

# Dharmalingam Prabhakaran

## List of Publications by Year in descending order

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157  
papers

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159  
docs citations

159  
times ranked

8673  
citing authors

#	ARTICLE	IF	CITATIONS
1	Multi-mode excitation drives disorder during the ultrafast melting of a C4-symmetry-broken phase. Nature Communications, 2022, 13, 238.	12.8	7
2	Magnetic monopole density and antiferromagnetic domain control in spin-ice iridates. Nature Communications, 2022, 13, 444.	12.8	13
3	Inhomogeneous spin excitations in weakly coupled spin-1/2 chains. Physical Review Research, 2022, 4, .	3.6	3
4	Model for coupled $f$ magnetic spectra: A neutron scattering study of the Yb-Fe hybridization in $\text{Yb}_3\text{Fe}_2\text{O}_{10}$ . Physical Review B, 2022, 105, .	3.2	1
5	Topological metamagnetism: Thermodynamics and dynamics of the transition in spin ice under uniaxial compression. Physical Review B, 2022, 105, .	3.2	3
6	Crystallographic, Optical, and Electronic Properties of the $\text{Cs}_2\text{AgBi}_{1-x}\text{In}_x\text{Br}_6$ Double Perovskite: Understanding the Fundamental Photovoltaic Efficiency Challenges. ACS Energy Letters, 2021, 6, 1073-1081.	17.4	19
7	Classical Spin Liquid or Extended Critical Range in $\text{YMnO}_3$ ? Physical Review Letters, 2021, 126, 107202.	7.8	5
8	Charge Condensation and Lattice Coupling Drives Stripe Formation in Nickelates. Physical Review Letters, 2021, 126, 177601.	7.8	9
9	Fe on molecular-layer MoS <sub>2</sub> as inorganic Fe-S <sub>2</sub> -Mo motifs for light-driven nitrogen fixation to ammonia at elevated temperatures. Chem Catalysis, 2021, 1, 162-182.	6.1	32
10	Dynamical screening in $\text{SrVO}_3$ : Inelastic x-ray scattering experiments and <i>ab initio</i> calculations. Physical Review B, 2021, 103, .	3.2	1
11	Order-by-disorder from bond-dependent exchange and intensity signature of nodal quasiparticles in a honeycomb cobaltate. Nature Communications, 2021, 12, 3936.	12.8	38
12	Experimental measurement of the isolated magnetic susceptibility. Physical Review B, 2021, 104, .	3.2	1
13	Real Space Imaging of Spin Stripe Domain Fluctuations in a Complex Oxide. Physical Review Letters, 2021, 127, 275301.	7.8	3
14	Low-temperature thermal transport measurements of oxygen-annealed $\text{YbTi}_2\text{O}_7$ . Physical Review B, 2020, 102, .	3.2	0
15	2D photocatalysts with tuneable supports for enhanced photocatalytic water splitting. Materials Today, 2020, 41, 34-43.	14.2	36
16	Origin of the large ferroelectric polarization enhancement under high pressure for multiferroic $\text{DyMnO}_3$ . Physical Review B, 2020, 102, .	3.2	1
17	Avoided quasiparticle decay and enhanced excitation in near-Heisenberg triangular antiferromagnet $\text{Ba}_3\text{O}_9$ . Physical Review B, 2020, 102, .	3.2	27
18	Persistent coherence of quantum superpositions in an optimally doped cuprate revealed by 2D spectroscopy. Science Advances, 2020, 6, eaaw9932.	10.3	9

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19	Polarizing an antiferromagnet by optical engineering of the crystal field. Nature Physics, 2020, 16, 937-941.	16.7	99
20	Approaching the quantum critical point in a highly correlated all-in-all-out antiferromagnet. Physical Review B, 2020, 101, .	3.2	9
21	Strong quantum fluctuations from competition between magnetic phases in a pyrochlore iridate. Physical Review B, 2020, 101, .	3.2	6
22	Resonant x-ray scattering study of diffuse magnetic scattering from the topological semimetals <math xmlns:mml="http://www.w3.org/1998/Math/MathML"><math>\langle \text{EuCd} \rangle_2</math></math> and <math xmlns:mml="http://www.w3.org/1998/Math/MathML"><math>\langle \text{EuCd} \rangle_2</math></math> Physical Review B, 2020, 102, .	3.2	20
23	Quantum oscillations probe the Fermi surface topology of the nodal-line semimetal CaAgAs. Physical Review Research, 2020, 2, .	3.6	17
24	Fragmented monopole crystal, dimer entropy, and Coulomb interactions in <math xmlns:mml="http://www.w3.org/1998/Math/MathML"><math>\langle \text{Dy} \rangle_2</math></math> mathvariant="normal">O</math> <math xmlns:mml="http://www.w3.org/1998/Math/MathML"><math>\langle \text{Dy} \rangle_2</math></math> Physical Review Research, 2020, 2, .	3.6	15
25	Topological Lifshitz transitions and Fermi arc manipulation in Weyl semimetal NbAs. Nature Communications, 2019, 10, 3478.	12.8	41
26	Transverse and longitudinal spin-fluctuations in INVAR Fe <sub>0.65</sub> Ni <sub>0.35</sub> . Journal of Physics Condensed Matter, 2019, 31, 025802.	1.8	4
27	Wave Vector Difference of Magnetic Bragg Reflections and Low Energy Magnetic Excitations in Charge-stripe Ordered La <sub>2</sub> NiO <sub>4</sub> . Scientific Reports, 2019, 9, 14468.	3.3	1
28	Magnetic and electronic structure of Dirac semimetal candidate <math xmlns:mml="http://www.w3.org/1998/Math/MathML"><math>\langle \text{EuMnSb} \rangle_2</math></math> Physical Review B, 2019, 100, .	3.2	5
29	Manifold of spin states and dynamical temperature effects in <math xmlns:mml="http://www.w3.org/1998/Math/MathML"><math>\langle \text{LaCoO} \rangle_3</math></math> : Experimental and theoretical insights. Physical Review B, 2019, 100, .	3.2	5
30	Spin-orbit excitons in CoO. Physical Review B, 2019, 100, .	3.2	25
31	 <math xmlns:mml="http://www.w3.org/1998/Math/MathML"><math>\langle \text{FeTi} \rangle_2</math></math> mathvariant="normal">O</math> <math xmlns:mml="http://www.w3.org/1998/Math/MathML"><math>\langle \text{FeTi} \rangle_2</math></math> spin Jahn-Teller transition enhanced by cation substitution. Physical Review B, 2019, 100, .	3.2	7
32	Magnetoelectric domains and their switching mechanism in a Y-type hexaferrite. Physical Review B, 2019, 100, .	3.2	9
33	Photocatalytic water splitting by N-TiO <sub>2</sub> on MgO (111) with exceptional quantum efficiencies at elevated temperatures. Nature Communications, 2019, 10, 4421.	12.8	151
34	Monitoring ultrafast metallization in LaCoO <sub>3</sub> with femtosecond soft x-ray spectroscopy. Communications Physics, 2019, 2, .	5.3	9
35	Nuclear spin assisted quantum tunnelling of magnetic monopoles in spin ice. Nature Communications, 2019, 10, 1509.	12.8	9
36	Phase transitions in few-monolayer spin ice films. Nature Communications, 2019, 10, 1219.	12.8	13

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37	Spin-charge-lattice coupling in quasi-one-dimensional Ising spin chain CoNb <sub>2</sub> O <sub>6</sub> . Journal of Physics Condensed Matter, 2019, 31, 195802.	1.8	2
38	Electromagnon excitation in cupric oxide measured by Fabry-Pérot enhanced terahertz Mueller matrix ellipsometry. Scientific Reports, 2019, 9, 1353.	3.3	6
39	Role of defects in determining the magnetic ground state of ytterbium titanate. Nature Communications, 2019, 10, 637.	12.8	28
40	Structural and Optical Properties of Cs <sub>2</sub> AgBiBr <sub>6</sub> Double Perovskite. ACS Energy Letters, 2019, 4, 299-305.	17.4	146
41	Spin Jahn-Teller antiferromagnetism in $\text{CoTi}_2\text{O}_5$ . Physical Review B, 2019, 99, .	3.2	10
42	Tracking a hysteretic and disorder-broadened phase transition via the electromagnon response in improper ferroelectrics. Journal Physics D: Applied Physics, 2018, 51, 084002.	2.8	1
43	Investigation of a Spin Transition in a LaCoO <sub>3</sub> Single Crystal by the Method of X-Ray Magnetic Circular Dichroism at the Cobalt K- and L <sub>2,3</sub> -Edges. Physics of the Solid State, 2018, 60, 288-291.	0.6	1
44	Magnetic ground state and magnon-phonon interaction in multiferroic $\text{YMnO}_3$ . Physical Review B, 2018, 97, .	3.2	22
45	Spin dynamics and exchange interactions in CuO measured by neutron scattering. Physical Review B, 2018, 97, .	3.2	11
46	Folded superstructure and degeneracy-enhanced band gap in the weak-coupling charge density wave system $\text{Hf}_2\text{O}_7$ . Physical Review B, 2018, 97, .	3.2	27
47	Correlated oxygen displacements and phonon mode changes in LaCoO <sub>3</sub> single crystal. Physica B: Condensed Matter, 2018, 536, 597-599.	2.7	4
48	Pauling Entropy, Metastability, and Equilibrium in $\text{Dy}_7\text{O}_{17}$ . Physical Review Letters, 2018, 121, 067202.	11.7	27
49	Coupling between Spin and Charge Order Driven by Magnetic Field in Triangular Ising System LuFe <sub>2</sub> O <sub>4</sub> . Crystals, 2018, 8, 88.	2.2	3
50	Disentangling orbital and spin exchange interactions for $\text{Co}_2\text{O}_7$ on a rocksalt lattice. Physical Review B, 2018, 98, .	3.2	17
51	Magnetic and electronic structure of the layered rare-earth pnictide $\text{EuCd}_2\text{Sb}_2$ . Physical Review B, 2018, 98, .	3.2	20
52	Layer-by-layer epitaxial thin films of the pyrochlore Tb <sub>2</sub> Ti <sub>2</sub> O <sub>7</sub> . Nanotechnology, 2017, 28, 055708.	2.6	8
53	Andreev bound states in superconductor/ferromagnet point contact Andreev reflection spectra. Physical Review B, 2017, 95, .	3.2	5
54	Anomalous behavior of displacement correlation function and strain in lanthanum cobalt oxide analyzed both from X-ray powder diffraction and EXAFS data. Powder Diffraction, 2017, 32, S151-S154.	0.2	3

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55	Terahertz spectroscopy of anisotropic materials using beams with rotatable polarization. Scientific Reports, 2017, 7, 12337.	3.3	33
56	Magnetic excitations of the charge stripe electrons below half doping in $\text{La}_{2-x}\text{Sr}_x\text{NiO}_4$ ( $x = 0.45, 0.4$ ). Physical Review B, 2017, 95, .	3.2	6
57	Quasiparticle Breakdown and Spin Hamiltonian of the Frustrated Quantum Pyrochlore $\langle \mathbb{1} \rangle$ . Physical Review Letters, 2017, 118, 057202.	7.8	31
58	Doping Dependence of Collective Spin and Orbital Excitations in the Spin-1 Quantum Antiferromagnet $\text{La}_{2-x}\text{Sr}_x\text{NiO}_4$ . Physical Review Letters, 2017, 118, 156402.	7.8	31
59	Crystal growth of the triangular-lattice antiferromagnet $\text{Ba}_3\text{CoSb}_2\text{O}_9$ . Journal of Crystal Growth, 2017, 468, 345-348.	1.5	4
60	Crystal growth of pyrochlore rare-earth stannates. Journal of Crystal Growth, 2017, 468, 335-339.	1.5	12
61	The full magnon spectrum of yttrium iron garnet. Npj Quantum Materials, 2017, 2, .	5.2	66
62	$\text{Co}^{2+}$ -edge magnetic circular dichroism across the spin state transition in $\text{LaCoO}_3$ single crystal. Journal of Physics: Conference Series, 2016, 712, 012111.	0.4	1
63	Intermediate magnetization state and competing orders in $\text{Dy}_2\text{Ti}_2\text{O}_7$ and $\text{Ho}_2\text{Ti}_2\text{O}_7$ . Nature Communications, 2016, 7, 12592.	12.8	26
64	Hall effect in charged conducting ferroelectric domain walls. Nature Communications, 2016, 7, 13764.	12.8	57
65	Direct evidence for charge stripes in a layered cobalt oxide. Nature Communications, 2016, 7, 11632.	12.8	16
66	Magnetic phase diagram of $\text{La}_{2-x}\text{Sr}_x\text{NiO}_4$ using muon-spin relaxation. Physical Review B, 2016, 93, .	3.2	40
67	Single-gap superconductivity in $\text{La}_{2-x}\text{Sr}_x\text{NiO}_4$ . Physical Review B, 2016, 93, .	3.2	40
68	Unconventional magnetism on a honeycomb lattice by muon spin rotation. Physical Review B, 2016, 94, .	3.2	40
69	All-in/all-out Magnetic Order and Propagating Spin Waves in $\text{Sm}_2\text{O}_7$ . Physical Review Letters, 2016, 117, 087201.	7.8	31
70	Experimental signature of the attractive Coulomb force between positive and negative magnetic monopoles in spin ice. Nature Physics, 2016, 12, 661-666.	16.7	32
71	Evolution of the Fermi surface of Weyl semimetals in the transition metal pnictide family. Nature Materials, 2016, 15, 27-31.	27.5	245
72	Crystal field states of the pyrochlore spin liquid $\text{La}_2\text{O}_7$ . Physical Review B, 2015, 91, .	3.2	41

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73	Importance of $X$ and $Y$ in $X^2$ and $Y^2$ by magnetic critical scattering experiments. Physical Review B, 2015, 92, .	3.2	41
74	Inverse order-disorder transition of charge stripes. Physical Review B, 2015, 92, .	3.2	4
75	Magnetic excitation spectrum of $\text{LuFe}_2\text{O}_4$ . Linear Magnetoresistance Caused by Mobility Fluctuations in $\text{LuFe}_2\text{O}_4$ . Physical Review B, 2015, 92, .	3.2	4
76	Doped $\text{Cd}_3\text{As}_2$ . Physical Review Letters, 2015, 114, 117201.	7.8	306
77	A new topological insulator built from quasi one-dimensional atomic ribbons. Physica Status Solidi - Rapid Research Letters, 2015, 9, 130-135.	2.4	6
78	Evidence of quantum dimer excitations in $\text{Sr}_3\text{O}_7$ . Physical Review B, 2015, 92, .	3.2	44
79	Anisotropic Local Modification of Crystal Field Levels in Pr-Based Pyrochlores: A Muon-Induced Effect Modeled Using Density Functional Theory. Physical Review Letters, 2015, 114, 017602.	7.8	61
80	Weyl semimetal phase in the non-centrosymmetric compound TaAs. Nature Physics, 2015, 11, 728-732.	16.7	796
81	Terahertz field control of in-plane orbital order in $\text{La}_0.5\text{Sr}_{1.5}\text{MnO}_4$ . Nature Communications, 2015, 6, 8175.	12.8	19
82	Laser-induced charge-disproportionated metallic state in $\text{LaCoO}_3$ . Physical Review B, 2014, 90, .	3.2	13
83	High-temperature electromagnons in the magnetically induced multiferroic cupric oxide driven by intersublattice exchange. Nature Communications, 2014, 5, 3787.	12.8	57
84	Restoration of the third law in spin ice thin films. Nature Communications, 2014, 5, 3439.	12.8	40
85	Divacancy superstructures in thermoelectric calcium-doped sodium cobaltate. Physical Review B, 2014, 90, .	3.2	3
86	Crystal field splitting in $\text{Sr}_{n+1}\text{Ir}_n\text{O}_{3n+1}$ ( $n=1,2$ ) iridates probed by x-ray Raman spectroscopy. Physical Review B, 2014, 90, .	3.2	21
87	Dynamic behavior of magnetic avalanches in the spin-ice compound $\text{Dy}_2\text{Ti}_2\text{O}_7$ . Physical Review B, 2014, 90, .	3.2	12
88	Vacancy defects and monopole dynamics in oxygen-deficient pyrochlores. Nature Materials, 2014, 13, 488-493.	27.5	81
89	A stable three-dimensional topological Dirac semimetal $\text{Cd}_3\text{As}_2$ . Nature Materials, 2014, 13, 677-681.	27.5	1,242
90	Blayer splitting and wave functions symmetry in $\text{Sr}_3\text{O}_7$ . Physical Review B, 2014, 89, .	12.8	40

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91	Magnetic and ferroelectric orderings in multiferroic $\text{NaFeO}_2$ . Physical Review B, 2014, 89, .	3.2	20
92	Far-from-equilibrium monopole dynamics in spin ice. Nature Physics, 2014, 10, 135-139.	16.7	47
93	Stripe disorder and dynamics in the hole-doped antiferromagnetic insulator $\text{SrCoO}_2$ . Physical Review B, 2014, .	3.2	15
94	Witnessing the formation and relaxation of dressed quasi-particles in a strongly correlated electron system. Nature Communications, 2014, 5, 5112.	12.8	58
95	Tuning order-by-disorder multiferroicity in CuO by doping. Physical Review B, 2014, 90, .	3.2	17
96	Influence of nonmagnetic Zn substitution on the lattice and magnetoelectric dynamical properties of the multiferroic material CuO. Physical Review B, 2014, 90, .	3.2	10
97	Memory effects and magnetic relaxation in single-crystalline $\text{LaCoO}_3$ . Physical Review B, 2014, 89, .	3.2	18
98	Mechanism of spin crossover in $\text{LaCoO}_3$ resolved by shape magnetostriction in pulsed magnetic fields. Scientific Reports, 2014, 4, 7003.	3.3	31
99	Charge order in $\text{La}_{0.5}\text{Sr}_{1.5}\text{MnO}_4$ . Physical Review B, 2013, 88, .	3.2	21
100	Development of the magnetic excitations of charge-stripe ordered $\text{La}_{2-x}\text{Sr}_x\text{NiO}_4$ on doping towards checkerboard charge order. Journal of the Korean Physical Society, 2013, 62, 1453-1457.	0.7	3
101	Circularly polarized x-ray scattering investigation of spin-lattice coupling in $\text{TbMnO}_3$ in crossed electric and magnetic fields. Physical Review B, 2013, 88, .	3.2	11
102	Critical exponents and irreversibility lines of $\text{La}_{0.9}\text{Sr}_{0.1}\text{CoO}_3$ single crystal. Journal of Applied Physics, 2013, 113, .	2.5	13
103	Neutron scattering investigation of the magnetic excitations below the Mott gap of $\text{CoO}$ . Physical Review B, 2013, 88, .	3.2	21
104	Hour-glass magnetic spectrum arising from a striped cluster spin-glass ground state in $\text{La}_{1.75}\text{Sr}_{0.25}\text{CoO}_4$ . Physical Review B, 2013, 88, .	3.2	8
105	Brownian motion and quantum dynamics of magnetic monopoles in spin ice. Nature Communications, 2013, 4, 1535.	12.8	60
106	Terahertz frequency electromagnon and magnon modes in multiferroic cupric oxide. , 2013, , .		0
107	Strongly momentum-dependent screening dynamics in $\text{La}_{0.5}\text{Sr}_{1.5}\text{MnO}_4$ . Physical Review B, 2013, 88, .	3.2	2
108	Critical behavior of the paramagnetic to antiferromagnetic transition in orthorhombic and hexagonal phases of $\text{MnO}$ . Physical Review B, 2013, 88, .		

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109	<p>Phonon scattering signatures of strain and electronic textures in YbFe<sub>2</sub>O<sub>7</sub></p> <p>Persistent dynamics in the S = 1 chain compound Rb<sub>2</sub>Fe<sub>2</sub>Si<sub>2</sub>F<sub>10</sub></p>	3.2	22
110	<p>Three-dimensional cryo-electron microscopy</p>		



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127	Resonant x-ray scattering from the $4p$ quadrupole moment in $\text{YVO}_3$ . Physical Review B, 2010, 82, .	3.2	6
128	Ferromagnetic excitations in $\text{LaMnO}_3$ using neutron inelastic scattering. Physical Review B, 2010, 82, .	3.2	6
129	Thermally induced rotation of $3d$ orbital stripes in $\text{LaMnO}_3$ .		

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145	Mapping spin-wave dispersions in stripe-ordered $\text{La}_{2-x}\text{Sr}_x\text{NiO}_4$ ( $x=0.275, 0.333$ ). <i>Physical Review B</i> , 2005, 72, .	3.2	48
146	Resonant soft x-ray scattering investigation of orbital and magnetic ordering in $\text{La}_{0.5}\text{Sr}_{1.5}\text{MnO}_4$ . <i>Physical Review B</i> , 2005, 71, .	3.2	58
147	Critical behavior dependence on Sr concentration in $\text{La}_{1-x}\text{Sr}_x\text{MnO}_3$ . <i>Journal of Applied Physics</i> , 2004, 95, 7366-7368.	2.5	3
148	Stripe order and magnetic transitions in $\text{La}_{2-x}\text{Sr}_x\text{NiO}_4$ . <i>Physical Review B</i> , 2004, 70, .	3.2	27
149	Incommensurate charge stripe ordering in $\text{La}_{2-x}\text{Sr}_x\text{NiO}_4$ for $x=(0.33, 0.30, 0.275)$ . <i>Physical Review B</i> , 2004, 70, .	3.2	17
150	Thermal Diffusivity of $\text{La}_{1-x}\text{Sr}_x\text{MnO}_3$ ( $x < 0.3$ ). <i>International Journal of Thermophysics</i> , 2004, 25, 1269-1279.	2.1	11
151	Hyperfine Parameters for Muonium in Copper (I), Silver (I) and Cadmium Oxides. <i>Hyperfine Interactions</i> , 2004, 158, 313-316.	0.5	3
152	Growth and magnetic characterization of large $\text{R}_2\text{NiO}_4$ ( $\text{R}=\text{Pr}, \text{Nd}$ ) single crystals. <i>Journal of Materials Science: Materials in Electronics</i> , 2003, 14, 583-586.	2.2	1
153	Single-crystal growth of $\text{La}_{2-x}\text{Sr}_{1+2x}\text{Mn}_2\text{O}_7$ under pressure. <i>Journal of Materials Science: Materials in Electronics</i> , 2003, 14, 587-589.	2.2	13
154	Preparation of large single crystals of $\text{ANb}_2\text{O}_6$ ( $\text{A}=\text{Ni}, \text{Co}, \text{Fe}, \text{Mn}$ ) by the floating-zone method. <i>Journal of Crystal Growth</i> , 2003, 250, 72-76.	1.5	33
155	Single crystal growth of Zn-doped CuO by the floating-zone method. <i>Journal of Crystal Growth</i> , 2003, 250, 77-82.	1.5	33
156	Spin dynamics in stripe-ordered $\text{La}_{5/3}\text{Sr}_{1/3}\text{NiO}_4$ . <i>Physical Review B</i> , 2003, 67, .	3.2	51
157	Growth of large $\text{La}_{2-x}\text{Sr}_x\text{NiO}_4$ single crystals by the floating-zone technique. <i>Journal of Crystal Growth</i> , 2002, 237-239, 815-819.	1.5	40