

## 70th anniversary of the E K Zavoisky Kazan Physical-Technical Institute, Kazan Scientific Center of the Russian Academy of Sciences (Scientific session of the Physical Sciences Division of the Russian Academy of Sciences, 4 February 2016)

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A scientific session of the Physical Sciences Division of the Russian Academy of Sciences (RAS) was held on 4 February 2016 at the E K Zavoisky Kazan Physical-Technical Institute, Kazan Scientific Center (KSC), RAS, devoted to the 70th anniversary of the E K Zavoisky Kazan Physical-Technical Institute, KSC RAS.

The agenda posted on the website of the Physical Sciences Division RAS [www.gpad.ac.ru](http://www.gpad.ac.ru) comprised the following reports:

(1) **Demishev S V** (Prokhorov General Physics Institute, RAS, Moscow) “Quantum phase transitions in spiral magnets without an inversion center”;

(2) **Smirnov A I** (Kapitza Institute for Physical Problems, RAS, Moscow) “Magnetic resonance of spinons in quantum magnets”;

(3) **Ryazanov V V** (Institute of Solid State Physics, RAS, Chernogolovka, Moscow region) “Coherent and nonequilibrium phenomena in superconductor- and ferromagnet-based structures”;

(4) **Mel’nikov A S** (Institute for Physics of Microstructures, RAS, Nizhny Novgorod) “Mechanisms of long-range proximity effects in superconducting spintronics”;

(5) **Fel’dman E B** (Institute of Problems of Chemical Physics, RAS, Chernogolovka, Moscow region) “Magnus

expansion paradoxes in the study of equilibrium magnetization and entanglement in multi-pulse spin locking”;

(6) **Fraerman A A** (Institute for Physics of Microstructures, RAS, Nizhny Novgorod) “Features of the motion of spin-1/2 particles in a noncoplanar magnetic field”;

(7) **Salikhov K M** (E K Zavoisky Kazan Physical-Technical Institute, KSC, RAS, Kazan) “Electron paramagnetic resonance applications: promising developments at the E K Zavoisky Kazan Physical-Technical Institute of the Russian Academy of Sciences”;

(8) **Vinogradov E A** (Institute for Spectroscopy, RAS, Troitsk, Moscow) “Ultrathin film characterization using far-field surface polariton spectroscopy”;

(9) **Glyavin M Yu** (Institute of Applied Physics, RAS, Nizhny Novgorod) “High-power terahertz sources for spectroscopy and material diagnostics”;

(10) **Soltamov V A** (Ioffe Institute, RAS, Saint Petersburg) “Radio spectroscopy of the optically aligned spin states of color centers in silicon carbide”;

(11) **Kalachev A A** (E K Zavoisky Kazan Physical-Technical Institute, KSC, RAS, Kazan) “Long-range quantum communication. Basic devices and prospects for development”;

(12) **Kuznetsov D** (Bruker Corporation, Moscow) “Recent magnetic resonance hardware advances at the Bruker Corporation.”

Papers based on talks 1, 2, 4–7, 9, and 10 are presented below.