

Igor E Mazets

List of Publications by Year in descending order

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92
papers

3,516
citations

159585

30
h-index

138484

58
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93
all docs

93
docs citations

93
times ranked

2255
citing authors

#	ARTICLE	IF	CITATIONS
1	Relaxation and Prethermalization in an Isolated Quantum System. <i>Science</i> , 2012, 337, 1318-1322.	12.6	783
2	Experimental observation of a generalized Gibbs ensemble. <i>Science</i> , 2015, 348, 207-211.	12.6	439
3	Experimental characterization of a quantum many-body system via higher-order correlations. <i>Nature</i> , 2017, 545, 323-326.	27.8	161
4	Reversible state transfer between superconducting qubits and atomic ensembles. <i>Physical Review A</i> , 2009, 79, .	2.5	128
5	Cold Bose Gases with Large Scattering Lengths. <i>Physical Review Letters</i> , 2002, 88, 210403.	7.8	109
6	Multiatom cooperative emission following single-photon absorption: Dicke-state dynamics. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2007, 40, F105-F112.	1.5	95
7	Breakdown of Integrability in a Quasi-1D Ultracold Bosonic Gas. <i>Physical Review Letters</i> , 2008, 100, 210403.	7.8	91
8	Two-point density correlations of quasicondensates in free expansion. <i>Physical Review A</i> , 2010, 81, .	2.5	84
9	Density ripples in expanding low-dimensional gases as a probe of correlations. <i>Physical Review A</i> , 2009, 80, .	2.5	83
10	Two-Point Phase Correlations of a One-Dimensional Bosonic Josephson Junction. <i>Physical Review Letters</i> , 2011, 106, 020407.	7.8	78
11	Prethermalization revealed by the relaxation dynamics of full distribution functions. <i>New Journal of Physics</i> , 2013, 15, 075011.	2.9	69
12	Atom interferometry with trapped Bose-Einstein condensates: impact of atom-atom interactions. <i>New Journal of Physics</i> , 2010, 12, 065036.	2.9	60
13	Local relaxation and light-cone-like propagation of correlations in a trapped one-dimensional Bose gas. <i>New Journal of Physics</i> , 2014, 16, 053034.	2.9	57
14	Weakly Interacting Bose Gas in the One-Dimensional Limit. <i>Physical Review Letters</i> , 2010, 105, 265302.	7.8	55
15	Thermalization in a quasi-one-dimensional ultracold bosonic gas. <i>New Journal of Physics</i> , 2010, 12, 055023.	2.9	52
16	Highly nonlocal optical nonlinearities in atoms trapped near a waveguide. <i>Optica</i> , 2016, 3, 725.	9.3	51
17	Transient coherent population trapping in a closed loop interaction scheme. <i>Physical Review A</i> , 1996, 53, 3444-3448.	2.5	48
18	Non-equilibrium scale invariance and shortcuts to adiabaticity in a one-dimensional Bose gas. <i>Scientific Reports</i> , 2015, 5, 9820.	3.3	48

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19	Cooling of a One-Dimensional Bose Gas. <i>Physical Review Letters</i> , 2016, 116, 030402.	7.8	48
20	Designing arbitrary one-dimensional potentials on an atom chip. <i>Optics Express</i> , 2019, 27, 33474.	3.4	43
21	Fluctuations and Stochastic Processes in One-Dimensional Many-Body Quantum Systems. <i>Physical Review Letters</i> , 2010, 105, 015301.	7.8	42
22	Pseudoresonance mechanism of all-optical frequency-standard operation. <i>Physical Review A</i> , 2005, 72, .	2.5	40
23	Extension of the Generalized Hydrodynamics to the Dimensional Crossover Regime. <i>Physical Review Letters</i> , 2021, 126, 090602.	7.8	40
24	Two-level masers as heat-to-work converters. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 9941-9944.	7.1	38
25	Prethermalization in one-dimensional Bose gases: Description by a stochastic Ornstein-Uhlenbeck process. <i>European Physical Journal: Special Topics</i> , 2013, 217, 43-53.	2.6	37
26	Adiabatic pulse propagation in coherent atomic media with the tripod level configuration. <i>Physical Review A</i> , 2005, 71, .	2.5	35
27	Einstein-Podolsky-Rosen Correlations of Ultracold Atomic Gases. <i>Physical Review Letters</i> , 2011, 106, 120404.	7.8	35
28	Waves on an interface between two phase-separated Bose-Einstein condensates. <i>Physical Review A</i> , 2002, 65, .	2.5	32
29	Giant vacuum forces via transmission lines. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 10485-10490.	7.1	31
30	Collective excitations of a "gravitationally" self-bound Bose gas. <i>Europhysics Letters</i> , 2001, 56, 1-7.	2.0	30
31	Quantum Field Thermal Machines. <i>PRX Quantum</i> , 2021, 2, .	9.2	29
32	Thermalization in a one-dimensional integrable system. <i>Physical Review A</i> , 2011, 84, .	2.5	27
33	Depletion of a Bose-Einstein condensate by laser-induced dipole-dipole interactions. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2004, 37, S155-S164.	1.5	25
34	Dephasing in coherently split quasicondensates. <i>Physical Review A</i> , 2011, 83, .	2.5	23
35	Degenerate Bose gases with uniform loss. <i>Physical Review A</i> , 2016, 93, .	2.5	22
36	Coherent population trapping in a finite-size buffer-less cell. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2007, 40, 3851-3860.	1.5	21

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37	Two-Particle Interference with Double Twin-Atom Beams. <i>Physical Review Letters</i> , 2021, 126, 083603.	7.8	21
38	Coherence protection by the quantum Zeno effect and nonholonomic control in a Rydberg rubidium isotope. <i>Physical Review A</i> , 2005, 71, .	2.5	20
39	Relaxation of bosons in one dimension and the onset of dimensional crossover. <i>SciPost Physics</i> , 2020, 9, .	4.9	19
40	Quantized refrigerator for an atomic cloud. <i>Quantum - the Open Journal for Quantum Science</i> , 0, 3, 155.	0.0	19
41	Optically Induced Polarons in Bose-Einstein Condensates: Monitoring Composite Quasiparticle Decay. <i>Physical Review Letters</i> , 2005, 94, 190403.	7.8	18
42	Integrability breakdown in longitudinally trapped, one-dimensional bosonic gases. <i>European Physical Journal D</i> , 2011, 65, 43-47.	1.3	17
43	Backscattering properties of a waveguide-coupled array of atoms in the strongly nonparaxial regime. <i>Physical Review A</i> , 2014, 89, .	2.5	16
44	Metal abundances and kinematics of quasar absorbers. <i>Astronomy and Astrophysics</i> , 2002, 383, 813-822.	5.1	15
45	BOSE-EINSTEIN CONDENSATES WITH LASER-INDUCED DIPOLE-DIPOLE INTERACTIONS BEYOND THE MEAN-FIELD APPROACH. <i>International Journal of Modern Physics B</i> , 2004, 18, 961-974.	2.0	14
46	Dephasing in two decoupled one-dimensional Bose-Einstein condensates and the subexponential decay of the interwell coherence. <i>European Physical Journal B</i> , 2009, 68, 335-339.	1.5	14
47	Polarization of two close metal spheres in an external homogeneous electric field. <i>Technical Physics</i> , 2000, 45, 1238-1240.	0.7	13
48	Nonlinear wavefront sharpening in the adiabatic population transfer regime. <i>Quantum and Semiclassical Optics: Journal of the European Optical Society Part B</i> , 1996, 8, 909-913.	0.9	12
49	Double radio-optical resonance in ⁸⁷ Rb atomic vapour in a finite-size bufferless cell. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2008, 41, 125401.	1.5	12
50	Relaxation in an extended bosonic Josephson junction. <i>Physical Review Research</i> , 2021, 3, .	3.6	12
51	High-contrast dark resonance on the D2-line of ⁸⁷ Rb in a vapor cell with different directions of the pump-probe waves. <i>European Physical Journal D</i> , 2005, 35, 445-448.	1.3	11
52	Two-dimensional dynamics of expansion of a degenerate Bose gas. <i>Physical Review A</i> , 2012, 86, .	2.5	11
53	Adiabatic Raman polariton in a Bose condensate. <i>JETP Letters</i> , 1996, 64, 515-519.	1.4	10
54	How different are multiatom quantum solitons from mean-field solitons?. <i>Europhysics Letters</i> , 2006, 76, 196-202.	2.0	10

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55	Creation of macroscopic quantum superposition states by a measurement. Europhysics Letters, 2008, 83, 60004.	2.0	10
56	Dynamics and kinetics of quasiparticle decay in a nearly-one-dimensional degenerate Bose gas. Physical Review A, 2011, 83, .	2.5	10
57	Nonperturbative method to compute thermal correlations in one-dimensional systems. Physical Review A, 2018, 98, .	2.5	10
58	Stimulated Raman processes in optically dense, inhomogeneously broadened media. Physical Review A, 1996, 54, 3539-3545.	2.5	9
59	New aspects of absorption line formation in intervening turbulent clouds – II. Monte Carlo simulation of interstellar H+D Ly α absorption profiles. Monthly Notices of the Royal Astronomical Society, 1997, 288, 802-816.	4.4	9
60	Coherence and Josephson oscillations between two tunnel-coupled one-dimensional atomic quasicondensates at finite temperature. Physical Review A, 2013, 87, .	2.5	9
61	Normal modes for electromagnetically induced transparency in the presence of off-resonance transitions. Physics Letters, Section A: General, Atomic and Solid State Physics, 1997, 229, 77-82.	2.1	8
62	Restoring integrability in one-dimensional quantum gases by two-particle correlations. Physical Review A, 2009, 79, .	2.5	8
63	Non-additivity in laser-illuminated many-atom systems. Optics Letters, 2014, 39, 3674.	3.3	8
64	Limit of laser cooling of atoms by velocity selective coherent population trapping. Journal of Physics B: Atomic, Molecular and Optical Physics, 1993, 26, 3795-3802.	1.5	7
65	Dark resonances in ⁸⁷ Rb atomic vapors interacting with the field of copropagated linearly polarized waves of various frequencies. Technical Physics, 2006, 51, 1414-1424.	0.7	7
66	Propagation of coupled dark-state polaritons and storage of light in a tripod medium. Physical Review A, 2017, 95, .	2.5	7
67	Abnormal velocity of soliton-type pulses in a nonlinear three-level medium with population inversion. Physical Review A, 1995, 52, 4941-4944.	2.5	6
68	Photoionization of neutral atoms in a Bose-Einstein condensate. Quantum and Semiclassical Optics: Journal of the European Optical Society Part B, 1998, 10, 675-681.	0.9	6
69	ELECTROMAGNETICALLY-INDUCED ISOTHERMAL "GRAVITATIONAL" COLLAPSE IN MOLECULAR FERMIONIC GASES. International Journal of Modern Physics B, 2004, 18, 2027-2034.	2.0	6
70	Adiabatic propagation of quantized light pulses in an atomic medium with the tripod level configuration. Journal of Experimental and Theoretical Physics, 2006, 103, 365-369.	0.9	6
71	Metropolis's Hastings thermal state sampling for numerical simulations of Bose-Einstein condensates. Computer Physics Communications, 2014, 185, 1926-1931.	7.5	6
72	Studying non-equilibrium many-body dynamics using one-dimensional Bose gases. , 2014, , .		5

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73	Coherent population trapping in a non-monochromatic laser field. Optics Communications, 1992, 92, 247-253.	2.1	4
74	Quantum particle localization by frequent coherent monitoring. Physical Review A, 2013, 87, .	2.5	4
75	Double refraction in coherent media. Optics Communications, 1997, 135, 65-70.	2.1	3
76	Modification of Scattering Lengths via Magnetic Dipole-Dipole Interactions. Physical Review Letters, 2007, 98, 140401.	7.8	3
77	Many-body physics of slow light. Physical Review A, 2014, 90, .	2.5	3
78	Nonexponential decay of an atomic excited state in the presence of a Bose-Einstein condensate. Physics Letters, Section A: General, Atomic and Solid State Physics, 1997, 229, 73-76.	2.1	1
79	Screw-type transparency in a three-level medium. JETP Letters, 1998, 67, 919-926.	1.4	1
80	Electromagnetically Induced Transparency: Laws of Light Transmission in a Continuous Wave Experiment. Physica Scripta, 1998, 58, 583-586.	2.5	1
81	Characteristics of four-wave mixing in a Bose-condensed atomic gas. Technical Physics Letters, 1999, 25, 911-912.	0.7	1
82	Nonlinearity effects in wave propagation in multicomponent Bose-Einstein condensates. Journal of Experimental and Theoretical Physics, 2002, 95, 221-225.	0.9	1
83	Optimized scheme of a rubidium all-optical frequency standard. Technical Physics Letters, 2005, 31, 1009-1010.	0.7	1
84	Double radiooptical resonance in ^{87}Rb atomic vapor in cells with antirelaxation wall coating. Technical Physics, 2009, 54, 268-275.	0.7	1
85	Tunneling electroconductance of atomic Bose-Einstein condensates. Physical Review A, 2009, 79, .	2.5	1
86	Cooperative population dynamics of an ensemble of $\hat{\nu}$ atoms in a bichromatic field. Technical Physics, 1998, 43, 631-636.	0.7	0
87	Degenerate four-wave mixing induced by ultrashort laser pulses in gaseous media. , 1998, 3345, 152.		0
88	Coherent Raman scattering on light-induced optical gratings prepared by adiabatic population transfer. , 1998, , .		0
89	Instability of a Bose condensate of neutral atoms in an external light field of nonuniform intensity. Technical Physics Letters, 1999, 25, 372-373.	0.7	0
90	Isotropic quantum beats. European Physical Journal D, 2004, 31, 121-129.	1.3	0

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91	Coherent population trapping (Electromagnetically induced transparency) resonance in cells of finite sizes. <i>Technical Physics</i> , 2008, 53, 498-503.	0.7	0
92	Geometry-dependent interplay of long- and short-range interactions in ultracold fermionic gases: models for condensed matter and astrophysics. <i>New Journal of Physics</i> , 2008, 10, 045013.	2.9	0