Alexey N Rubtsov

List of Publications by Year
in descending order

70	3,558	279798 23	133252 59
papers	citations	h-index	g-index

70	70	70	2190
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Continuous-time MonteÂCarlo methods for quantum impurity models. Reviews of Modern Physics, 2011, 83, 349-404.	45.6	1,185
2	Continuous-time quantum Monte Carlo method for fermions. Physical Review B, 2005, 72, .	3.2	524
3	Dual fermion approach to nonlocal correlations in the Hubbard model. Physical Review B, 2008, 77, .	3.2	290
4	Enhanced crystal-field splitting and orbital-selective coherence induced by strong correlations in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mi mathvariant="normal">V</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:msub><mml:mi mathvariant="normal">O</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:mrow></mml:math>. Physical Review B, 2007, 76, .	3.2	129
5	Dual boson approach to collective excitations in correlated fermionic systems. Annals of Physics, 2012, 327, 1320-1335.	2.8	115
6	Dual fermion approach to the two-dimensional Hubbard model: Antiferromagnetic fluctuations and Fermi arcs. Physical Review B, 2009, 79, .	3.2	110
7	Efficient Perturbation Theory for Quantum Lattice Models. Physical Review Letters, 2009, 102, 206401.	7.8	105
8	Continuous-time quantum Monte Carlo method for fermions: Beyond auxiliary field framework. JETP Letters, 2004, 80, 61-65.	1.4	77
9	Dynamical screening effects in correlated materials: Plasmon satellites and spectral weight transfers from a Green's function ansatz to extended dynamical mean field theory. Physical Review B, 2012, 85, .	3.2	75
10	dc-electric-field-induced second-harmonic generation in Si(111)-SiO2-Cr metal-oxide-semiconductor structures. Physical Review B, 1996, 54, 1825-1832.	3.2	73
11	dc-electric-field-induced and low-frequency electromodulation second-harmonic generation spectroscopy ofSi(001)â^'SiO2interfaces. Physical Review B, 1999, 60, 8924-8938.	3.2	73
12	Dual fermion approach to susceptibility of correlated lattice fermions. Physical Review B, 2008, 77, .	3.2	55
13	Second-harmonic generation in metal and semiconductor low-dimensional structures. Surface Science, 1995, 325, 343-355.	1.9	50
14	Plasmons in Strongly Correlated Systems: Spectral Weight Transfer and Renormalized Dispersion. Physical Review Letters, 2014, 113, 246407.	7.8	49
15	Superperturbation solver for quantum impurity models. Europhysics Letters, 2009, 85, 27007.	2.0	46
16	Polaronic mass renormalization of impurities in Bose-Einstein condensates: Correlated Gaussian-wave-function approach. Physical Review A, 2016, 93, .	2.5	45
17	Cluster dual fermion approach to nonlocal correlations. JETP Letters, 2008, 86, 677-682.	1.4	35
18	Phasons, sliding modes and friction. European Physical Journal B, 2002, 29, 85-95.	1.5	31

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19	Correlated Adatom Trimer on a Metal Surface: A Continuous-Time Quantum Monte Carlo Study. Physical Review Letters, 2005, 94, 026402.	7.8	31
20	Relevance of the complete Coulomb interaction matrix for the Kondo problem: Co impurities in Cu hosts. Physical Review B, 2009, 80, .	3.2	31
21	Competing phases of the Hubbard model on a triangular lattice: Insights from the entropy. Physical Review B, 2014, 89, .	3.2	31
22	Dual parquet scheme for the two-dimensional Hubbard model: Modeling low-energy physics of high-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>T</mml:mi><mml:mi>c</mml:mi></mml:msub></mml:ma cuprates with high momentum resolution. Physical Review B, 2020, 101, .	3.2	31
23	Dualâ€fermion approach to nonâ€equilibrium strongly correlated problems. Annalen Der Physik, 2012, 524, 49-61.	2.4	29
24	Crossover between a displacive and an order-disorder phase transition. Physical Review E, 2000, 61, 126-131.	2.1	23
25	Importance of full Coulomb interactions for understanding the electronic structure of δ-Pu. Physical Review B, 2010, 82, .	3.2	21
26	Dispersive Response of a Disordered Superconducting Quantum Metamaterial. Photonics, 2015, 2, 449-458.	2.0	21
27	Role of rotational symmetry in the magnetism of a multiorbital model. Physical Review B, 2012, 86, .	3.2	20
28	Electron energy spectrum of the spin-liquid state in a frustrated Hubbard model. Physical Review B, 2011, 83, .	3.2	19
29	Macroscopic Size Effects in Second Harmonic Generation from Si(111) Coated by Thin Oxide Films: The Role of Optical Casimir Nonlocality. Physical Review Letters, 1997, 78, 46-49.	7.8	16
30	Quantum spin fluctuations and evolution of electronic structure in cuprates. Npj Quantum Materials, 2018, 3, .	5.2	14
31	DC-electric-field-induced optical second harmonic generation at the smooth metal-electrolyte interface. Surface Science, 1995, 336, 225-231.	1.9	13
32	Spin transfer torque induced paramagnetic resonance. Physical Review B, 2019, 99, .	3.2	13
33	Accessing thermodynamics from dynamical cluster-embedding approaches. Physical Review B, 2009, 80, .	3.2	11
34	Magnetostriction and ferroelectric state in AgCrS₂. Journal of Physics Condensed Matter, 2015, 27, 165601.	1.8	11
35	Role of coherence in transport through engineered atomic spin devices. Physical Review B, 2016, 94, .	3.2	11
36	Quantum phase transitions in the discreteÏ†4model: The crossover between two types of transition. Physical Review B, 2001, 63, .	3.2	10

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37	Collective magnetic fluctuations in Hubbard plaquettes captured by fluctuating local field method. Physical Review B, 2020, 102, .	3.2	10
38	Topological defects, pattern evolution, and hysteresis in thin magnetic films. Europhysics Letters, 2006, 73, 104-109.	2.0	9
39	Analytical approximation for single-impurity Anderson model. JETP Letters, 2010, 91, 319-325.	1.4	9
40	Nonequilibrium breakdown of a correlated insulator through pattern formation. Physical Review B, 2016, 93, .	3.2	9
41	Dual fermion method as a prototype of generic reference-system approach for correlated fermions. Annals of Physics, 2020, 422, 168310.	2.8	9
42	Quantum discreteÏ†4model at finite temperatures. Physical Review B, 2002, 65, .	3.2	8
43	Relaxation and decoherence of qubits encoded in collective states of engineered magnetic structures. Physical Review B, 2017, 96, .	3.2	7
44	Fluctuating local field method probed for a description of small classical correlated lattices. Physical Review E, 2018, 97, 052120.	2.1	7
45	Transient phases and dynamical transitions in the post-quench evolution of the generalized Bose-Anderson model. Physical Review B, 2016, 94, .	3.2	6
46	Dual Fermion Approach to High-Temperature Superconductivity. Journal of Superconductivity and Novel Magnetism, 2009, 22, 45-49.	1.8	5
47	Synchronization of qubit ensembles under optimized<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>Ï€</mml:mi></mml:math>-pulse driving. Physical Review A, 2015, 92, .	2.5	5
48	Modeling the metastable dynamics of correlated structures. Scientific Reports, 2015, 5, 8005.	3.3	5
49	Exact real-time dynamics of single-impurity Anderson model from a single-spin hybridization-expansion. SciPost Physics, 2019, 7, .	4.9	5
50	Fluctuating local field approach to free energy of one-dimensional molecules with strong collective electronic fluctuations. Physical Review B, 2022, 105, .	3.2	5
51	Quality of the mean-field approximation: A low-order generalization yielding realistic critical indices for three-dimensional Ising-class systems. Physical Review B, 2002, 66, .	3.2	4
52	Understanding the electronic structure and magnetism of correlated nanosystems. Journal of Physics Condensed Matter, 2009, 21, 064248.	1.8	4
53	Critical behavior at dynamical phase transition in the generalized Bose-Anderson model. Physical Review B, 2017, 95, .	3.2	4
54	Probing the silicon-silicon oxide interface of Si(111)î—¸SiO2î—¸Cr MOS structures by DC-electric-field-induced second harmonic generation. Surface Science, 1996, 352-354, 1033-1037.	1.9	3

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55	Oscillatoric bias dependence of DC-electric field induced second harmonic generation from Siâ€“SiO2 multiple quantum wells. Thin Solid Films, 1998, 336, 350-353.	1.8	3
56	Two-dimensional and layered structures in the discrete Ï†4 model. Journal of Experimental and Theoretical Physics, 2000, 91, 1204-1212.	0.9	3
57	Analysis of the nature of the peak structure of Hubbard subbands using the quantum Monte Carlo method. JETP Letters, 2012, 94, 768-773.	1.4	3
58	On a lattice model for type II incommensurate crystals. Ferroelectrics, 2000, 240, 1429-1433.	0.6	2
59	Optical echo in photonic crystals. JETP Letters, 2007, 85, 156-159.	1.4	2
60	Energy diffusion in strongly driven quantum chaotic systems: the role of correlations of the matrix elements. Journal of Physics A: Mathematical and Theoretical, 2008, 41, 055103.	2.1	2
61	Fluctuating local field approach to the description of lattice models in the strong coupling regime. Journal of Superconductivity and Novel Magnetism, 0, , .	1.8	2
62	Reciprocity sum rule for metal surfaces and its application to the problem of surface plasmon dispersion. Solid State Communications, 1994, 90, 799-802.	1.9	1
63	Monte Carlo simulations of the classical two-dimensional discrete frustrated model. European Physical Journal B, 2003, 31, 525-531.	1.5	1
64	Numerical Study of the Classical 2D Discrete Frustrated Ï†4Model. Ferroelectrics, 2004, 301, 71-77.	0.6	1
65	Restricted Boltzmann machine based on a Fermi sea. Journal of Physics A: Mathematical and Theoretical, 2021, 54, 485302.	2.1	1
66	Numerical study of the paraelectric-incommensurate- ferroelectric transition in the DIFFOUR model. Europhysics Letters, 2001, 53, 216-220.	2.0	0
67	The crossover between quantum and classical phase transitions in monolayers: a discrete Ï†4 model study. Surface Science, 2002, 507-510, 707-712.	1.9	0
68	Multiscale simulation of the electronic structure of silicon nanoclusters. Bulletin of the Lebedev Physics Institute, 2013, 40, 132-135.	0.6	0
69	Quantum statistical ensemble for emissive correlated systems. Physical Review E, 2016, 93, 062122.	2.1	0
70	Proton fraction in neutron star matter: dynamical mean-field approach. New Journal of Physics, 2021, 23, 033015.	2.9	0