

# Mikhail V Balabas

## List of Publications by Year in descending order

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44  
papers

1,716  
citations

430874  
18  
h-index

276875  
41  
g-index

47  
all docs

47  
docs citations

47  
times ranked

1277  
citing authors

#	ARTICLE	IF	CITATIONS
1	Quantum Noise Limited and Entanglement-Assisted Magnetometry. Physical Review Letters, 2010, 104, 133601.	7.8	328
2	Polarized Alkali-Metal Vapor with Minute-Long Transverse Spin-Relaxation Time. Physical Review Letters, 2010, 105, 070801.	7.8	212
3	Quantum back-action-evading measurement of motion in a negative mass reference frame. Nature, 2017, 547, 191-195.	27.8	153
4	Light-induced desorption of alkali-metal atoms from paraffin coating. Physical Review A, 2002, 66, .	2.5	135
5	Relaxation of atomic polarization in paraffin-coated cesium vapor cells. Physical Review A, 2005, 72, .	2.5	110
6	Generation of a squeezed state of an oscillator by stroboscopic back-action-evading measurement. Nature Physics, 2015, 11, 389-392.	16.7	92
7	Magnetometry with millimeter-scale antirelaxation-coated alkali-metal vapor cells. Journal of the Optical Society of America B: Optical Physics, 2006, 23, 1001.	2.1	78
8	High quality anti-relaxation coating material for alkali atom vapor cells. Optics Express, 2010, 18, 5825.	3.4	64
9	Magnetocardiography on an isolated animal heart with a room-temperature optically pumped magnetometer. Scientific Reports, 2018, 8, 16218.	3.3	53
10	Non-invasive detection of animal nerve impulses with an atomic magnetometer operating near quantum limited sensitivity. Scientific Reports, 2016, 6, 29638.	3.3	52
11	Controlling atomic vapor density in paraffin-coated cells using light-induced atomic desorption. Physical Review A, 2009, 79, .	2.5	50
12	Investigation of antirelaxation coatings for alkali-metal vapor cells using surface science techniques. Journal of Chemical Physics, 2010, 133, 144703.	3.0	45
13	Three-component variometer based on a scalar potassium sensor. Measurement Science and Technology, 2004, 15, 918-922.	2.6	36
14	Characterization of high-temperature performance of cesium vapor cells with anti-relaxation coating. Journal of Applied Physics, 2017, 121, .	2.5	32
15	Experimental demonstration of the sensitivity of an optically pumped quantum magnetometer. Technical Physics, 2004, 49, 779-783.	0.7	31
16	Hyperfine frequency shift and Zeeman relaxation in alkali-metal-vapor cells with antirelaxation alkene coating. Physical Review A, 2013, 87, .	2.5	26
17	Experimental investigation of the longitudinal relaxation time of electronic polarization of the ground state of potassium atoms in a cell with an antirelaxation coating on the walls. JETP Letters, 1999, 70, 196-200.	1.4	19
18	Transient processes under dynamic excitation of a coherent population trapping resonance. Quantum Electronics, 2016, 46, 668-671.	1.0	19

#	ARTICLE	IF	CITATIONS
19	Detection of low-conductivity objects using eddy current measurements with an optical magnetometer. Physical Review Research, 2019, 1, .	3.6	19
20	Spin-alignment noise in atomic vapor. Physical Review Research, 2020, 2, .	3.6	17
21	A new model of a quantum magnetometer: A single-cell Cs-K tandem based on four-quantum resonance in 39K atoms. Technical Physics, 2000, 45, 931-936.	0.7	14
22	Fast three-component magnetometer-variometer based on a cesium sensor. Technical Physics, 2006, 51, 112-117.	0.7	14
23	Light-induced changes in an alkali metal atomic vapor cell coating studied by X-ray photoelectron spectroscopy. Journal of Applied Physics, 2013, 114, .	2.5	13
24	Testing a prototype of the neutron magnetic resonance stabilization system. Technical Physics Letters, 2007, 33, 1-3.	0.7	12
25	Temperature dependence of the kinetics of irreversible escape of cesium atoms from a vapor phase into an antirelaxation coating. Technical Physics, 2012, 57, 1257-1265.	0.7	11
26	Rubidium 'whiskers' in a vapour cell. Nature Physics, 2007, 3, 2-2.	16.7	8
27	Electric-field-induced change of the alkali-metal vapor density in paraffin-coated cells. Physical Review A, 2009, 79, .	2.5	8
28	Is light narrowing possible with dense-vapor paraffin coated cells for atomic magnetometers?. AIP Advances, 2017, 7, .	1.3	8
29	Quantum magnetometer for stabilization of the neutron magnetic resonance. Technical Physics Letters, 2006, 32, 627-629.	0.7	7
30	Raman and nuclear magnetic resonance investigation of alkali metal vapor interaction with alkene-based anti-relaxation coating. Journal of Chemical Physics, 2016, 144, 094707.	3.0	7
31	Comparative study of alkali-vapour cells with alkane-, alkeneand 1-nonadecylbenzene-based antirelaxation wall coatings. Quantum Electronics, 2013, 43, 1175-1178.	1.0	5
32	Multiple-quantum radio-frequency spectroscopy of atoms: Application to the metrology of geomagnetic fields. Technical Physics, 1999, 44, 1025-1028.	0.7	4
33	Dependence of the longitudinal relaxation time of the polarization of cesium atoms in the ground state on the temperature of an antirelaxation coating. Technical Physics, 2010, 55, 1324-1329.	0.7	4
34	A noise-immune cesium magnetometer. Instruments and Experimental Techniques, 2007, 50, 91-94.	0.5	3
35	Experimental nonlinear interference comb spectroscopy. Bulletin of the Russian Academy of Sciences: Physics, 2017, 81, 1466-1467.	0.6	3
36	On the effect of photoinduced emission of alkali atoms from a paraffin coating on the rate of spin relaxation of atoms in the volume of a cell. Optics and Spectroscopy (English Translation of Optika i Spektroskopiya) 2017, 42, 1020-1024.	0.6	3

#	ARTICLE	IF	CITATIONS
37	Gradiometric investigation of a cesium-vapor quantum magnetometer. Technical Physics, 2007, 52, 389-391.	0.7	2
38	Surface coatings for atomic magnetometry. , 2013, , 205-224.		2
39	Collective radiation effects in rubidium vapor beyond the yoked superradiance. Journal of Physics B: Atomic, Molecular and Optical Physics, 2020, 53, 175003.	1.5	2
40	Cavity enhanced quantum limited magnetometry. , 2014, , .		1
41	Investigation of antirelaxation wall coatings beyond melting temperatures. , 2017, , .		1
42	Quantum memory, entanglement and sensing with room temperature atoms. Journal of Physics: Conference Series, 2011, 264, 012022.	0.4	0
43	Raman spectroscopy investigation of alkene-based anti-relaxation coating. , 2014, , .		0
44	Experimental study of angular and frequency spectra of laser pulse diffraction on a planar periodic nanostructure of gold V antennas. Quantum Electronics, 2015, 45, 914-916.	1.0	0