

# Pinaki Sengupta

## List of Publications by Year in descending order

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85  
papers

2,515  
citations

201674

27  
h-index

206112

48  
g-index

86  
all docs

86  
docs citations

86  
times ranked

2951  
citing authors

#	ARTICLE	IF	CITATIONS
1	Sign-problem free quantum stochastic series expansion algorithm on a quantum computer. Npj Quantum Information, 2022, 8, .	6.7	1
2	Direct Observation of Magnon-Phonon Strong Coupling in Two-Dimensional Antiferromagnet at High Magnetic Fields. Physical Review Letters, 2021, 127, 097401.	7.8	54
3	Weyl triplons in $\text{SrCu}_2\text{O}_3$ . Physical Review B, 2021, 104, .	3.2	2
4	Skyrmion-driven topological Hall effect in a Shastry-Sutherland magnet. Physical Review B, 2021, 104, .	3.2	6
5	Tailoring magnetic order via atomically stacking $3d/5d$ electrons to achieve high-performance spintronic devices. Applied Physics Reviews, 2020, 7, .	11.3	18
6	Antichiral edge states in Heisenberg ferromagnet on a honeycomb lattice. Physical Review B, 2020, 101, .	3.2	27
7	Topological magnon bands in the flux state of Shastry-Sutherland lattice model. Physical Review B, 2020, 101, .	3.2	7
8	Effects of staggered Dzyaloshinskii-Moriya interactions in a quasi-two-dimensional Shastry-Sutherland model. Physical Review B, 2020, 101, .	3.2	2
9	Topological Hall effect in the Shastry-Sutherland lattice. Physical Review B, 2020, 102, .	3.2	3
10	Phase diagram of spin-1 chains with Dzyaloshinskii-Moriya interaction. Physical Review B, 2019, 100, .	3.2	2
11	Pair hopping in systems of strongly interacting hard-core bosons. Physical Review B, 2019, 100, .	3.2	4
12	Electronic ground state in bilayer graphene with realistic Coulomb interactions. Physical Review B, 2019, 100, .	3.2	7
13	NMR relaxation in the spin-1 Heisenberg chain. Physical Review B, 2019, 100, .	3.2	12
14	Nonclassicality of spin structures in condensed matter: An analysis of $\text{SrCu}_2\text{O}_3$ . Physical Review B, 2019, 100, .	3.2	4
15	Response to Comment on "The role of electron-electron interactions in two-dimensional Dirac fermions". Science, 2019, 366, .	12.6	1
16	Quadratic to linear magnetoresistance tuning in $\text{TmB}_4$ . Physical Review B, 2019, 99, .	3.2	1
17	Magnetization plateaus and supersolid phases in an extended Shastry-Sutherland model. European Physical Journal B, 2018, 91, 1.	1.5	6
18	The role of electron-electron interactions in two-dimensional Dirac fermions. Science, 2018, 361, 570-574.	12.6	82

#	ARTICLE	IF	CITATIONS
19	Phase diagram of the Shastry-Sutherland Kondo lattice model with classical localized spins: a variational calculation study. Journal of Physics Condensed Matter, 2017, 29, 305802.	1.8	4
20	Magnons in a two-dimensional transverse-field XXZ model. Physical Review B, 2017, 96, .	3.2	7
21	Noncollinear magnetic ordering in the Shastry-Sutherland Kondo lattice model: Insulating regime and the role of Dzyaloshinskii-Moriya interaction. Physical Review B, 2017, 96, .	3.2	7
22	Noncollinear magnetic ordering in a frustrated magnet: Metallic regime and the role of frustration. Physical Review B, 2017, 96, .	3.2	8
23	Raman spectroscopy of atomically thin two-dimensional magnetic iron phosphorus trisulfide (FePS <sub>3</sub> ). Physical Review B, 2017, 96, .	4.4	299
24	Hysteretic magnetoresistance and unconventional anomalous Hall effect in the frustrated magnet TbMnO <sub>3</sub> . Physical Review B, 2016, 93, .	3.2	22
25	Berry curvature of interacting bosons in a honeycomb lattice. Physical Review A, 2015, 92, .	2.5	11
26	Generalized plaquette state in the anisotropic Shastry-Sutherland model. Physical Review B, 2015, 92, .	3.2	1
27	Dimer-induced heavy-fermion superconductivity in the Shastry-Sutherland Kondo lattice model. Physical Review B, 2015, 92, .	3.2	6
28	Origin of modulated phases and magnetic hysteresis in TbMnO <sub>3</sub> . Physical Review B, 2015, 92, .	3.2	6
29	Interaction-Driven Metal-Insulator Transition in Strained Graphene. Physical Review Letters, 2015, 115, 186602.	7.8	52
30	Quantum Hall bilayer as pseudospin magnet. Europhysics Letters, 2015, 109, 57003.	2.0	4
31	Pairing correlations in the two-layer attractive Hubbard model. New Journal of Physics, 2014, 16, 013004.	2.9	8
32	Strange correlations in spin-1 Heisenberg antiferromagnets. Physical Review B, 2014, 90, .	3.2	12
33	Characterizing the Haldane phase in quasi-one-dimensional spin-1 Heisenberg antiferromagnets. Modern Physics Letters B, 2014, 28, 1430017.	1.9	36
34	Quenching the Haldane Gap in Spin-1 Heisenberg Antiferromagnets. Physical Review Letters, 2014, 112, 247203.	7.8	46
35	Magnetic phases in the S=1 Shastry-Sutherland model with uniaxial anisotropy. Physical Review B, 2014, 89, .	3.2	5
36	Magnetization plateaus in generalized Shastry-Sutherland models. Journal of the Korean Physical Society, 2013, 63, 486-488.	0.7	1

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37	Electric field modulation of the tetragonal domain orientation revealed in the magnetic ground state of quantum paraelectric EuTiO <sub>3</sub> . Physical Review B, 2013, 87, .	3.2	40
38	Phase diagram and magnetic excitations of anisotropic spin-one magnets. Physical Review B, 2013, 87, .	3.2	43
39	Columnar Antiferromagnetic Order and Spin Supersolid Phase on the Extended Shastry-Sutherland Lattice. Physical Review Letters, 2013, 110, 207207.	7.8	15
40	Néel to spin-Peierls transition in a quasi-one-dimensional Heisenberg model coupled to bond phonons. Physical Review B, 2013, 88, .	3.2	2
41	Induced magnetism versus Kondo screening in alternating Mott-metal layers. Physical Review B, 2013, 88, .	3.2	3
42	Dimensionality Selection in a Molecule-Based Magnet. Physical Review Letters, 2012, 108, 077208.	7.8	45
43	Dimensional crossover in spin-1 Heisenberg antiferromagnets: a quantum Monte Carlo study. Journal of Physics: Conference Series, 2012, 400, 032112.	0.4	6
44	Magnetic and nematic orderings in spin-1 antiferromagnets with single-ion anisotropy. Physical Review B, 2012, 86, .	3.2	19
45	Thermal Transport and Strong Mass Renormalization in NiCl <sub>2</sub> 4SC(NH <sub>2</sub> ) <sub>2</sub> . Physical Review B, 2012, 86, .	7.8	57
46	Thermal Transport and Strong Mass Renormalization in NiCl <sub>2</sub> 4SC(NH <sub>2</sub> ) <sub>2</sub> . Physical Review B, 2012, 86, .	7.8	57
47	Magnetolectric effects in an organometallic quantum magnet. Physical Review B, 2011, 83, .	3.2	31
48	Critical properties of generalized four-state clock model on square lattices. Journal of Physics: Conference Series, 2011, 320, 012012.	0.4	0
49	Thermal and magnetic properties of a low-temperature antiferromagnet Ce <sub>4</sub> Pt <sub>12</sub> Sn <sub>25</sub> . Journal of Physics: Conference Series, 2011, 273, 012045.	0.4	1
50	Spin fluctuations and orbital ordering in quasi-one-dimensional $\hat{I}\pm$ -Cu(dca) <sub>2</sub> (pyz) {dca=dicyanamide=N(CN)2 <sup>-</sup> ; pyz=pyrazine}, a molecular analogue of KCuF <sub>3</sub> . Polyhedron, 2010, 29, 514-520.	2.2	6
51	Thermal and magnetic properties of the low-temperature antiferromagnet Ce <sub>4</sub> Pt <sub>12</sub> Sn <sub>25</sub> . Journal of Physics: Conference Series, 2011, 273, 012045.	3.2	6
52	Finite-temperature phase transition to the m <sub>1</sub> 2 <sub>1</sub> plateau phase in the spin-1/2 Heisenberg chain. Physical Review B, 2009, 80, .	3.2	24
53	Robust pairing mechanism from repulsive interactions. Physical Review B, 2009, 80, .	3.2	7
54	Critical Properties at the Field-Induced Bose-Einstein Condensation in NiCl <sub>2</sub> 4SC(NH <sub>2</sub> ) <sub>2</sub> . Physical Review Letters, 2009, 102, 077204.	7.8	17



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73	Phase Diagram and Visibility of Optically Trapped Bosons. AIP Conference Proceedings, 2006, , .	0.4	0
74	Quantum kinetics of an open system in the presence of periodic refocusing fields. Physical Review B, 2006, 73, .	3.2	16
75	Time-of-flight observables and the formation of Mott domains of fermions and bosons on optical lattices. Physical Review B, 2006, 73, .	3.2	10
76	Scalable Design of Tailored Soft Pulses for Coherent Control. Physical Review Letters, 2005, 95, 037202.	7.8	32
77	Supersolids versus Phase Separation in Two-Dimensional Lattice Bosons. Physical Review Letters, 2005, 94, 207202.	7.8	196
78	Phase Coherence, Visibility, and the Superfluidâ€“Mott-Insulator Transition on One-Dimensional Optical Lattices. Physical Review Letters, 2005, 95, 220402.	7.8	25
79	Lateral organization of cholesterol molecules in lipid-cholesterol assemblies. Physical Review E, 2004, 70, 021902.	2.1	6
80	Criticality in coupled quantum spin chains with competing ladderlike and two-dimensional couplings: Contrasting SrCu <sub>2</sub> O <sub>3</sub> with CaCu <sub>2</sub> O <sub>3</sub> . Physical Review B, 2004, 69, .	3.2	2
81	Specific heat of quasi-two-dimensional antiferromagnetic Heisenberg models with varying interplanar couplings. Physical Review B, 2003, 68, .	3.2	111
82	Comment on â€œGround-State Phase Diagram of a Half-Filled One-Dimensional Extended Hubbard Modelâ€. Physical Review Letters, 2003, 91, 089701; discussion 089702.	7.8	25
83	Peierls transition in the presence of finite-frequency phonons in the one-dimensional extended Peierls-Hubbard model at half-filling. Physical Review B, 2003, 67, .	3.2	40
84	High-energy magnon dispersion in the half-filled Hubbard model:â€“,â€“,A comparison with La <sub>2</sub> CuO <sub>4</sub> . Physical Review B, 2002, 66, .	3.2	14
85	Bond-order-wave phase and quantum phase transitions in the one-dimensional extended Hubbard model. Physical Review B, 2002, 65, .	3.2	180