

Tadeusz Kopec

List of Publications by Year in descending order

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#	ARTICLE	IF	CITATIONS
1	Transverse freezing in the quantum Ising spin glass: a thermofield dynamic approach. Journal of Physics C: Solid State Physics, 1988, 21, 297-307.	1.5	48
2	Quantum rotor description of the Mott-insulator transition in the Bose-Hubbard model. Physical Review B, 2007, 76, .	1.1	45
3	Instabilities in the quantum Sherrington-Kirkpatrick Ising spin glass in transverse and longitudinal fields. Physical Review B, 1989, 39, 12418-12421.	1.1	43
4	Coulomb repulsion, phase stiffnesses, and doping-induced superconductivity from the Mott insulator in the $t\text{-}U$ model of high-Tc cuprates. Physical Review B, 2004, 70, .	1.1	36
5	Quantum critical point and scaling in a layered array of ultrasmall Josephson junctions. Physical Review B, 1999, 60, 7473-7483.	1.1	34
6	A dynamic theory of transverse freezing in the Sherrington-Kirkpatrick Ising model. Journal of Physics C: Solid State Physics, 1988, 21, 6053-6065.	1.5	30
7	Random fields and quantum effects in proton glasses. European Physical Journal B, 1990, 78, 493-499.	0.6	25
8	Quantum Heisenberg spin glasses: Anisotropy effects and field dependence. Physical Review B, 1990, 41, 9221-9227.	1.1	23
9	Finite-temperature effects on the superfluid Bose-Einstein condensation of confined ultracold atoms in three-dimensional optical lattices. Journal of Physics B: Atomic, Molecular and Optical Physics, 2009, 42, 095302.	0.6	23
10	Three-Dimensional Josephson-Junction Arrays in the Quantum Regime. Physical Review Letters, 2000, 84, 749-752.	2.9	22
11	Phase diagram of the quantum Ising spin glass in a transverse field. Physical Review B, 1991, 44, 12583-12585.	1.1	21
12	Atom-atom correlations in time-of-flight imaging of ultracold bosons in optical lattices. Physical Review A, 2011, 84, .	1.0	21
13	Quantum Spin Glass on the Bethe Lattice. Physical Review Letters, 1997, 78, 1988-1991.	2.9	20
14	Dependence of the superconducting critical temperature on the number of layers in a homologous series of high-Tc cuprates. Physical Review B, 2005, 71, .	1.1	19
15	On the zero-temperature critical behaviour of the quantum X-Y model in a transverse magnetic field. Physics Letters, Section A: General, Atomic and Solid State Physics, 1983, 95, 104-106.	0.9	18
16	Frustration effects in rapidly rotating square and triangular optical lattices. Physical Review A, 2009, 79, .	1.0	18
17	Zero-temperature phase diagram of Bose-Fermi gaseous mixtures in optical lattices. Physical Review A, 2010, 81, .	1.0	16
18	Phase diagrams in the SO(5) quantum rotor theory of high-Tc superconductivity. Physical Review B, 2000, 62, 9059-9076.	1.1	15

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19	Néel order in the Hubbard model within a spin-charge rotating reference frame approach: Crossover from weak to strong coupling. <i>Physical Review B</i> , 2008, 77, .	1.1	14
20	Excitonic gap formation and condensation in the bilayer graphene structure. <i>Physica Scripta</i> , 2016, 91, 095801.	1.2	14
21	Infinite-range-interaction M-component quantum spin glasses: Statics and dynamics in the large-M limit. <i>Physical Review B</i> , 1994, 50, 9963-9975.	1.1	13
22	Quantum vector spin glasses with random Dzyaloshinsky-Moriya interactions. <i>Physical Review B</i> , 1991, 43, 10853-10864.	1.1	12
23	Critical charge instability on the verge of the Mott transition and the origin of quantum protection in high-Tccuprates. <i>Physical Review B</i> , 2006, 73, .	1.1	12
24	Superfluid-to-Mott transition in optical lattices with restricted geometry. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2010, 43, 425303.	0.7	11
25	Excitonic Phase Transition in the Extended Three-Dimensional Falicovâ€“Kimball Model. <i>Journal of Low Temperature Physics</i> , 2014, 176, 27-63.	0.6	11
26	Discontinuous spin-glass transition in a random quantum Heisenberg magnet. <i>Physical Review B</i> , 1995, 52, 9590-9594.	1.1	10
27	Superconducting phase coherence and pairing gap in the three-dimensional attractive Hubbard model. <i>Physical Review B</i> , 2002, 65, .	1.1	10
28	Spectral properties of excitons in the bilayer graphene. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2018, 95, 108-120.	1.3	9
29	Antiferromagnetic ordering and excitonic pairing in AA-stacked bilayer graphene. <i>Physical Review B</i> , 2021, 104, .	1.1	9
30	Nonlinear Response in Quantum Spin Glasses. <i>Physical Review Letters</i> , 1997, 79, 4266-4269.	2.9	8
31	Ground-state properties of charge and magnetically frustrated two-dimensional quantum Josephson junction arrays. <i>Physical Review B</i> , 2002, 66, .	1.1	8
32	Possible origin of 60K plateau in the $\text{YBa}_2\text{Cu}_3\text{O}_{6+y}$ phase diagram. <i>Physical Review B</i> , 2006, 74, .	1.1	8
33	Generic gauge fields in the Hubbard model: Emergence of pairing interaction. <i>Physical Review B</i> , 2006, 73, .	1.1	8
34	Effect of next-nearest-neighbour hopping on Boseâ€“Einstein condensation in optical lattices. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2010, 43, 085303.	0.6	8
35	The infinite-range quantum transverse Ising spin glass: new estimate of the critical line via thermo-field method. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1990, 150, 70-73.	0.9	7
36	Quantum orientational glasses: Large-M limit approach. <i>Physical Review B</i> , 1996, 54, 3367-3379.	1.1	7

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37	Scaling near the Quantum-Critical Point in the SO(5) Theory of the High-Tc Superconductivity. <i>Physical Review Letters</i> , 2001, 87, 097002.	2.9	7
38	Optical sum rule violation and the kinetic energy change at the phase coherence transition in superconductors with pseudogap. <i>Physical Review B</i> , 2003, 67, .	1.1	7
39	Capacitance-matrix and geometrical effects on the ground-state properties of quantum Josephson-junction arrays. <i>Physical Review B</i> , 2001, 63, .	1.1	6
40	Short-range \hat{A}_{\pm} interaction Ising spin glass in a transverse field on a Bethe lattice: a quantum-spherical approach. <i>Physica Status Solidi (B): Basic Research</i> , 2006, 243, 502-511.	0.7	6
41	Effect of the Temperature and Concentration of Magnetic Atoms on Phase Diagrams and Order Parameters in Ferromagnetic Superconductors. <i>Physica Status Solidi (B): Basic Research</i> , 1986, 137, 73-79.	0.7	5
42	Quantum effects in a superconducting-glass model. <i>Physical Review B</i> , 1995, 52, 16140-16148.	1.1	5
43	Superconducting phase transition in quantum three-dimensional Josephson junction arrays: c-axis anisotropy and charge frustration effects. <i>Physical Review B</i> , 2000, 62, 14419-14426.	1.1	5
44	The tricritical point in the quantum Ising $S=1$ spin glass with biaxial crystal-field effects. <i>Journal of Physics Condensed Matter</i> , 2000, 12, 5727-5734.	0.7	5
45	Phase coherence in the Josephson-coupled stack of planar spin-charge separated condensates and the interlayer mechanism of high-Tc superconductivity. <i>Physical Review B</i> , 2004, 69, .	1.1	5
46	Temperature effects on superfluid phase transition in Bose-Hubbard model with three-body interaction. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2014, 378, 3402-3405.	0.9	5
47	Temperature-dependent excitation spectra of ultra-cold bosons in optical lattices. <i>Physica B: Condensed Matter</i> , 2014, 433, 37-42.	1.3	5
48	Probing Phase Coherence Via Density of States for Strongly Correlated Excitons. <i>Journal of Low Temperature Physics</i> , 2015, 178, 295-330.	0.6	5
49	Quantum Glass of Interacting Bosons with Off-Diagonal Disorder. <i>Physical Review Letters</i> , 2018, 120, 160401.	2.9	5
50	High thermoelectric performance in excitonic bilayer graphene. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2020, 124, 114234.	1.3	5
51	Nonlinear susceptibility in quadrupolar glasses with axial symmetry. <i>Physical Review B</i> , 1993, 48, 16792-16794.	1.1	4
52	Composite quasiparticles and the hidden quantum critical point in the topological transition scenario of high-Tc cuprates. <i>Physical Review B</i> , 2005, 72, .	1.1	4
53	Local dissipation effects in two-dimensional quantum Josephson junction arrays with a magnetic field. <i>Physical Review B</i> , 2005, 72, .	1.1	4
54	Superfluid to Mott-insulator transition in an anisotropic two-dimensional optical lattice. <i>Annalen Der Physik</i> , 2008, 17, 947-954.	0.9	4

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55	Superfluid phase transition in two-dimensional excitonic systems. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2014, 378, 1185-1190.	0.9	4
56	Bose condensation in systems with p -particle tunneling and multi-body interactions. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2015, 48, 345001.	0.7	4
57	Ultraviolet absorption spectrum of the half-filled bilayer graphene. <i>Superlattices and Microstructures</i> , 2018, 119, 166-180.	1.4	4
58	Excitonic Tunneling in the AB-bilayer Graphene Josephson Junctions. <i>Journal of Low Temperature Physics</i> , 2019, 194, 325-359.	0.6	4
59	Dynamical correlations and a quantum glass phase in a random hopping Bose-Hubbard model. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2020, 2020, 024001.	0.9	4
60	Excitonic condensation and metal-semiconductor transition in AA bilayer graphene in an external magnetic field. <i>Physical Review B</i> , 2022, 105, .	1.1	4
61	Emergence of a superglass phase in the random-hopping Bose-Hubbard model. <i>Physical Review B</i> , 2022, 105, .	1.1	4
62	Spin glasses with cubic anisotropy. <i>Journal of Applied Physics</i> , 1994, 75, 5847-5849.	1.1	3
63	Magnetic correlation functions in SO(5) theory of high-Tc superconductivity. <i>Physical Review B</i> , 2001, 64, .	1.1	3
64	Uemura relation in phase-fluctuation-dominated superconductors. <i>Physical Review B</i> , 2002, 66, .	1.1	3
65	Phase coherence and spectral functions in the two-dimensional excitonic systems. <i>Physica B: Condensed Matter</i> , 2015, 473, 75-92.	1.3	3
66	On the multi-critical behaviour of a ferromagnetic superconductor. <i>Journal of Physics F: Metal Physics</i> , 1983, 13, L137-L141.	1.6	2
67	Quantum critical behaviour of a disordered granular superconductor with charging effects. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1985, 108, 468-472.	0.9	2
68	Quantum Heisenberg $S=1$ spin glass: Effect of anisotropy and ferromagnetic interaction. <i>European Physical Journal B</i> , 1991, 84, 285-293.	0.6	2
69	Field-induced crossover behavior in quantum Heisenberg spin glasses with random-anisotropy axes. <i>Physical Review B</i> , 1992, 45, 5703-5706.	1.1	2
70	Superconducting-insulating transition in quantum three-dimensional Josephson junction arrays with magnetic and charge frustration. <i>Physical Review B</i> , 2003, 67, .	1.1	2
71	Effective pairing interaction in the two-dimensional Hubbard model within a spin rotationally invariant approach. <i>Physical Review B</i> , 2008, 78, .	1.1	2
72	Scaling of the density profiles of cold atoms near the quantum critical point in two- and three-dimensional optical lattices. <i>Physical Review A</i> , 2012, 85, .	1.0	2

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73	Phase-locking transition of Josephson coupled Bose-Einstein condensates in wood-pile geometry. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2014, 406, 253-259.	1.2	2
74	Mott-superfluid transition of q-deformed bosons. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2015, 379, 2493-2497.	0.9	2
75	Excitonic gap formation in neutral bilayer structures. <i>Physica Scripta</i> , 2015, 90, 085806.	1.2	2
76	Excitonic effects in twisted bilayer graphene. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2020, 115, 113682.	1.3	2
77	Dimensional Crossover in the Bose-Einstein Condensation Confined to Anisotropic Three-Dimensional Lattices. <i>Journal of Low Temperature Physics</i> , 2020, 201, 340-372.	0.6	2
78	Quantum Rotor Approach to the Mott-Insulator Transition in the Bose-Hubbard Model. <i>Acta Physica Polonica A</i> , 2008, 114, 29-34.	0.2	2
79	Fluctuation-induced first-order phase transition in ferromagnetic superconductors. <i>Journal of Physics F: Metal Physics</i> , 1984, 14, 2649-2657.	1.6	1
80	Charging energy renormalisation due to quasi-particle effects in granular superconductors. <i>Journal of Physics C: Solid State Physics</i> , 1986, 19, 1975-1981.	1.5	1
81	Superconducting glass properties in the random infinite-range interaction Hubbard model: stability analysis and phase diagrams. <i>Journal of Physics Condensed Matter</i> , 1990, 2, 7493-7501.	0.7	1
82	The bipolaronic superconducting glass state in the random infinite-range interaction Hubbard model. <i>Journal of Physics Condensed Matter</i> , 1990, 2, 397-404.	0.7	1
83	Quantum-state Potts spin glass: Transverse-field effects and freezing transition. <i>Physical Review B</i> , 1991, 44, 12058-12061.	1.1	1
84	Quantum phase diagrams in periodic and glassy arrays of ultra-small Josephson junctions. <i>Physica B: Condensed Matter</i> , 1996, 222, 353-357.	1.3	1
85	A solvable multipolar glass. <i>Journal of Physics A</i> , 1996, 29, L49-L54.	1.6	1
86	Phase diagram of the quantum SO(5) symmetry model for high-TC superconductivity. <i>Physica C: Superconductivity and Its Applications</i> , 2000, 341-348, 237-238.	0.6	1
87	Quantum criticality in the SO(5) theory of antiferromagnetism and superconductivity. <i>Physica C: Superconductivity and Its Applications</i> , 2003, 387, 65-68.	0.6	1
88	Nexus between quantum criticality and the chemical potential pinning in high-Tc cuprates. <i>Physical Review B</i> , 2005, 72, .	1.1	1
89	Competition between local and nonlocal dissipation effects in two-dimensional quantum Josephson-junction arrays. <i>Physica C: Superconductivity and Its Applications</i> , 2007, 455, 25-32.	0.6	1
90	Spin-charge rotating local reference frames: a unified $U(2) = U(1) \times SU(2)$ approach to the interacting electrons. <i>Physica Status Solidi (B): Basic Research</i> , 2007, 244, 2458-2463.	0.7	1

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91	Quantum rotor description of the bosonic superfluidâ€™Mott insulator transition in optical lattices. Physica Status Solidi (B): Basic Research, 2009, 246, 981-984.	0.7	1
92	Finite-temperature phase-locking transition in three-dimensional arrays of Josephson coupled Boseâ€™Einstein condensates. Physics Letters, Section A: General, Atomic and Solid State Physics, 2012, 376, 2788-2791.	0.9	1
93	Berezinskiiâ€™Kosterlitzâ€™Thouless transition in two-dimensional arrays of Josephson coupled Boseâ€™Einstein condensates. Physics Letters, Section A: General, Atomic and Solid State Physics, 2013, 377, 2581-2584.	0.9	1
94	NÃ©el order and the destruction of localized magnetic moments in the crossover from the Mottâ€™Heisenberg to the Slater limit. Physica Status Solidi (B): Basic Research, 2013, 250, 542-546.	0.7	1
95	Finite temperature superfluid transition of strongly correlated lattice bosons in various geometries. Physica B: Condensed Matter, 2015, 456, 244-249.	1.3	1
96	Density of states and excitonic condensation in the double layer correlated systems. Physica B: Condensed Matter, 2016, 481, 67-79.	1.3	1
97	Berezinskiiâ€™Kosterlitzâ€™Thouless transition of ultracold atoms in optical lattice. Journal of Physics B: Atomic, Molecular and Optical Physics, 2017, 50, 085006.	0.6	1
98	Coherence and spectral weight transfer in the dynamic structure factor of cold lattice bosons. Physica B: Condensed Matter, 2017, 504, 74-79.	1.3	1
99	Sherringtonâ€™Kirkpatrick glassy-phase of random Josephson coupled Boseâ€™Einstein condensates in wood-pile geometry. Physics Letters, Section A: General, Atomic and Solid State Physics, 2017, 381, 368-372.	0.9	1
100	Superconducting Critical Temperature of Homologous Series of High-Tc Cuprates as a Function of Number of Layers. Acta Physica Polonica A, 2004, 106, 561-567.	0.2	1
101	Antiferromagnetic Order in the Hubbard Model: Spin-Charge Rotating Reference Frame Approach. Acta Physica Polonica A, 2008, 114, 247-251.	0.2	1
102	Real time functional effective action for the quantum dynamics of a transverse Ising model at finite temperature. Journal of Physics A, 1987, 20, L393-L397.	1.6	0
103	Charge Density Waves in Systems with Condensed Local Pairs and Superconductivity in $\text{La}_{2-x}\text{M}_x\text{CuO}_4$ Compounds. Physica Status Solidi (B): Basic Research, 1988, 147, K37.	0.7	0
104	Quantum-state Potts spin glass in a transverse field: Dynamical correlations and first-order phase transition. Physical Review B, 1992, 46, 1015-1022.	1.1	0
105	Composite bosons and quantum coherent effects in the negative-U Hubbard model. Physica B: Condensed Matter, 1994, 194-196, 1393-1394.	1.3	0
106	The short-range-interaction -random-bond spherical quantum spin glass on the Bethe lattice: dynamic correlations and thermodynamic functions. Journal of Physics Condensed Matter, 1999, 11, 807-820.	0.7	0
107	SO(5) superconductor in a Zeeman magnetic field: Phase diagram and thermodynamic properties. Physical Review B, 2002, 66, .	1.1	0
108	Effect of phase fluctuations on the penetration depth in local-pair superconductors. Physica C: Superconductivity and Its Applications, 2003, 387, 89-92.	0.6	0

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109	Charging and magnetic field effects in three-dimensional Josephson junction arrays. Physica C: Superconductivity and Its Applications, 2003, 387, 102-104.	0.6	0
110	Zero-temperature phase diagram of charge and magnetically frustrated two-dimensional quantum Josephson junction arrays. Physica C: Superconductivity and Its Applications, 2003, 387, 105-108.	0.6	0
111	SO(5) superconductor in a Zeeman magnetic field. Physica C: Superconductivity and Its Applications, 2003, 387, 93-96.	0.6	0
112	Novel quantum criticality due to emergent topological conservation law in high- T_c cuprates. Physica B: Condensed Matter, 2006, 378-380, 135-136.	1.3	0
113	Superconductivity emerging near U(1) topological critical point and the strange metal phase in cuprates. Physica C: Superconductivity and Its Applications, 2007, 460-462, 1107-1108.	0.6	0
114	Influence of oxygen ordering and charge imbalance on the existence of the 60-K plateau in the $\text{YBa}_2\text{Cu}_3\text{O}_{6+y}$ phase diagram. Physica C: Superconductivity and Its Applications, 2007, 460-462, 1024-1025.	0.6	0
115	Emergence of Pairing Interaction in the Hubbard Model in the Strong Coupling Limit. Journal of Superconductivity and Novel Magnetism, 2009, 22, 57-61.	0.8	0
116	Spectral functions in the two-dimensional Hubbard model within a spin-charge rotating frame approach. European Physical Journal B, 2010, 76, 405-419.	0.6	0
117	Quasi-particle peak due to magnetic order in strongly correlated electron systems. Annalen Der Physik, 2010, 522, 584-593.	0.9	0
118	Magnetically driven superconducting pairing interaction in the two-dimensional Hubbard model within a spin-rotationally invariant approach. Physica Status Solidi (B): Basic Research, 2010, 247, 605-607.	0.7	0
119	Unconventional quantum critical points in systems of strongly interacting bosons. Physica B: Condensed Matter, 2014, 449, 204-208.	1.3	0
120	Competing bosonic condensates in optical lattice with a mixture of single and pair hoppings. Physica B: Condensed Matter, 2017, 505, 22-32.	1.3	0
121	Density-driven superfluid transition of the constrained bosons on a lattice. Physics Letters, Section A: General, Atomic and Solid State Physics, 2019, 383, 2061-2064.	0.9	0
122	Topological Criticality on Brink of the Mott Transition in High- T_c Superconductors. Acta Physica Polonica A, 2006, 109, 499-506.	0.2	0
123	Quantum Criticality Due to the Topological Effects in the Hubbard Model. Acta Physica Polonica A, 2007, 111, 527-536.	0.2	0
124	The Existence of the 60 K Plateau in the $\text{YBa}_2\text{Cu}_3\text{O}_{6+y}$ Phase Diagram: the Role of Oxygen Ordering and Charge Imbalance. Acta Physica Polonica A, 2007, 111, 705-711.	0.2	0
125	Pairing Scenarios for the Hubbard Model in the Strong Coupling Limit. Acta Physica Polonica A, 2008, 114, 159-163.	0.2	0
126	Magnetically Driven Superconducting Pairing Interaction in the Two-Dimensional Hubbard Model within a Spin-Rotationally Invariant Approach. Acta Physica Polonica A, 2010, 118, 273-278.	0.2	0

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127	Electron Spectral Functions in the Presence of the Antiferromagnetic Order in the Two-Dimensional Hubbard Model. Acta Physica Polonica A, 2010, 118, 267-272.	0.2	0
128	Bose-Hubbard Model in the Rotating Frame of Reference. Acta Physica Polonica A, 2010, 118, 279-282.	0.2	0
129	Theoretical Approach to Strongly Correlated Systems Based on the U(1) and SU(2) Symmetry Groups. Acta Physica Polonica A, 2012, 121, 738-743.	0.2	0
130	Ultra-Cold Bosons in Optical Lattice: Time-of-Flight Imaging of Atom-Atom Correlations. Acta Physica Polonica A, 2012, 121, 796-800.	0.2	0
131	Phase Transitions of Bosons in Optical Lattices with a Mixture of Single and Pair Hoppings. Acta Physica Polonica A, 2016, 130, 625-628.	0.2	0
132	Two-Band Model for Coherent Excitonic Condensates. Acta Physica Polonica A, 2016, 130, 621-624.	0.2	0
133	Dynamic Structure Factor of Ultracold Bosons in Optical Lattice. Acta Physica Polonica A, 2016, 130, 564-568.	0.2	0
134	Temperature Effects on Superfluid Phase Transition in Bose-Hubbard Model with Three-body Interaction. Acta Physica Polonica B, Proceedings Supplement, 2017, 10, 925.	0.0	0