00	Coffee Break
11:00–13:00	Session: Low-Dimensional Systems and Nano-Systems
13:00–14:30	Lunch
14:30–16:10	Session: Magnetic Resonance Instrumentation
16:10–16:30	Coffee Break
16:30–18:30	Poster Session 1
18:30–20:30	Poster Session 2

THURSDAY, October 1st, 2020

- 09:00–11:10 Sessions: Electron Spin-Based Methods for Electronic and Spatial Structure Determination in Physics, Chemistry and Biology.
Modern Methods of Magnetic Resonance
- 11:10–11:30 Coffee Break
- 11:30–13:00 Workshop: Diamond-Based Quantum Systems for Sensing and Quantum Information
- 13:10–14:30 Lunch
- 14:30–16:10 Session: Molecular Magnets and Liquid Crystals
- 16:10–16:25 Coffee Break
- 16:25–18:20 Session: Other Applications of Magnetic Resonance
- 18:25–18:40 Coffee Break
- 18:40–21:10 Workshop: Diamond-Based Quantum Systems for Sensing and Quantum Information

FRIDAY, October 2nd, 2020

- 09:00–11:00 Sessions: Perspectives of Magnetic Resonance in Science and Spin Technology. Spin-Based Information Processing. Theory of Magnetic Resonance
- 11:00–11:30 Coffee Break
- 11:30–12:30 Sessions: Medical Physics. Magnetic Resonance Imaging
- 12:30 Closing of the Conference

SCIENTIFIC PROGRAM

MONDAY, September 28th, 2020

14:00 Opening of the Conference

Plenary Session

Chair: A. A. Kalachev

14:30 K.-P. Dinse: From High Power to Low Power – Recipes for a Successful Scientific Life!

15:10 G. Buntkowsky: DNP Enhanced Solid-State NMR Spectroscopy of Functional Materials

Coffee Break

16:20 K. M. Salikhov: New Paradigm of Spin Exchange

17:00 V. Kataev: Interplay of Magnetism and Topological Electronic Structure of Magnetic Van Der Waals Compounds

18:00 Welcome Party

TUESDAY, September 29th, 2020

Session: Chemical and Biological Systems

Chair: E. G. Bagryanskaya

Invited Talks

09:00 V. I. Chizhik, S. S. Bystrov, V. V. Matveev, A. V. Egorov, V. Balevičius: Molecular Mobility in a Set of Imidazolium-Based Ionic Liquids [bmim]⁺A⁻ and Their Mixtures with Water

09:30 E. A. Konstantinova, E. V. Kytina, G. V. Trusov, A. I. Kokorin: On the Nature of Radicals in Titania Photocatalysts: New Approach Based on EPR Spectroscopy

10:00 O. A. Krumkacheva, N. E. Sannikova, I. O. Timofeev, A. S. Chubarov, N. Sh. Lebedeva, A. S. Semeikin, I. A. Kirilyuk, Y. P. Tsentalovich, M. V. Fedin, E. G. Bagryanskaya: Application of EPR to Porphyrin-Protein Agents for Photodynamic Therapy

10:30 X. Zhang, Y. Dong, Y. Yan, J. Zhao: Application of Time-Resolved EPR in Study of Charge-Recombination Induced Intersystem Crossing in Compact Electron Donor/Acceptor Dyads

Coffee Break

Session: Chemical and Biological Systems*Chair: K. M. Salikhov*

Oral Talks

- 11:30 *M. Gafurov, G. Mamin, S. Orlinskii, P. Grishin, I. Ignatyev, M. Goldberg, N. Petrakova, A. Fedotov, V. S. Komlev*: Investigation of Pathological Calcification and Synthetic Calcium Phosphates by Magnetic Resonance Techniques
- 11:50 *E. G. Kovaleva, A. Marek, A. I. Smirnov, D. O. Antonov, D. P. Tambasova*: A Test of the Poisson-Boltzmann Double Layer Theory on Mesoporous Silicas by EPR of pH-Sensitive Nitroxides
- 12:10 *N. Asanbaeva, D. Morozov, S. Dobrynin, V. Tormyshev, I. Kirilyuk, E. Bagryanskaya*: Stable Novel Biradicals for Dynamic Nuclear Polarization
- 12:30 *R. B. Zaripov, I. T. Khairutdinov, T. Kálai, K. Kish, A. I. Kokorin, K. M. Salikhov*: Isotope Substitution in EPR Studies of Nitroxide Biradicals

Session: Strongly Correlated Electron System*Chair: M. S. Tagirov*

Plenary Lectures

- 14:30 *S. V. Demishev*: New Concept of Magnetism of Topological Kondo Insulator SmB_6 on the Basis of Electron Spin Resonance Experiments
- 15:10 *V. R. Shaginyan*: Thermodynamic, Dynamic and Transport Properties of Quantum Spin Liquid

Invited Talk

- 15:50 *A. I. Smirnov, T. A. Soldatov, K. Yu. Povarov, A. Paduan-Filho, A. Zheludev*: Dynamic Diamagnetism of the Anisotropic Chain Antiferromagnet

Oral Talks

- 16:20 *V. N. Glazkov, Yu. V. Krasnikova, I. K. Rodygina, J. Chovan, R. Tarasenko, A. Orendáčová*: Antiferromagnetic Resonance Modes of the Quasi-Two-Dimensional Antiferromagnet $\text{Cu}(\text{en})(\text{H}_2\text{O})_2\text{SO}_4$
- 16:40 *E. Vavilova, G. Prando, V. Kataev*: Glassy Features in the NMR and μSR Response of Na_2IrO_3 with 3d Transition Metal Ion Impurities

Coffee Break

Workshop: Diamond-Based Quantum Systems for Sensing and Quantum Information

Chair: A. A. Kalachev

Invited Talks

- 17:30 *P. Hemmer*: Color Centers in Diamond for Biological Sensing and Quantum Information
 18:00 *M. Nesladek*: Single Nuclear Spin Detection Using Electrical Spin State NV Readout
 18:30 *V. Acosta*: Picoliter NMR Spectroscopy with Diamond NV Centers

Coffee break

- 19:15 *Kai-Mei C. Fu, G. Z. Iwata, A. Wickenbrock, D. Budker*: Sensitive Magnetometry in Challenging Environments
 19:45 *A. Ajoy*: Optically Hyperpolarized Nanodiamonds: Applications in Accelerated NMR and Sensing

Oral Talks

- 20:15 *V. G. Nikiforov, D. K. Zharkov, A. G. Shmelev, A. V. Leontyev, V. S. Lobkov, M. H. Alkahtani, P. R. Hemmer*: Development of Upconversion YVO₄ Yb³⁺Er³⁺ Nanoparticles for Biological Application
 20:35 *A. G. Shmelev, V. G. Nikiforov, D. K. Zharkov, V. V. Andrianov, L. N. Muranova, A. V. Leontyev, Kh. L. Gainutdinov, V. S. Lobkov, P. R. Hemmer*: Biocompatibility Testing of Vanadate Oxide Based Upconversion Nanoparticles with Helix Lucorum Grape Snails

WEDNESDAY, September 30th, 2020

Session: Low-Dimensional Systems and Nano-Systems

Chair: S. V. Demishev

Plenary Lecture

- 09:00 *T. Nakamura*: ESR Investigation of Functional Molecular Magnetic Materials

Oral Talks

- 09:40 *I. I. Geru, A. N. Barba, E. C. Gorincioi, I. E. Midoni*: Synthesis of Carbon Quantum Dots and Their Characterization by 2D DOSY NMR Method

10:00 *A. B. Drovosekov, N. M. Kreines, A. S. Barkalova, S. N. Nikolaev, A. V. Sitnikov, V. V. Rylkov*: Ferromagnetic Resonance in CoFeB-LiNbO Nanogranular Films Near Metal-Insulator Transition

10:20 *R. M. Eremina, I. V. Yatsyk, A. G. Badelin, V. K. Karpasyuk, Z. Y. Seidov*: Formation of Ferromagnetic Clusters in $\text{La}_{1-x}\text{Sr}_x\text{Mn}_{0.9}\text{Fe}_{0.1-y}\text{M}_y\text{O}_3$ ($\text{M} = \text{Mg}^{2+}, \text{Zn}^{2+}$)

Coffee Break

Session: Low-Dimensional Systems and Nano-Systems

Chair: A. I. Smirnov

Oral Talks

11:00 *M. G. Shelyapina, D. Nefedov, A. Tyurtyaeva, A. Arteaga, R. Yocupicio-Gaxiola, A. V. Petranovskii, S. Fuentes*: Local Structure of Pillared Mordenite and ZSM-5 Zeolites and Water Behavior in Their Interlayer Space Studied by NMR

11:20 *W. M. Mohammed, I. V. Yanilkin, A. I. Gumarov, A. G. Kiamov, A. A. Rodionov, R. V. Yusupov, L. R. Tagirov*: Synthesis and Studies of Structural, Magnetic and Ferromagnetic Resonance Properties of Epitaxial $\text{Pd}_{0.96}\text{Fe}_{0.04}/\text{VN}/\text{Pd}_{0.92}\text{Fe}_{0.08}$ Superconducting Spin-Valve Heterostructure

11:40 *R. V. Yusupov, A. I. Gumarov, A. A. Rodionov, I. V. Yanilkin, G. A. Zhivov, L. R. Tagirov*: Ferromagnetic Resonance Versus Spin-Hall Effect in Heteroepitaxial $\text{W}/\text{Pd}_{0.92}\text{Fe}_{0.08}$ Thin Film Structure

12:00 *R. I. Khaibullin, A. I. Gumarov, V. I. Nuzhdin, I. R. Vakhtov, V. F. Valeev, I. V. Yanilkin, R. V. Yusupov, L. R. Tagirov*: VSM and FMR Studies of Fe-Ion Implanted Epitaxial Films of Palladium

12:20 *S. Gotovko, L. Svistov*: Electron Spin Resonance in Multiferroic Spin-Chain Cuprate LiCuVO_4

12:40 *A. M. Ziatdinov*: Spin Resonance on Electrons of Zero Modes Stabilized at Atomically Smooth Graphene Edges

Session: Magnetic Resonance Instrumentation

Chair: S. B. Orlinskii

Plenary Lectures

- 14:30 H. Ohta, S. Okubo, E. Ohmichi, T. Sakurai, H. Takahashi,
S. Hara, Y. Saito: Multi-Extreme THz ESR: Present and
Future
- 15:10 R. A. Babunts, A. N. Anisimov, A. S. Gurin, N. G. Romanov,
A. G. Badalyan, P. G. Baranov: EPR/ODMR Instrument
Complex and its Application for the Study of Wide Band
Gap Materials

Oral Talk

- 15:50 A. Bogaychuk, V. Kuzmin: Accounting Material Imperfections
in the Design of Halbach Magnets

Coffee Break

16:30–18:30 Poster Session 1

18:30–20:30 Poster Session 2

THURSDAY, October 1st, 2020

Sessions: Electron Spin-Based Methods for Electronic and Spatial Structure Determination in Physics, Chemistry and Biology. Modern Methods of Magnetic Resonance

Chair: V. F. Tarasov

Plenary Lecture

- 09:00 M. Tagirov: Experimental Features of Enhanced Nuclear
Magnetic Resonance in Van Vleck Paramagnets

Invited Talk

- 09:40 J. L. Wort, K. Ackermann, A. Giannoulis, A. J. Stewart,
D. G. Norman, B. E. Bode: Enhancing Coordination-Based
Copper(II) Spin Labelling for Accurate Distances at Sub-
Micromolar Concentrations

Oral Talks

- 10:10 E. M. Alakshin, G. A. Dolgorukov, A. V. Klochkov, E. I. Kon-
dratyeva, V. V. Kuzmin, K. R. Safiullin, A. A. Stanislavovas,
M. S. Tagirov: NMR of ^3He in Contact with Nanoparticles

10:30 *F. F. Murzakhonov, M. R. Gafurov, G. V. Mamin, S. B. Or-linskii, M. A. Goldberg, S. M. Barinov, V. S. Komlev*: Investigations of Substituted Calcium Phosphates for Biomedical Applications Using Double Resonance EPR Techniques

10:50 *A. Sukhanov, M. Mamedov, A. Semenov, K. Salikhov*: On the Manifestation of the Le Chatelier-Braun Principle in Photo-system I Complexes Embedded in Dry Trehalose Matrices

Coffee Break

Workshop: Diamond-Based Quantum Systems for Sensing and Quantum Information

Chair: M. Nesladek

Invited Talks

11:30 *I. Aharonovich*: Quantum Photonics with hBN – from Fundamental Studies to Emerging Applications

12:00 *Q. Li*: Diamond Quantum Sensing of Cell Mechanics and Cell Dynamic

Oral Talk

12:30 *D. K. Zharkov, A. G. Shmelev, A. V. Leontyev, V. G. Nikiforov, R. I. Khaibullin, M. H. Alkahtani, P. R. Hemmer*: Fluorescent Properties of Diamonds Doped with Germanium and Erbium

Session: Molecular Magnets and Liquid Crystals

Chair: L. R. Tagirov

Plenary Lecture

14:30 *E. G. Bagryanskaya, S. Ovcherenko, O. A. Chinak, O. A. Krumkacheva, S. A. Dobrynin, V. Tormyshev, I. A. Kirilyuk*: EPR Study of Intrinsically Disordered Proteins in Cell

Invited Talks

15:10 *S. L. Veber, J. Nehr Korn, I. V. Valuev, A. S. Bogomyakov, A. M. Sheveleva, V. I. Ovcharenko, M. A. Kiskin, E. A. Sutturina, K. Holldack, A. Schnegg, M. V. Fedin*: Tuning the Magnetic Properties of Co(II)-Based Single-Ion Magnets by Magnetic Dilution

15:40 *D. Majhi, J. Dai, B. B. Kharkov, A. V. Komolkin, S. V. Dvinskikh*: Cation Dynamics in Ionic Liquid Crystals

Session: Other Applications of Magnetic Resonance

Chair: *K. A. Il'yasov*

Invited Talks

- 16:25 *V. I. Volkov, A. V. Chernyak, O. I. Gnezdilov, V. D. Skirda*: Hydration, Self-Diffusion and Ionic Conductivity of One Charge Cations in Nafion Membranes Studied by NMR
- 16:55 *A. Barbon*: New Insights from the Study of Triplet States

Oral Talks

- 17:25 *V. Kuzmin, K. Safiullin, A. Stanislavovas, M. Tagirov*: Spin Kinetics of Gaseous ^3He in Nematically Oriented Aerogels at Low Temperatures
- 17:45 *D. A. Bizyaev, A. A. Bukharaev, N. I. Nurgazizov, A. P. Chuklanov, S. A. Migachev*: Magnetoelastic Effect in CoNi Particles Caused by Thermal Resizing of Crystal Substrate
- 18:05 *S. S. Khutsishvili, A. I. Perfil'eva, O. A. Nozhkina, T. V. Ganenko, N. I. Tikhonov, I. A. Graskova, T. I. Vakul'skaya*: Modern Fundamentals of the Development of Agricultural *Solanum Tuberosum L.* Using Targeted Delivery of Manganese with Novel Bionanocomposites Based on Polysaccharides

Coffee Break

Workshop: Diamond-Based Quantum Systems for Sensing and Quantum Information

Chair: *P. Hemmer*

Invited Talks

- 18:40 *Y. Shi, A. Akimov, P. Hemmer, A. A. Kalachev, F. G. Vagizov, Y. V. Radeonychev, O. Kocharovskaya*: Coherent Control of the Single Photon Interaction with Atomic and Nuclear Ensembles of Quantum Emitters in Solids
- 19:10 *C. Becher*: Prospects of Tin Vacancy Centers in Diamond for Quantum Sensing and Information
- 19:40 *A. Akimov*: Photonic Crystal Cavities for GeV SnV Diamond
- 20:10 *A. Zheltikov*: Fiber-Optic Diamond-Based Biothermometry
- 20:40 *P. Maurer*: Diamond Quantum Nanosensors for Probing Complex Biological Processes

FRIDAY, October 2nd, 2020

Sessions: Perspectives of Magnetic Resonance in Science and Spin Technology. Spin-Based Information Processing. Theory of Magnetic Resonance

Chair: R. M. Eremina

Oral Talks

- 09:00 *Yu. Bunkov*: Magnon Bose Condensed State for Quantum Computing
- 09:20 *D. V. Stass*: On Certain Algebraic Properties of the Sub-Block of Zero Field Hyperfine Hamiltonian with Penultimate Total Spin Projection for a Radical with an Arbitrary Set of Spin-1/2 Nuclei and Visualizing its Eigenvalues
- 09:40 *Y. E. Kandrashkin*: Energy Transfer in Spin-Polarized Photo-Excited Triplet States: Two-Site Model
- 10:00 *V. O. Sakhin, I. I. Gimazov, E. F. Kukovitskii, Yu. I. Talanov, G. B. Teitel'baum*: Conduction Electron Spin Resonance Study of $\text{Bi}_{1.08}\text{Sn}_{0.02}\text{Sb}_{0.9}\text{Te}_2\text{S}$ Topological Insulator
- 10:20 *M. N. Uvarov, L. V. Kulik*: EPR Study of Light-Induced Charges in Ternary Organic Photovoltaic Blend PCDTBT/PC60BM/ICBA
- 10:40 *A. G. Maryasov, M. K. Bowman, M. V. Fedin, S. L. Veber*: Theoretical Basis for Switching a Kramers Single Molecular Magnet by Circularly-Polarized Radiation

Coffee Break

Sessions: Medical Physics. Magnetic Resonance Imaging

Chair: M. G. Shelyapina

Oral Talks

- 11:30 *Kh. L. Gainutdinov, V. V. Andrianov, G. G. Yafarova, T. K. Bogodvid, M. N. Paveliev, N. G. Shayakhmetov, S. G. Pashkevich, V. A. Kulchitchky*: Application of EPR Spectroscopy to Determine the Content of Nitric Oxide in the Brain and Heart of Rats after Some Pathology
- 11:50 *Ya. Fattakhov, A. Bayazitov, A. Fakhrutdinov, R. Khabipov, K. Salikhov, V. Shagalov, A. Kornienko, O. Stognienko*: Using of Special MRI-0.4 T for the Selection of Sugar Beets
- 12:10 *M. Fattakhova, V. Krasnozhan, R. Khabipov, Ya. Fattakhov*: Investigation of Functional Voice Diseases Using MRI and Spectral Voice Analysis Method

POSTER SESSION 1

Session: Chemical and Biological Systems

1. *M. M. Akhmetov, G. G. Gumarov, V. Yu. Petukhov, G. N. Konygin, D. S. Rybin*: Kinetics of Paramagnetic Centers Formation in the Calcium Gluconate Subjected to Mechanochemical Treatment
2. *S. O. Rabdano, S. S. Bystrov, C. Cabal, V. I. Chizhik*: Quantification of Protein Aggregation using NMR Relaxation of Nuclei of Water and Ions: a Study of the RRM2 Domain of TDP-43 Protein
3. *A. R. Gafarova, G. G. Gumarov, M. M. Bakirov, R. B. Zaripov, V. Yu. Petukhov*: Identification of the Radiation-Induced Radicals in Calcium Gluconate
4. *Kh. L. Gainutdinov, V. V. Andrianov, G. G. Yafarova, S. G. Pashkevich, M. O. Dosina, A. S. Zamaro, Y. P. Tokalchik, T. Kh. Bogodvid, L. V. Bazan, A. A. Denisov, V. A. Kulchitchky*: The Content of Nitric Oxide and Copper in the Olfactory Bulbs of Rat's Brain after Modeling of Brain Stroke and Administration of Mesenchymal Stem Cells
5. *A. I. Kokorin, E. A. Konstantinova, A. N. Streletskii*: Structural and Functional Properties of the Nanosized Al/V₂O₅ Termites Obtained by Mechanochemical Activation
6. *A. M. Kusova, A. E. Sitnitsky, Yu. F. Zuev*: NMR and DLS Study of Intermolecular Interactions of the Blood Plasma Fibrinogen. The pH and Ionic Strength Effects on the Prelude of Fibrin Clotting
7. *S. Ovcherenko, O. Chinak, O. Krumkacheva, S. Dobrynin, I. Kirilyuk, E. Bagryanskaya*: Mechanism of Intrinsically Disordered Protein Penetration into Cells: Monitoring by EPR and Confocal Microscopy
8. *D. Shurtakova, G. Mamin, M. Gafurov, S. Orlinskii, F. Murzakhanov, A. Fedotov, V. Komlev*: DFT Calculations of EPR Parameters for Substituted Calcium Phosphates
9. *S. V. Yurtaeva, M. Yu. Volkov, G. G. Yafarova*: ¹H NMR Study of Blood Plasma of Rats with the Experimental Model of SCI
10. *A. A. Sukhanov, V. K. Voronkova, J. Zhao*: Photoinduced States of Some Compact Electron Donor/Acceptor Dyads

11. *G. G. Yafarova, V. V. Andrianov, V. S. Iyudin, T. V. Baltina, A. A. Ereemeev, I. A. Lavrov, R. I. Zaripova, T. L. Zefirov, Kh. L. Gainutdinov*: Nitric Oxide in Restriction of Motor Activity, Including Spin Cord Injury
12. *B. Yavkin, D. Shurtakova, F. Murzakhanov, M. Gafurov, G. Mamin, S. Orlinskii, V. Smirnov, V. Sirotkin, A. Fedotov, V. S. Komlev, A. Shinkarev*: Study of the Radiation-Induced at Room Temperature Stable Radicals in Octacalcium Phosphate Synthesized by Wet Method with XRD and EPR

Session: Strongly Correlated Electron Systems

13. *D. Gafurov, M.-I. Sturza, E. Vavilova*: NMR Study of the Ion Mobility in Frustrated $\text{Li}_{1-x}\text{CuSbO}_4$ Compound
14. *T. P. Gavrilova, S. M. Khantimerov, R. R. Fatykhov, I. V. Yatsyk, P. Balaya, N. M. Suleimanov*: ESR Investigation of Magnetic Properties and Vanadium Oxidation State in $\alpha\text{-Li}_3\text{V}_2(\text{PO}_4)_3/\text{C}$ Composite
15. *A. Kamalov, M.-I. Sturza, H.-J. Grafe, E. Vavilova*: Zn-Doped Frustrated $S = 1/2$ Spin Chains $\text{LiCu}_{(1-x)}\text{Zn}_{(x)}\text{SbO}_4$ Studied by NMR
16. *D. P. Pavlov, R. I. Batalov, A. V. Leontyev, D. K. Zharkov, S. A. Migachev, I. V. Lunev, T. S. Shaposhnikova, R. F. Mamin*: Modification of the Properties of Barium Strontium Titanate Films on Silicon Substrate
17. *T. S. Shaposhnikova, S. A. Migachev, R. F. Mamin*: The Delay Time of Phase Transition to the Polar Phase in Relaxors
18. *E. Vavilova, T. Salikhov, E. Zvereva, V. Nalbandyan*: Cluster Spin Glass State as a Result of Lithium Deficiency in the Honeycomb System $\text{Li}_3\text{Ni}_2\text{SbO}_6$
19. *R. M. Eremina, I. V. Yatsyk, Z. Y. Seidov, A. Badelin*: Superparamagnetic Properties in $\text{La}_{0.83}\text{Sr}_{0.17}\text{Mn}_{0.9}\text{Zn}_{0.1-x}\text{Fe}_x\text{O}_3$ ($x = 0, 0.025, 0.075, 0.1$)
20. *D. P. Pavlov, T. S. Shaposhnikova, A. V. Leontyev, D. K. Zharkov, T. M. Salikhov, R. F. Mamin*: Photostimulated Properties of Ferroics and Photoconductivity at the Interface of the $\text{Ba}_{0.8}\text{Sr}_{0.2}\text{TiO}_3/\text{LaMnO}_3$

21. *S. V. Demishev, M. I. Gilmanov, A. N. Samarin, A. V. Semeno, N. E. Sluchanko, N. Yu. Shitsevalova, V. B. Filipov, V. V. Glushkov*: Electron Spin Resonance Study of $\text{Sm}_{1-x}\text{Yb}_x\text{B}_6$ Solid Solutions

Session: Electron Spin-Based Methods for Electronic and Spatial Structure Determination in Physics, Chemistry and Biology

22. *D. Tamasova, P. Lyubyakina, E. Kovaleva*: Comparative Analysis of Electrosurface Properties of Mesoporous Alumina Grafted with Silanes Using EPR of pH-sensitive Nitroxide Radicals
23. *V. Tarasov, A. Sukhanov, R. Zaripov, K. Subbotin, E. Zharikov, V. Dudnikova*: EPR Study of Yb^{3+} Impurity Ions in Mg_2SiO_4 Single Crystals
24. *I. Timofeev, E. Tretyakov, G. Fazleeva, P. Troshin, E. Bagryanskaya, M. Fedin, O. Krumkacheva*: Development of Fullerene-Based Spin Label for Nanometer Distance Measurements
25. *D. O. Sagdeev, R. R. Shamilov, V. K. Voronkova, A. A. Sukhanov, Yu. G. Galyametdinov*: Synthesis and ESR Study of Copper Doped CdSe and “Core-Shell” CdSe/CdS Quantum Dots
26. *E. V. Kytina, E. R. Parkhomenko, E. A. Konstantinova*: Determination of the Energy Level Position of Radicals in the Band Gap of TiO_2 Based Microspheres Using EPR Spectroscopy
27. *Yu. A. Uspenskaya, R. A. Babunts, E. V. Edinach, A. S. Gurin, H. R. Asatryan, D. O. Tolmachev, N. G. Romanov, A. G. Badalyan, P. G. Baranov*: Specific Features and Application Examples of a High-Frequency Electron Spin Resonance Spectrometer with Frequency Modulation

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28. *G. Gumarov, M. Ibragimova, A. Chushnikov, D. Khaibullina, V. Petukhov, I. Yatsyk*: Connective Tissue Dysplasia: Computer Analysis of Serum Fe^{3+} -Transferrin ERR Spectra
29. *A. K. Iskhakova, A. M. Kusova, A. E. Sitnitsky, Yu. F. Zuev*: Inter-Protein Molecular Interactions in Solutions of Human Serum Albumin, Studied by NMR-Diffusometry and Dynamic Light Scattering

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30. M. M. Bakirov, K. M. Salikhov, I. T. Khairutdinov, B. Bales: Collective Modes in Solutions of Nitroxyl Radicals Detected by CW EPR
31. R. Shagvaleev, N. Fatkullin: Spin-Echo Diffusion Attenuation and Spin Relaxation of a Particle Moving in a Random Magnetic Field

POSTER SESSION 2

Session: Low-Dimensional Systems and Nano-Systems

1. G. Yu. Andreev, A. G. Kiyamov, S. L. Korableva, A. A. Rodionov, I. V. Romanova, A. S. Semakin, M. S. Tagirov: Abnormal Magnetism of Nano- and Microscaled Tetrafluorites LiTbF_4 and LiDyF_4
2. Ch. A. Fam, N. Kh. Useinov, A. P. Chuklanov, A. A. Bukharaev: Spin-Polarized Current in Non-Collinear Magnetic Tunnel Junction
3. B. F. Gabbasov, A. I. Gumarov, A. A. Rodionov, I. V. Yanilkin, R. R. Khabibullin, R. V. Yusupov, L. R. Tagirov: Epitaxial Growth and Ferromagnetic Resonance Study of Magnetic Anisotropies in Thin $\text{Pd}_{1-x}\text{Fe}_x$ Films on the Single-Crystal $\text{MgO}(110)$ Substrate
4. A. V. Petrov, M. V. Pasynkov, R. V. Yusupov, S. I. Nikitin, A. I. Gumarov, I. V. Yanilkin, A. G. Kiyamov, L. R. Tagirov: Ultrafast Magnetization Dynamics in Thin Films of L10-Ordered FePt and FePd Compounds
5. A. V. Petrov, R. V. Yusupov, I. V. Yanilkin, A. I. Gumarov, A. G. Kiyamov, S. I. Nikitin, L. R. Tagirov: Femtosecond Optical and Magneto-Optical Studies of Magnetic and Electronic Inhomogeneities in $\text{Pd}_{1-x}\text{Fe}_x$ Thin Films
6. G. V. Raganyan, T. M. Vasilchikova, V. B. Nalbandyan, D. A. Gafurov, E. L. Vavilova, A. E. Susloparova, A. I. Kurbakov, M.-H. Whangbo, E. A. Zvereva: Hidden Magnetic Order in Triangular-Lattice Magnet $\text{Li}_2\text{MnTeO}_6$
7. R. M. Eremina, A. V. Shestakov, I. V. Yatsyk, D. V. Mamedov, A. G. Badelin, V. K. Karpasyuk: Magnetic Properties of $\text{La}_{1-x}\text{Sr}_x\text{Mn}_{0.9}\text{Fe}_{0.1-y}\text{Mg}_y\text{O}_3$

8. *V. Vorobyeva, U. Chervonova, M. Gruzdev, A. Kolker*: EPR Study of Highly Branched Mesomorphic Iron(III) Complexes
9. *A. I. Gumarov, I. V. Yanilkin, R. V. Yusupov, R. I. Khaibullin, M. N. Aliyev, L. R. Tagirov*: Epitaxial Growth, Structural and Magnetic Properties of $\text{Pd}_{0.95}\text{Fe}_{0.05}/\text{Pd}_{0.92}\text{Fe}_{0.08}$ Bilayers
10. *T. Vasilchikova, V. Nalbandyan, M. Evstigneeva, E. Zvereva*: 2D Triangular Lattice Magnet GdFeTeO_6 with Large Magnetocaloric Characteristics
11. *A. M. Zyuzin, N. V. Yantsen, A. A. Karpeev, V. V. Naumkin*: EPR in Conductive Polymer Composites with Carbon Nanotubes
12. *A. B. Drovosekov, A. S. Barkalova, L. S. Parshina, O. A. Novodvorsky, O. D. Khramova, D. S. Gusev, E. A. Cherebilo, K. Yu. Chernoglazov, A. S. Vedenev, V. V. Rylkov*: High Temperature Ferromagnetism in Thin Films of $\text{Mn}_x\text{Si}_{1-x}$ ($x \approx 0.5$) Nonstoichiometric Alloys: Ferromagnetic Resonance Studies

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13. *D. O. Antonov, D. P. Tambasova, D. D. Davydov, E. G. Kovaleva*: The Effect of Halloysite Nanotubes Surface Modification on its Acid-Base Properties
14. *A. A. Sukhanov, Z. Mahmood, J. Zhao, V. K. Voronkova*: TR EPR Study of Spin-Orbit Charge Transfer Intersystem Crossing in Bodipy-Anthracene Compact Dyads
15. *V. Murzakaev, N. Belousova, A. Bragin, D. Kisler, V. Skirda, A. Alexandrov*: Capabilities of Nuclear-Magnetic Resonance Tools for Detailed Scanning of Fluid Properties in Core Samples and in Wells Under Drilling.
16. *E. N. Frolova, L. V. Bazan, O. A. Turanova, M. Yu. Volkov, L. G. Gafiyatullin, I. V. Ovchinnikov, A. N. Turanov*: Spin Properties of the Fe(III) Complexes with Tetradentate Schiff Bases and Photosensitive 4-Alkoxystrylpyridine Axial Ligands
17. *D. Polyukhov, A. Poryvaev, M. Fedin*: EPR Measurements of Guest Diffusion in Magneto-Concentrated Porous Metal Organic Frameworks (MOFs)

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18. A. A. Bayazitov, Ya. V. Fattakhov, A. R. Fakhrutdinov, V. A. Shagalov: Development of a Conform Sensor “Hand” for Receiving an NMR Signal in a Small-Size Traumatological MRI System with a Field of 0.4 T
19. Ya. Fattakhov, A. Anikin, A. Bayazitov, A. Fakhrutdinov, R. Khabipov, V. Odivanov, K. Salikhov, V. Shagalov, N. Reshetnikov, D. Abdulganieva, M. Mikhailov, S. Ryzhkin, V. Anisimov: The First Results of Using a Specialized MRI System with Magnetic Field of 0.4 T

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20. V. Lisin, A. Shegeda, V. Samartsev: Photon Echo Oscillations in $\text{LuLiF}_4:\text{Er}^{3+}$ (0.025%) Depending on the Magnetic Field Perpendicular to the C Axis of the Sample
21. D. O. Akatiev, D. A. Turaikhanov, A. V. Shkalikov, I. Z. Latypov, A. A. Kalachev: Propagation Single-Photon Wave-Packet with Orbital Angular Momentum in a Turbulent Atmosphere
22. T. S. Shaposhnikova, R. F. Mamin: Electric Polarization in Small Particles of Multiferroics
23. D. V. Lapaev, V. G. Nikiforov, V. S. Lobkov, A. A. Knyazev, Yu. G. Galyametdinov: Effect of UV Laser Modification on Intramolecular Energy Transfer Processes in a Vitrified Film Based on a Europium(III) β -Diketonate Complex

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24. I. T. Khairutdinov, K. M. Salikhov: Effect of Random Flips of Spins and Conformational Transitions in PELDOR Signal of Spin Labels with Overlapping EPR Spectra
25. A. S. Parfishina, A. V. Egorov, S. L. Korableva, I. V. Romanova, K. R. Safiullin, M. S. Tagirov: NMR Study ^{169}Tm in Diluted Van Vleck Paramagnet $\text{LiTm}_{0.02}\text{Y}_{0.98}\text{F}_4$
26. G. S. Shakurov, V. V. Gudkov, I. V. Zhevstovskikh, M. N. Sarychev, Yu. V. Korostelin: Jahn-Teller Centers of Cr^{2+} in a CdSe Crystal
27. Yu. Goryunov, A. Nateprov: Features of the ESR on the Mn^{2+} Impurities in the 3D Dirac Semimetal Cd_3As_2

28. *N. Sannikova, I. Timofeev, E. Bagryanskaya, M. Bowman, M. Fedin, O. Krumkacheva*: Electron Spin Relaxation of Photoexcited Porphyrin in Water-Glycerol Glass
29. *M. L. Falin, V. A. Latypov, S. L. Korableva, N. M. Khaidukov*: ESR of Dy^{3+} Ions at Cubic Sites in Cs_2NaYF_6 and $CsCaF_3$ Single Crystals

Workshop: Diamond-Based Quantum Systems for Sensing and Quantum Information

30. *R. A. Babunts, D. D. Kramushchenko, A. S. Gurin, A. P. Bundakova, M. V. Muzafarova, A. G. Badalyan, N. G. Romanov, P. G. Baranov*: Specific Features of High-Frequency EPR/ESE/ODMR Spectroscopy of NV Defects in Diamond
31. *A. M. Gorbachev, S. A. Bogdanov, M. A. Lobaev, A. L. Vikharev, D. B. Radishev, V. A. Isaev, M. N. Drozdov, V. A. Gusev, D. A. Tatarsky*: Investigation of Vacancy Diffusion and NV Center Formation in the Annealed Electron Beam Irradiated Diamond
32. *S. A. Bogdanov, A. M. Gorbachev, A. L. Vikharev, D. B. Radishev, M. A. Lobaev*: The Study of SiV Centers Formation in Diamond During the Process of CVD Growth by Optical Emission Spectroscopy
33. *M. A. Lobaev, D. B. Radishev, S. A. Bogdanov, A. L. Vikharev, A. M. Gorbachev, V. A. Isaev, S. A. Kraev, A. I. Okhapkin, E. A. Arhipova, M. N. Drozdov*: Electroluminescence of Silicon Vacancy Centers in Diamond p-i-n Diode
34. *P. M. Vetoshko, G. A. Knyazev, A. N. Kuzmichev, A. A. Kholin, V. I. Belotelov, Yu. M. Bunkov*: Bose Condensation and Spin Superfluidity of Magnons in YIG Film

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