

# What's new in magnetism?

## (Scientific session of the Physical Sciences Division of the Russian Academy of Sciences, 27 May 2015)

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A scientific session of the Physical Sciences Division of the Russian Academy of Sciences (RAS), “What's new in magnetism?”, was held in the conference hall of the Lebedev Physical Institute, RAS, on 27 May 2015.

The papers collected in this issue were written based on talks given at the session:\*

(1) Kalashnikova A M, Pisarev R V (Ioffe Physical-Technical Institute, RAS, St. Petersburg), Kimel A V (Radboud University Nijmegen, Institute for Molecules and Materials, The Netherlands; Moscow State Technical University of Radio Engineering, Electronics and Automation, Moscow) “Ultrafast optomagnetism”;

(2) Pyatakov A P, Sergeev A S, Nikolaeva E P, Kosykh T B, Nikolaev A V (Lomonosov Moscow State University, Moscow), Zvezdin K A (Prokhorov General Physics Institute, RAS, Moscow; Kintech Laboratory Ltd, Moscow), Zvezdin A K (Prokhorov General Physics Institute, RAS, Moscow; Lebedev Physical Institute, RAS, Moscow) “Micromagnetism and topological defects in magnetoelectric media”;

(3) Mukhin A A, Kuzmenko A M, Ivanov V Yu (Prokhorov General Physics Institute, RAS, Mos-

cow), Pimenov A V, Shuvaev A M, Dziom V E (Institute of Solid State Physics, Vienna University of Technology, Vienna, Austria) “Dynamic magneto-electric phenomena within electromagnons in rare-earth borate multiferroics”;

(4) Nikitov S A (Kotel'nikov Institute of Radio Engineering and Electronics, RAS, Moscow; Moscow Institute of Physics and Technology (State University), Dolgoprudnyi, Moscow region; Chernyshevskii Saratov State University, Saratov), Kalyabin D V, Osokin S A (Kotel'nikov Institute of Radio Engineering and Electronics, RAS, Moscow; Moscow Institute of Physics and Technology (State University), Dolgoprudnyi, Moscow region), Lisenkov I V (Kotel'nikov Institute of Radio Engineering and Electronics, RAS, Moscow; Moscow Institute of Physics and Technology (State University), Dolgoprudnyi, Moscow region; Oakland University, Rochester, USA), Slavin A N (Oakland University, Rochester, USA), Barabanenkov Yu N (Kotel'nikov Institute of Radio Engineering and Electronics, RAS, Moscow), Sadovnikov A V (Kotel'nikov Institute of Radio Engineering and Electronics, RAS, Moscow; Chernyshevskii Saratov State University, Saratov), Beginin E N, Morozova M A, Sharaevsky Yu P (Chernyshevskii Saratov State University, Saratov), Filimonov Yu A, Khivintsev Y V, Vysotsky S L (Chernyshevskii Saratov State University, Saratov; Saratov Branch of Kotel'nikov Institute of Radio Engineering and Electronics, RAS, Saratov), Sakharov V K, Pavlov E S (Saratov Branch of Kotel'nikov Institute of Radio Engineering and Electronics, RAS, Saratov) “Magnonics: a new research area in spintronics and spin wave electronics.”

\* The speakers are underlined as indicated in the program of the session available on the RAS Physical Sciences Division website [www.gpad.ac.ru](http://www.gpad.ac.ru).