

# D N Sheng

## List of Publications by Year in descending order

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85  
papers

5,475  
citations

94381

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76872

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85  
docs citations

85  
times ranked

3008  
citing authors

#	ARTICLE	IF	CITATIONS
1	Coexistence of non-Abelian chiral spin liquid and magnetic order in a spin-1 antiferromagnet. Physical Review B, 2022, 105, .	1.1	3
2	Quantum Phases of Transition Metal Dichalcogenide Moiré Systems. Physical Review Letters, 2022, 128, 157602.	2.9	12
3	Quantum phase diagram and chiral spin liquid in the extended spin-12 honeycomb XY model. Physical Review B, 2021, 103, .	1.1	8
4	Orbital Chern Insulator and Quantum Phase Diagram of a Kagome Electron System with Half-Filled Flat Bands. Physical Review Letters, 2021, 126, 117602.	2.9	4
5	Robust $d$ -Wave Superconductivity in the Square-Lattice $t$ - $J$ Model. Physical Review Letters, 2021, 127, 097003.	2.9	38
6	SU(4) Chiral Spin Liquid, Exciton Supersolid, and Electric Detection in Moiré Bilayers. Physical Review Letters, 2021, 127, 247701.	2.9	39
7	Topological Interface between Pfaffian and Anti-Pfaffian Order in $\hat{t}^2$ Quantum Hall Effect. Physical Review Letters, 2020, 125, 146802.	2.9	18
8	Quantum Hall effects of exciton condensate in topological flat bands. Physical Review B, 2020, 101, .	1.1	3
9	Continuous phase transition between bosonic integer quantum Hall liquid and a trivial insulator: Evidence for deconfined quantum criticality. Physical Review B, 2020, 101, .	1.1	10
10	Widely Tunable Quantum Phase Transition from Moore-Read to Composite Fermi Liquid in Bilayer Graphene. Physical Review Letters, 2020, 124, 097604.	2.9	8
11	Spin-Orbital Density Wave and a Mott Insulator in a Two-Orbital Hubbard Model on a Honeycomb Lattice. Physical Review Letters, 2019, 123, 087602.	2.9	9
12	Disorder-Driven Transition in the $\hat{t}^{1/2}$ Fractional Quantum Hall Effect. Physical Review Letters, 2019, 123, 056804.	2.9	16
13	Topological characterization of hierarchical fractional quantum Hall effects in topological flat bands with SU(N) symmetry. Physical Review B, 2019, 100, .	1.1	9
14	Single-layer tensor network study of the Heisenberg model with chiral interactions on a kagome lattice. Physical Review B, 2019, 99, .	1.1	14
15	Single-hole wave function in two dimensions: A case study of the doped Mott insulator. Physical Review B, 2019, 99, .	1.1	11
16	Identifying spinon excitations from dynamic structure factor of spin-1/2 Heisenberg antiferromagnet on the Kagome lattice. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 5437-5441.	3.3	15
17	Chiral spin liquid with spinon Fermi surfaces in the spin-1/2 triangular Heisenberg model. Physical Review B, 2019, 100, .	1.1	19
18	SU(N) fractional quantum Hall effect in topological flat bands. Physical Review B, 2018, 97, .	1.1	12

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19	Pairing versus phase coherence of doped holes in distinct quantum spin backgrounds. Physical Review B, 2018, 97, .	1.1	18
20	Quantum anomalous Hall phase stabilized via realistic interactions on a kagome lattice. Physical Review B, 2018, 98, .	1.1	9
21	Hidden spin current in doped Mott antiferromagnets. Physical Review B, 2018, 98, .	1.1	16
22	Two-component quantum Hall effects in topological flat bands. Physical Review B, 2017, 95, .	1.1	20
23	Two Universality Classes for the Many-Body Localization Transition. Physical Review Letters, 2017, 119, 075702.	2.9	170
24	Global phase diagram and quantum spin liquids in a spin- $\frac{1}{2}$ antiferromagnet. Physical Review B, 2017, 96, .	1.1	6
25	Numerical Study of Quantum Hall Bilayers at Total Filling $\nu = 1$ : A New Phase at Intermediate Layer Distances. Physical Review Letters, 2017, 119, 177601.	2.9	17
26	Nature of continuous phase transitions in interacting topological insulators. Physical Review B, 2017, 96, .	1.1	7
27	Interaction-Driven Spontaneous Quantum Hall Effect on a Kagome Lattice. Physical Review Letters, 2016, 117, 096402.	2.9	52
28	Variational Monte Carlo study of chiral spin liquid in quantum antiferromagnet on the triangular lattice. Physical Review B, 2016, 94, .	1.1	38
29	Emergent quasi-one-dimensionality in a kagome magnet: A simple route to complexity. Physical Review B, 2016, 94, .	1.1	18
30	Bosonic integer quantum Hall states in topological bands with Chern number two. Physical Review B, 2016, 93, .	1.1	20
31	Interaction-driven fractional quantum Hall state of hard-core bosons on kagome lattice at one-third filling. Physical Review B, 2016, 94, .	1.1	23
32	Global phase diagram of competing ordered and quantum spin-liquid phases on the kagome lattice. Physical Review B, 2015, 91, .	1.1	109
33	Possible non-Abelian Moore-Read state in double-layer bosonic fractional quantum Hall system. Physical Review B, 2015, 91, .	1.1	13
34	Competing spin-liquid states in the spin- $\frac{1}{2}$ model on the triangular lattice. Physical Review B, 2015, 92, .	1.1	22
35	Topological characterization of the non-Abelian Moore-Read state using density-matrix renormalization group. Physical Review B, 2015, 92, .	1.1	23
36	Quantum phase diagram of the spin-1 model on the honeycomb lattice. Physical Review B, 2015, 92, .	1.1	29

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37	Variational Monte Carlo study of a gapless spin liquid in the spin- $\frac{1}{2}$ antiferromagnetic model on the kagome lattice. Physical Review B, 2015, 92, .		
38	Fractional Quantum Hall States at $\nu = \frac{13}{5}$ and Their Non-Abelian Nature. Physical Review Letters, 2015, 115, 126805.	2.9	41
39	Nature of strong hole pairing in doped Mott antiferromagnets. Scientific Reports, 2015, 4, 5419.	1.6	31
40	Variational Monte Carlo study of a chiral spin liquid in the extended Heisenberg model on the kagome lattice. Physical Review B, 2015, 91, .	1.1	47
41	Chiral and critical spin liquids in a spin-1 kagome antiferromagnet. Physical Review B, 2015, 92, .	1.1	31
42	Obtaining topological degenerate ground states by the density matrix renormalization group. Physical Review B, 2014, 89, .	1.1	35
43	Identifying Non-Abelian Topological Order through Minimal Entangled States. Physical Review Letters, 2014, 112, 096803.	2.9	24
44	Fractional quantum spin Hall effect in flat-band checkerboard lattice model. Physical Review B, 2014, 90, .	1.1	16
45	Scaling behavior of the insulator-to-plateau transition in a topological band model. Physical Review B, 2014, 89, .	1.1	10
46	Chiral Spin Liquid in a Frustrated Anisotropic Kagome Heisenberg Model. Physical Review Letters, 2014, 112, 137202.	2.9	152
47	The Z <sub>2</sub> and chiral spin liquids in an anisotropic kagome spin model. Journal of Statistical Mechanics: Theory and Experiment, 2014, 2014, P08012.	0.9	7
48	Plaquette Ordered Phase and Quantum Phase Diagram in the Spin- $\frac{1}{2}$ Kagome Heisenberg Model. Physical Review Letters, 2014, 113, 027201.	2.9	194
49	Emergent Chiral Spin Liquid: Fractional Quantum Hall Effect in a Kagome Heisenberg Model. Scientific Reports, 2014, 4, 6317.	1.6	192
50	Phase diagram of the spin- $\frac{1}{2}$ Kagome Heisenberg Model. Physical Review Letters, 2014, 113, 027201.	1.1	91
51	Stabilization of the Quantum Spin Hall Effect by Designed Removal of Time-Reversal Symmetry of Edge States. Physical Review Letters, 2013, 110, 266802.	2.9	39
52	Topological phase transitions with and without energy gap closing. New Journal of Physics, 2013, 15, 083042.	1.2	11
53	Minimal entangled states and modular matrix for fractional quantum Hall effect in topological flat bands. Physical Review B, 2013, 88, .	1.1	35
54	Fractional Topological Phases and Broken Time-Reversal Symmetry in Strained Graphene. Physical Review Letters, 2012, 108, 266801.	2.9	90

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55	Non-Abelian Quantum Hall Effect in Topological Flat Bands. <i>Physical Review Letters</i> , 2012, 108, 126805.	2.9	99
56	Fractional quantum Hall effect in topological flat bands with Chern number two. <i>Physical Review B</i> , 2012, 86, .	1.1	119
57	Exotic Gapless Mott Insulators of Bosons on Multileg Ladders. <i>Physical Review Letters</i> , 2011, 106, 046402.	2.9	28
58	Fractional Quantum Hall Effect of Hard-Core Bosons in Topological Flat Bands. <i>Physical Review Letters</i> , 2011, 107, 146803.	2.9	234
59	Time-Reversal-Symmetry-Broken Quantum Spin Hall Effect. <i>Physical Review Letters</i> , 2011, 107, 066602.	2.9	231
60	Fractional quantum Hall effect in the absence of Landau levels. <i>Nature Communications</i> , 2011, 2, 389.	5.8	398
61	Chern number of thin films of the topological insulator $Bi_2Se_3$ . <i>Physical Review B</i> , 2010, 82, .	1.1	86
62	Supersolid order of frustrated hard-core bosons in a triangular lattice system. <i>Physical Review B</i> , 2009, 79, .	1.1	31
63	Density Matrix Renormalization Group Numerical Study of the Kagome Antiferromagnet. <i>Physical Review Letters</i> , 2008, 101, 117203.	2.9	216
64	Quantum Spin-Hall Effect and Topologically Invariant Chern Numbers. <i>Physical Review Letters</i> , 2006, 97, 036808.	2.9	515
65	Quantum Hall effect in graphene: Disorder effect and phase diagram. <i>Physical Review B</i> , 2006, 73, .	1.1	132
66	Supersolid Order from Disorder: Hard-Core Bosons on the Triangular Lattice. <i>Physical Review Letters</i> , 2005, 95, 127207.	2.9	216
67	Spin Hall effect and spin transfer in a disordered Rashba model. <i>Physical Review B</i> , 2005, 72, .	1.1	37
68	Spin-Hall Effect in Two-Dimensional Electron Systems with Rashba Spin-Orbit Coupling and Disorder. <i>Physical Review Letters</i> , 2005, 94, 016602.	2.9	148
69	Nondissipative Spin Hall Effect via Quantized Edge Transport. <i>Physical Review Letters</i> , 2005, 95, 136602.	2.9	192
70	Disorder-Driven Collapse of the Mobility Gap and Transition to an Insulator in the Fractional Quantum Hall Effect. <i>Physical Review Letters</i> , 2003, 90, 256802.	2.9	65
71	Spin-charge separation in the single-hole-doped Mott antiferromagnet. <i>Physical Review B</i> , 2001, 63, .	1.1	27
72	Nature of spin-charge separation in the $t\tilde{J}$ model. <i>Physical Review B</i> , 2000, 61, 12328-12341.	1.1	13

#	ARTICLE	IF	CITATIONS
73	Quasiparticle Localization in Disordered d-Wave Superconductors. Physical Review Letters, 2000, 85, 4944-4947.	2.9	20
74	Theory of ferromagnetic metal to paramagnetic insulator transition in $R_{1-x}A_xMnO_3$ . Physical Review B, 1999, 59, 13550-13553.	1.1	8
75	Mean-field description of the phase string effect in the $t\text{-}J$ model. Physical Review B, 1999, 59, 8943-8955.	1.1	38
76	Magnetic incommensurability in a doped Mott insulator. Physical Review B, 1999, 59, 11367-11376.	1.1	2
77	EFFECTIVE ORBITAL INTERACTION: SPIN AND ORBITAL ORDERING IN UNDOPED MANGANITES. International Journal of Modern Physics B, 1999, 13, 1397-1418.	1.0	2
78	Bosonic Resonating-Valence-Bond Description of a Doped Antiferromagnet. Physical Review Letters, 1998, 80, 5401-5404.	2.9	76
79	Phase string effect in the $t$ - $J$ model: General theory. Physical Review B, 1997, 55, 3894-3906.	1.1	103
80	Theory of Colossal Magnetoresistance in $R_{1-x}A_xMnO_3$ . Physical Review Letters, 1997, 79, 1710-1713.	2.9	152
81	Phase String Effect in a Doped Antiferromagnet. Physical Review Letters, 1996, 77, 5102-5105.	2.9	79
82	Spin-charge separation in the $t$ - $J$ model: Magnetic and transport anomalies. Physical Review B, 1995, 52, 637-664.	1.1	29
83	Path-integral approach to the one-dimensional large- $U$ Hubbard model. Physical Review B, 1992, 45, 7850-7871.	1.1	35
84	One-dimensional large- $U$ Hubbard model: An analytical approach. Physical Review Letters, 1991, 67, 3318-3321.	2.9	37
85	One-dimensional Large- $U$ Hubbard Model in Strong Coupling: Charge and Spin Separation. International Journal of Modern Physics B, 1991, 05, 1801-1807.	1.0	0