

PROGRAMM of All-Russian conference with international participation

ELECTRONIC, SPIN AND QUANTUM PROCESSES IN MOLECULAR AND CRYSTALLINE SYSTEMS

dedicated to the 300th anniversary of the Russian Academy of Sciences, the 105th anniversary of the founding of the Ufa Physical Institute and 30th anniversary of the founding the IMCP UFRC of RAS

May 21

10:00-11:00 Registration

11:00-11:30 Opening ceremony

Lectures

11:30-12:30 Prof. K.M. Salikhov, Kazan, Russia. "Current state of the theory of spin chemistry"

12:30-13:00 Lunch

13:00-14:00 Prof. E.N. Nikolaev, Moscow, Russia. "Application of mass spectrometry for the study of molecular substances" **Zoom**

14:00-15:00 Prof. A.I. Ivanov Volgograd, Russia. "Electric spin of 1/2 excited octupole molecules"

15:00-15:20 Coffee break

15:20-15:50 I.A. Novikov, Moscow, Russia. "New scientific instruments for nanoscale research of modern materials and diagnostics of nanostructures"

15:50-16:50 Prof. A. Modelli, Bologna, Italy. "Temporary anion states characterized by electron spectroscopies: electron transmission spectroscopy (ETS) and dissociative electron attachment spectroscopy (DEAS)" **Zoom**

16:50-17:50 Prof. R.A. Evarestov, St. Petersburg, Russia. "Quantum chemical study of nanorods in the crystallographic and helical paradigms using tellurium as an example"

17:50-18:50 Prof. I.I. Fabricant, Lincoln, USA. "Theory of electron attachment to molecules and clusters" **Zoom**

May 22

Lectures

10:00-10:40 Dr. Y.V. Vasiliev, Corvallis, USA. "Gas-phase resonance electron capture by small molecules, like azobenzenes, fullerenes and others" **Zoom**

10:40-11:40 Prof. S. Matejczyk, Bratislava, Slovakia. "Electron collisions in thin and dense environments" **Zoom**

11:40-12:20 Prof. Yu.V. Chizhov, St. Petersburg, Russia. "Development of UV photoelectron spectroscopy at St. Petersburg State University" **Zoom**

12:20-12:50 Prof. A.A. Goryunkov, Moscow, Russia. "Anions of fluorine derivatives of fullerenes: structurally predetermined localization of charge/spin density for the targeted synthesis of polyfunctional materials"

12:50-13:10 Coffee break

13:10-13:50 Prof. A.S. Komolov, St. Petersburg, Russia. "Electron spectroscopy as a set of methods for establishing the energy profile of charge carrier transport regions in ultrathin organic films on the surface of binary semiconductors" Zoom

13:50-14:30 Prof. K.A. Zvezdin, Moscow, Russia. "Microwave spintronics and spin currents" Zoom

14:30-15:00 Lunch

Lectures

15:00-15:40 Prof. O.E. Tereshchenko, Novosibirsk, Russia. "Semiconductor sources of spin-polarized electrons and spin detectors"

15:40-16:20 Dr. A.M. Shikin, St. Petersburg, Russia. "Features of the electronic and spin structure of magnetic topological insulators and their relationship with topological phase transitions"

16:20-16:30 Coffee break

16:30 Poster session.

May 23

Lectures

10:00-10:40 Prof. A.V. Kimel, Nijmegen, The Netherlands. "Ultrafast antiferromagnetism – terra incognita beyond the boundaries of classical approximations" Zoom

10:40-11:20 Dr. M.V. Sapozhnikov, Novgorod, Russia. "Magnetoelectric effect in tunnel magnetoresistive contacts"

11:20-12:00 Prof. N.E. Polyakov, Novosibirsk, Russia. "Photoinduced electron transfer in biological systems – study by chemical polarization of nuclei"

12:00-12:20 Coffee break

12:20-13:00 Dr. A.V. Kukhta, Minsk, Belarus. "Solution processed 2D hybrid charge transfer complexes for opto-electronics applications"

13:00-13:40 Prof. W.B. Sharopov, Tashkent, Uzbekistan. "Surface modification of thin LiF/Si(111) films under bombardment with cesium ions" Zoom

13:40-14:10 Lunch

14:10-14:40 Prof. A.K. Zvezdin, Moscow, Russia. "Rare earth ions and magnetic nanoclusters in mega-Gaussian fields" Zoom

14:40-15:20 Prof. A.P. Pyatakov, Moscow, Russia. "Interplay between spin, electronic and mechanical degrees of freedom in thin magnetic films and van der Waals materials"

15:20-16:00 Prof. R.M. Eremina, Kazan, Russia. "CO₃⁺ ions with spin S=1 in the magnetic and conductive properties of BA₂CONBO₆"

16:00-16:20 Coffee break

- 16:20-16:50 Dr. I.A. Pshenichnyuk, Skolkovo, Russia. "Design of optical neurons for the implementation of Ising machines in the form of integrated photonic chips"
- 16:50-17:20 Prof. S.L. Khursan, Ufa, Russia. "HOMODESMOTIC METHOD FOR STUDYING THE MOLECULAR ENERGY OF ORGANIC COMPOUNDS"