

Alexej I Streltsov

List of Publications by Year in descending order

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69
papers

2,818
citations

136950

32
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175258

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all docs

69
docs citations

69
times ranked

905
citing authors

#	ARTICLE	IF	CITATIONS
1	<i>Colloquium</i> : Multiconfigurational time-dependent Hartree approaches for indistinguishable particles. <i>Reviews of Modern Physics</i> , 2020, 92, .	45.6	67
2	Many-Body Effects in Fragmented, Depleted, and Condensed Bosonic Systems in Traps and Optical Cavities by MCTDHB and MCTDH-X. , 2018, , 93-115.		4
3	Variance of an anisotropic Bose-Einstein condensate. <i>Chemical Physics</i> , 2018, 509, 45-54.	1.9	17
4	Probing quantum states with momentum boosts. <i>Physical Review A</i> , 2018, 98, .	2.5	6
5	Many-body effects in the excitation spectrum of weakly interacting Bose-Einstein condensates in one-dimensional optical lattices. <i>Physical Review A</i> , 2017, 95, .	2.5	10
6	Solvable model of a trapped mixture of Bose-Einstein condensates. <i>Chemical Physics</i> , 2017, 482, 362-373.	1.9	17
7	Uncertainty product of an out-of-equilibrium many-particle system. <i>Physical Review A</i> , 2016, 93, .	2.5	30
8	Many-body excitations and deexcitations in trapped ultracold bosonic clouds. <i>Physical Review A</i> , 2016, 94, .	2.5	15
9	MCTDHB Physics and Technologies: Excitations and Vorticity, Single-Shot Detection, Measurement of Fragmentation, and Optimal Control in Correlated Ultra-Cold Bosonic Many-Body Systems. , 2016, , 23-49.		5
10	Vorticity, Variance, and the Vigor of Many-Body Phenomena in Ultracold Quantum Systems: MCTDHB and MCTDH-X. , 2016, , 79-96.		3
11	Many-body tunneling dynamics of Bose-Einstein condensates and vortex states in two spatial dimensions. <i>Physical Review A</i> , 2015, 92, .	2.5	38
12	Quantum speed limit and optimal control of many-boson dynamics. <i>Physical Review A</i> , 2015, 92, .	2.5	38
13	Quantum Many-Body Dynamics of Trapped Bosons with the MCTDHB Package: Towards New Horizons with Novel Physics. , 2015, , 63-86.		4
14	Universality of fragmentation in the Schrödinger dynamics of bosonic Josephson junctions. <i>Physical Review A</i> , 2014, 89, .	2.5	44
15	Controlling the velocities and the number of emitted particles in the tunneling to open space dynamics. <i>Physical Review A</i> , 2014, 89, .	2.5	21
16	Generic regimes of quantum many-body dynamics of trapped bosonic systems with strong repulsive interactions. <i>Physical Review A</i> , 2014, 89, .	2.5	32
17	Breaking the resilience of a two-dimensional Bose-Einstein condensate to fragmentation. <i>Physical Review A</i> , 2014, 90, .	2.5	31
18	Unified view on linear response of interacting identical and distinguishable particles from multiconfigurational time-dependent Hartree methods. <i>Journal of Chemical Physics</i> , 2014, 140, 034108.	3.0	13

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19	Elastic scattering of a Bose-Einstein condensate at a potential landscape. <i>Journal of Physics: Conference Series</i> , 2014, 488, 012032.	0.4	11
20	Excitation spectra of many-body systems by linear response: General theory and applications to trapped condensates. <i>Physical Review A</i> , 2013, 88, .	2.5	32
21	Quantum systems of ultracold bosons with customized interparticle interactions. <i>Physical Review A</i> , 2013, 88, .	2.5	38
22	Two trapped particles interacting by a finite-range two-body potential in two spatial dimensions. <i>Physical Review A</i> , 2013, 87, .	2.5	39
23	Numerically-Exact Schrödinger Dynamics of Closed and Open Many-Boson Systems with the MCTDHB Package. , 2013, , 81-92.		4
24	How an interacting many-body system tunnels through a potential barrier to open space. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012, 109, 13521-13525.	7.1	55
25	Excitation spectra of fragmented condensates by linear response: General theory and application to a condensate in a double-well potential. <i>Physical Review A</i> , 2012, 86, .	2.5	14
26	Numerically exact quantum dynamics of bosons with time-dependent interactions of harmonic type. <i>Physical Review A</i> , 2012, 86, .	2.5	92
27	Dynamics and symmetries of a repulsively bound atom pair in an infinite optical lattice. <i>Physical Review A</i> , 2012, 86, .	2.5	14
28	Wave chaos as signature for depletion of a Bose-Einstein condensate. <i>Physical Review A</i> , 2012, 86, .	2.5	46
29	Recursive formulation of the multiconfigurational time-dependent Hartree method for fermions, bosons and mixtures thereof in terms of one-body density operators. <i>Chemical Physics</i> , 2012, 401, 2-14.	1.9	23
30	Optimal time-dependent lattice models for nonequilibrium dynamics. <i>New Journal of Physics</i> , 2011, 13, 043003.	2.9	21
31	Swift Loss of Coherence of Soliton Trains in Attractive Bose-Einstein Condensates. <i>Physical Review Letters</i> , 2011, 106, 240401.	7.8	39
32	Number fluctuations of cold, spatially split bosonic objects. <i>Physical Review A</i> , 2011, 84, .	2.5	6
33	Accurate multi-boson long-time dynamics in triple-well periodic traps. <i>Physical Review A</i> , 2011, 83, .	2.5	45
34	Exact decay and tunnelling dynamics of interacting few-boson systems. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2010, 43, 029802-029802.	1.5	7
35	Fragmented many-body states of definite angular momentum and stability of attractive three-dimensional condensates. <i>Physical Review A</i> , 2010, 82, .	2.5	15
36	Quantum dynamics of attractive versus repulsive bosonic Josephson junctions: Bose-Hubbard and full-Hamiltonian results. <i>Physical Review A</i> , 2010, 82, .	2.5	52

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37	General mapping for bosonic and fermionic operators in Fock space. <i>Physical Review A</i> , 2010, 81, .	2.5	47
38	Many-body theory for systems with particle conversion: Extending the multiconfigurational time-dependent Hartree method. <i>Physical Review A</i> , 2009, 79, .	2.5	37
39	Exact Quantum Dynamics of a Bosonic Josephson Junction. <i>Physical Review Letters</i> , 2009, 103, 220601.	7.8	163
40	Scattering of an attractive Bose-Einstein condensate from a barrier: Formation of quantum superposition states. <i>Physical Review A</i> , 2009, 80, .	2.5	64
41	Exact decay and tunnelling dynamics of interacting few-boson systems. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2009, 42, 044018.	1.5	36
42	Build-up of coherence between initially-independent subsystems: The case of Bose-Einstein condensates. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2009, 373, 301-304.	2.1	9
43	Efficient generation and properties of mesoscopic quantum superposition states in an attractive Bose-Einstein condensate threaded by a potential barrier. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2009, 42, 091004.	1.5	21
44	Reduced density matrices and coherence of trapped interacting bosons. <i>Physical Review A</i> , 2008, 78, .	2.5	124
45	Fragmented Metastable States Exist in an Attractive Bose-Einstein Condensate for Atom Numbers Well above the Critical Number of the Gross-Pitaevskii Theory. <i>Physical Review Letters</i> , 2008, 100, 040402.	7.8	19
46	Multiconfigurational time-dependent Hartree method for bosons: Many-body dynamics of bosonic systems. <i>Physical Review A</i> , 2008, 77, .	2.5	280
47	Formation and Dynamics of Many-Boson Fragmented States in One-Dimensional Attractive Ultracold Gases. <i>Physical Review Letters</i> , 2008, 100, 130401.	7.8	59
48	Multiconfigurational time-dependent Hartree method for mixtures consisting of two types of identical particles. <i>Physical Review A</i> , 2007, 76, .	2.5	50
49	Interferences in the Density of Two Bose-Einstein Condensates Consisting of Identical or Different Atoms. <i>Physical Review Letters</i> , 2007, 98, 110405.	7.8	32
50	Role of Excited States in the Splitting of a Trapped Interacting Bose-Einstein Condensate by a Time-Dependent Barrier. <i>Physical Review Letters</i> , 2007, 99, 030402.	7.8	175
51	Multiorbital mean-field approach for bosons, spinor bosons, and Bose-Bose and Bose-Fermi mixtures in real-space optical lattices. <i>Physical Review A</i> , 2007, 76, .	2.5	13
52	Unified view on multiconfigurational time propagation for systems consisting of identical particles. <i>Journal of Chemical Physics</i> , 2007, 127, 154103.	3.0	124
53	Time-dependent multi-orbital mean-field for fragmented Bose-Einstein condensates. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2007, 362, 453-459.	2.1	34
54	Coupled-cluster theory for bosons in rings and optical lattices. <i>Computational and Theoretical Chemistry</i> , 2006, 768, 151-158.	1.5	5

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55	Demixing of Bosonic Mixtures in Optical Lattices from Macroscopic to Microscopic Scales. Physical Review Letters, 2006, 97, 230403.	7.8	37
56	Coupled-cluster theory for systems of bosons in external traps. Physical Review A, 2006, 73, .	2.5	32
57	General variational many-body theory with complete self-consistency for trapped bosonic systems. Physical Review A, 2006, 73, .	2.5	119
58	Fragmentation of Bose-Einstein condensates in multi-well three-dimensional traps. Physics Letters, Section A: General, Atomic and Solid State Physics, 2005, 347, 88-94.	2.1	24
59	Exact ground state of finite Bose-Einstein condensates on a ring. Physical Review A, 2005, 72, .	2.5	64
60	Properties of fragmented repulsive condensates. Physical Review A, 2005, 71, .	2.5	14
61	Interacting fermions and bosons with definite total momentum. Physical Review B, 2005, 71, .	3.2	6
62	Zoo of Quantum Phases and Excitations of Cold Bosonic Atoms in Optical Lattices. Physical Review Letters, 2005, 95, 030405.	7.8	80
63	Continuous configuration-interaction for condensates in a ring. Europhysics Letters, 2004, 67, 8-13.	2.0	23
64	Ground-state fragmentation of repulsive Bose-Einstein condensates in double-trap potentials. Physical Review A, 2004, 70, .	2.5	52
65	Self-consistent fragmented excited states of trapped condensates. Physical Review A, 2004, 70, .	2.5	24
66	Best mean-field for condensates. Physics Letters, Section A: General, Atomic and Solid State Physics, 2003, 318, 564-569.	2.1	71
67	Charge transfer effects in molecule-negative ion complexes induced by core ionization. Journal of Chemical Physics, 2003, 119, 3051-3062.	3.0	11
68	Foreign and native coordination effects in core-level spectra of mixed Be-Mg clusters. Journal of Chemical Physics, 2002, 117, 3533-3536.	3.0	11
69	Interatomic response to core ionization of atomic clusters. Chemical Physics Letters, 2001, 339, 263-268.	2.6	10