

Curriculum vitae

Alexandra M. Kalashnikova, PhD

1. Personal data

Kalashnikova, Alexandra Mikhailovna, PhD, born on 12.05.1980

Current status: Leading research fellow – head of laboratory

Work address: Ioffe Institute, Politekhnikeskaya 26, 194021 St.-Petersburg, Russia

Phone: +7 812-2927963

E-mail: kalashnikova@mail.ioffe.ru

Webpage: <http://www.ioffe.ru/ferrolab/akalashnikova>

ORCID: 0000-0001-5635-6186

Researcher ID: C-7821-2014

Scopus author ID: 8564138900

2. University education

09/1997– 01/2003: Laser Techniques and Technology, St. Petersburg State Institute for Precision Mechanics and Optics (TU), Engineer (cum laude).

3. Academic degrees

Promotion: PhD in Physics, Radboud University Nijmegen, 01.04.2009,
Promoters: Prof. Dr. Theo Rasing and Prof. Dr. Roman Pisarev.

4. Work experience

Since 07/2019 Head of the Ferroics Physics Laboratory at the Ioffe Institute, St. Petersburg, Russia.

Since 02/2018 Docent (part-time) at ITMO University, St. Petersburg, Russia.

Since 05/2010 Full-time scientific staff member (since 07/2019: leading research fellow), Ioffe Institute, St. Petersburg, Russia.

05/2009-04/2010 Post-doc, Spectroscopy of Solids and Interfaces, Institute for Molecules and Materials, Radboud University Nijmegen, Nijmegen, The Netherlands.

05/2005-04/2009 Junior Researcher (PhD student), Spectroscopy of Solids and Interfaces, Institute for Molecules and Materials, Radboud University Nijmegen, The Netherlands. Supervisor - Prof. Dr. Th. Rasing.

04/2002-04/2005 Laboratory assistant, Ioffe Institute, St. Petersburg, Russia

5. Scientific interests

Ultrafast laser-induced dynamics of electrons, spins and lattice; all-optical control of magnetization; optical and magneto-optical spectroscopy, second harmonics generation in ferroic media, ultrafast phase transitions

6. Publications in peer-reviewed scientific journals

47 publications in total (WoS). Selected publications:

1. Ia. A. Mogunov, F. Fernández, S. Lysenko, A. J. Kent, A. V. Scherbakov, **A. M. Kalashnikova**, and A. V. Akimov, *Ultrafast Insulator-Metal Transition in VO₂ Nanostructures Assisted by Picosecond Strain Pulses*, Physical Review Applied **11**, 014054 (2019).
2. S. F. Maehrlein, I. Radu, P. Maldonado, A. Paarmann, M. Gensch, **A. M. Kalashnikova**, R. V. Pisarev, M. Wolf, P. M. Oppeneer, J. Barker and T. Kampfrath, *Dissecting spin-phonon equilibration in ferrimagnetic insulators by ultrafast lattice excitation*, Science Advances **4**, eaar5164 (2018).

3. K. Imasaka, R. V. Pisarev, L. N. Bezmaternykh, Ts. Shimura, **A. M. Kalashnikova**, and T. Satoh, *Excitation of multiple phonon modes in copper metaborate CuB_2O_4 via nonresonant impulsive stimulated Raman scattering*, Physical Review B **98**, 054303 (2018).
4. L. A. Shelukhin, V. V. Pavlov, P. A. Usachev, P. Yu. Shamray, R. V. Pisarev, **A. M. Kalashnikova**, *Ultrafast laser-induced changes of the magnetic anisotropy in a low-symmetry iron garnet film*, Physical Review B **97**, 014422 (2018).
5. M. Dell'Angela, F. Hieke, M. Malvestuto, L. Sturari, S. Bajt, I. V. Kozhevnikov, J. Ratanapreechachai, A. Caretta, B. Casarin, F. Glerean, **A. M. Kalashnikova**, R. V. Pisarev, Y.-D. Chuang, G. Manzoni, F. Cilento, R. Mincigrucci, A. Simoncig, E. Principi, C. Masciovecchio, L. Raimondi, N. Mahne, C. Svetina, M. Zangrando, R. Passuello, G. Gaio, M. Prica, M. Scarcia, G. Kourousias, R. Borghes, L. Giannessi, W. Wurth & F. Parmigiani, *Extreme ultraviolet resonant inelastic X-ray scattering (RIXS) at a seeded free-electron laser*, Scientific Reports **6**, 38796 (2016).
6. V. N. Kats, T. L. Linnik, A. S. Salasyuk, A. W. Rushforth, M. Wang, P. Wadley, A. V. Akimov, S. A. Cavill, V. Holy, **A. M. Kalashnikova**, and A. V. Scherbakov, *Ultrafast changes of magnetic anisotropy driven by laser-generated coherent and noncoherent phonons in metallic films*, Physical Review B **93**, 214422 (2016).
7. J. A. de Jong, I. Razdolski, **A. M. Kalashnikova**, R. V. Pisarev, A. M. Balbashov, A. Kirilyuk, Th. Rasing, and A. V. Kimel, *Coherent Control of the Route of an Ultrafast Magnetic Phase Transition via Low-Amplitude Spin Precession*, Physical Review Letters **108**, 157601 (2012); Editor's suggestion; Viewpoint in Physics.
8. T. A. Ostler, J. Barker, R. F. L. Evans, R. W. Chantrell, U. Atxitia, O. Chubykalo-Fesenko, S. El Moussaoui, L. Le Guyader, E. Mengotti, L. J. Heyderman, F. Nolting, A. Tsukamoto, A. Itoh, D. Afanasiev, B. A. Ivanov, **A. M. Kalashnikova**, K. Vahaplar, J. Mentink, A. Kirilyuk, Th. Rasing & A.V. Kimel, *Ultrafast heating as a sufficient stimulus for magnetization reversal in a ferrimagnet*, Nature Communications **3**, 666 (2012).
9. K. Vahaplar, **A. M. Kalashnikova**, A. V. Kimel, D. Hinzke, U. Nowak, R. Chantrell, A. Tsukamoto, A. Itoh, A. Kirilyuk, Th. Rasing, *Ultrafast Path for Optical Magnetization Reversal via a Strongly Nonequilibrium State*, Physical Review Letters **103**, 117201 (2009); Editor's suggestion; Viewpoint in Physics.
10. **A. M. Kalashnikova**, A. V. Kimel, R. V. Pisarev, V. N. Gridnev, A. Kirilyuk, and Th. Rasing, *Impulsive Generation of Coherent Magnons by Linearly Polarized Light in the Easy-Plane Antiferromagnet $FeBO_3$* , Physical Review Letters **99**, 167205 (2007).

7. Other academic activities

2018-present: Member of the Russian Presidential Council for Science and Education.

2016-present: Member of the Council for Science and Education affiliated with the Russian Ministry of Education and Science.

2016-2018: Advisory Board member of the Journal of Magnetism and Magnetic Materials.

2014-present: Supervisor of 4 PhD students at the Ioffe Institute.

2009-present: Member of the program committees of several international conferences, including The International Symposium Spin Waves (2018, 2015, St. Petersburg, Russia) and Moscow International Symposium on Magnetism (2017, Moscow, Russia), Organizer of International workshops on Novel Trends in Physics of Ferroics (2014, 2017, St. Petersburg, Russia)

8. Awards

2015: *President of Russia Award* in science and innovations for young scientists.

2014: *Leonard Euler Award* from the Government of St. Petersburg for outstanding achievement in science for young researchers.

2011: *Academician A. F. Ioffe award* from the Ioffe Institute (together with V.V. Pavlov, D. R. Yakovlev, M. Bayer, and R. V. Pisarev).

2005, 2008, 2012: *Research Awards* of A. F. Ioffe Physical-Technical Institute of RAS.