

Rajesh Chopdekar

List of Publications by Year in descending order

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127
papers

4,641
citations

117625
34
h-index

106344
65
g-index

127
all docs

127
docs citations

127
times ranked

5871
citing authors

#	ARTICLE	IF	CITATIONS
1	Magnetic state switching in FeGa microstructures. <i>Smart Materials and Structures</i> , 2022, 31, 035005.	3.5	5
2	Entropy-driven order in an array of nanomagnets. <i>Nature Physics</i> , 2022, 18, 706-712.	16.7	5
3	Intermolecular Interaction and Cooperativity in an Fe(II) Spin Crossover Molecular Thin Film System. <i>Journal of Physics Condensed Matter</i> , 2022, 34, .	1.8	3
4	Formation of Complex Spin Textures in Thermally Demagnetized $\text{La}_{0.7} \text{O}_{3-\delta}$ Epitaxial Films. <i>Physical Review Applied</i> , 2022, 17, .	3.2	23
5	Crystal nucleation and growth of spherulites demonstrated by coral skeletons and phase-field simulations. <i>Acta Biomaterialia</i> , 2021, 120, 277-292.	8.3	21
6	Direct imaging of electrical switching of antiferromagnetic Néel order in $\text{Fe}_{3-\delta}\text{O}_3$ epitaxial films. <i>Physical Review B</i> , 2021, 103, .	3.2	23
7	A Long-Lived Planetesimal Dynamo Powered by Core Crystallization. <i>Geophysical Research Letters</i> , 2021, 48, e2020GL091917.	4.0	6
8	Switchable X-Ray Orbital Angular Momentum from an Artificial Spin Ice. <i>Physical Review Letters</i> , 2021, 126, 117201.	7.8	16
9	Reversible hydrogen control of antiferromagnetic anisotropy in $\text{Fe}_{2-\delta}\text{O}_3$. <i>Nature Communications</i> , 2021, 12, 1668.	12.8	30
10	Single-Domain Multiferroic Array-Addressable Terfenol-D (SMArT) Micromagnets for Programmable Single-Cell Capture and Release. <i>Advanced Materials</i> , 2021, 33, e2006651.	21.0	20
11	Uniaxial Néel vector control in perovskite oxide thin films by anisotropic strain engineering. <i>Physical Review B</i> , 2021, 103, .	3.2	1
12	Single magnetic domain Terfenol-D microstructures with passivating oxide layer. <i>Journal of Magnetism and Magnetic Materials</i> , 2021, 528, 167798.	2.3	7
13	Effects of array shape and disk ellipticity in dipolar-coupled magnetic metamaterials. <i>Physical Review B</i> , 2021, 104, .	3.2	2
14	String Phase in an Artificial Spin Ice. <i>Nature Communications</i> , 2021, 12, 6514.	12.8	9
15	Interfacial-Redox-Induced Tuning of Superconductivity in $\text{YBa}_{2\text{x}}\text{Cu}_{3\text{x}}\text{O}_{7-\delta}$. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 4741-4748.	8.0	11
16	Phase transitions and magnetic domain coexistence in $\text{Nd}_{0.5}\text{Sr}_{0.5}\text{MnO}_3$ thin films. <i>Journal of Magnetism and Magnetic Materials</i> , 2020, 498, 166116.	2.3	1
17	Evidence of a magnetic transition in atomically thin $\text{Cr}_{2\text{x}}\text{TiC}_{2\text{x}}\text{T}_{\text{x}}$ MXene. <i>Nanoscale Horizons</i> , 2020, 5, 1557-1565.	8.0	51
18	From particle attachment to space-filling coral skeletons. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 30159-30170.	7.1	50

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19	Meteorite evidence for partial differentiation and protracted accretion of planetesimals. <i>Science Advances</i> , 2020, 6, eaba1303.	10.3	24
20	Creation of skyrmions in van der Waals ferromagnet Fe ₃ GeTe ₂ on (Co/Pd) _n superlattice. <i>Science Advances</i> , 2020, 6, .	10.3	89
21	Controlling spin current polarization through non-collinear antiferromagnetism. <i>Nature Communications</i> , 2020, 11, 4671.	12.8	103
22	Controlling Magnetization Vector Depth Profiles of La _{0.7} Sr _{0.3} CoO ₃ /La _{0.7} Sr _{0.3} MnO ₃ Exchange Spring Bilayers via Interface Reconstruction. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 45437-45443.	8.0	16
23	Itinerant ferromagnetism in van der Waals $\text{Fe}_{\text{3}}\text{GeTe}_{\text{2}}$ crystals above room temperature. <i>Physical Review B</i> , 2020, 102, .	3.2	15
24	Thermally superactive artificial kagome spin ice structures obtained with the interfacial Dzyaloshinskii-Moriya interaction. <i>Physical Review B</i> , 2020, 102, .	3.2	15
25	Surface and grain boundary carbon heterogeneity in CH ₃ NH ₃ PbI ₃ perovskites and its impact on optoelectronic properties. <i>Applied Physics Reviews</i> , 2020, 7, .	11.3	9
26	Controlling antiferromagnetic domains in patterned La _{0.7} Sr _{0.3} FeO ₃ thin films. <i>Journal of Applied Physics</i> , 2020, 127, 203901.	2.5	8
27	Manipulating magnetoelectric energy landscape in multiferroics. <i>Nature Communications</i> , 2020, 11, 2836.	12.8	42
28	Interfacial tuning of chiral magnetic interactions for large topological Hall effects in LaMnO ₃ /SrIrO ₃ heterostructures. <i>Science Advances</i> , 2020, 6, eaaz3902.	10.3	50
29	Highly Enhanced Curie Temperature in Ga ⁺ -implanted Fe ₃ GeTe ₂ van der Waals Material. <i>Advanced Quantum Technologies</i> , 2020, 3, 2000017.	3.9	34
30	Tunable Magnetoelastic Effects in Voltage-Controlled Exchange-Coupled Composite Multiferroic Microstructures. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 6752-6760.	8.0	12
31	Modification of magnetocrystalline anisotropy via ion-implantation. <i>AIP Advances</i> , 2020, 10, .	1.3	7
32	Enhanced ferroelectricity in ultrathin films grown directly on silicon. <i>Nature</i> , 2020, 580, 478-482.	27.8	486
33	Geometrical Frustration and Planar Triangular Antiferromagnetism in Quasi-Three-Dimensional Artificial Spin Architecture. <i>Physical Review Letters</i> , 2020, 125, 267203.	7.8	8
34	Direct imaging of long-range ferromagnetic and antiferromagnetic order in a dipolar metamaterial. <i>Physical Review Research</i> , 2020, 2, .	3.6	7
35	Spontaneous Magnetic Superdomain Wall Fluctuations in an Artificial Antiferromagnet. <i>Physical Review Letters</i> , 2019, 123, 197202.	7.8	20
36	Towards artificial Ising spin glasses: Thermal ordering in randomized arrays of Ising-type nanomagnets. <i>Physical Review B</i> , 2019, 99, .	3.2	28

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37	Shape-imposed anisotropy in antiferromagnetic complex oxide nanostructures. <i>Applied Physics Letters</i> , 2019, 115, 112403.	3.3	5
38	Deterministic optical control of room temperature multiferroicity in BiFeO ₃ thin films. <i>Nature Materials</i> , 2019, 18, 580-587.	27.5	76
39	Emergent magnetic monopole dynamics in macroscopically degenerate artificial spin ice. <i>Science Advances</i> , 2019, 5, eaav6380.	10.3	108
40	Electric-field controlled magnetic reorientation in exchange coupled CoFeB/Ni bilayer microstructures. <i>Journal of Physics: Conference Series</i> , 2019, 1407, 012024.	0.4	1
41	Correlation between epitaxial strain and magnetic properties in La _{0.7} Sr _{0.3} CoO ₃ /La _{0.7} Sr _{0.3} MnO ₃ bilayers. <i>Journal of Applied Physics</i> , 2019, 125, 082518.	2.5	3
42	Characterisation of size distribution and positional misalignment of nanoscale islands by small-angle X-ray scattering. <i>Journal of Applied Physics</i> , 2019, 125, 014301.	2.5	0
43	Decoupling exchange bias and coercivity enhancement in a perovskite oxide exchange spring bilayer. <i>Physical Review Materials</i> , 2019, 3, .	2.4	7
44	X-ray nanodiffraction studies of ionically controlled nanoscale phase separation in cobaltites. <i>Physical Review Materials</i> , 2019, 3, .	2.4	8
45	Dipolar Cairo lattice: Geometrical frustration and short-range correlations. <i>Physical Review Materials</i> , 2019, 3, .	2.4	16
46	Engineered superlattices with crossover from decoupled to synthetic ferromagnetic behavior. <i>Journal of Physics Condensed Matter</i> , 2018, 30, 015805.	1.8	3
47	Interplay between bulk and edge-bound topological defects in a square micromagnet. <i>Applied Physics Letters</i> , 2018, 112, .	3.3	4
48	Cytocompatible magnetostrictive microstructures for nano- and microparticle manipulation on linear strain response piezoelectrics. <i>Multifunctional Materials</i> , 2018, 1, 014004.	3.7	6
49	A study of temperature dependent current-voltage ($I-V$) characteristics in Ni/sol-gel $\text{Ga}_2\text{O}_3/\text{n-GaN}$ structure. <i>Journal of Materials Science: Materials in Electronics</i> , 2018, 29, 11265-11270.	2.2	5
50	Patterning-Induced Ferromagnetism of Fe ₃ GeTe ₂ van der Waals Materials beyond Room Temperature. <i>Nano Letters</i> , 2018, 18, 5974-5980.	9.1	177
51	Ionic tuning of cobaltites at the nanoscale. <i>Physical Review Materials</i> , 2018, 2, .	2.4	32
52	Thickness-dependent magnetic and electrical transport properties of epitaxial La _{0.7} Sr _{0.3} CoO ₃ films. <i>AIP Advances</i> , 2017, 7, 045003.	1.3	8
53	An Investigation of Electrical and Dielectric Parameters of Sol-gel Process Enabled Ga_2O_3 as a Gate Dielectric Material. <i>IEEE Transactions on Electron Devices</i> , 2017, 64, 2047-2053.	3.0	24
54	Emergent dynamic chirality in a thermally driven artificial spin ratchet. <i>Nature Materials</i> , 2017, 16, 1106-1111.	27.5	61

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55	Magnetic domain configuration of (111)-oriented LaFeO ₃ epitaxial thin films. APL Materials, 2017, 5, .	5.1	7
56	Sum rule distortions in fluorescence-yield x-ray magnetic circular dichroism. Physical Review B, 2017, 96, .	3.2	16
57	Characterization of $\hat{\ell}^2\text{-Ga}_{2\text{-}}\text{O}_{3}$ interface and conduction band offset with GaN using a Sol-gel process of deposition. , 2017, ., .		1
58	Antiferromagnetic structure of exchange-coupled La _{0.7} Sr _{0.3} FeO ₃ thin films studied using angle-dependent x-ray absorption spectroscopy. Physical Review B, 2017, 96, .	3.2	2
59	Temperature dependence of ferromagnet-antiferromagnet spin alignment and coercivity in epitaxial micromagnet bilayers. Physical Review Materials, 2017, 1, .	2.4	5
60	Nanostructured complex oxides as a route towards thermal behavior in artificial spin ice systems. Physical Review Materials, 2017, 1, .	2.4	9
61	Giant reversible anisotropy changes at room temperature in a (La,Sr)MnO ₃ /Pb(Mg,Nb,Ti)O ₃ magneto-electric heterostructure. Scientific Reports, 2016, 6, 27501.	3.3	15
62	Tuning interfacial exchange interactions via electronic reconstruction in transition-metal oxide heterostructures. Applied Physics Letters, 2016, 109, .	3.3	19
63	Thermodynamics of emergent magnetic charge screening in artificial spin ice. Nature Communications, 2016, 7, 12635.	12.8	43
64	Tailoring Spin Textures in Complex Oxide Micromagnets. ACS Nano, 2016, 10, 8545-8551.	14.6	11
65	Magnetoelectroelastic control of magnetism in an artificial multiferroic. Physical Review B, 2016, 94, .	3.2	17
66	Thickness dependence of exchange coupling in (111)-oriented perovskite oxide superlattices. Physical Review B, 2016, 93, .	3.2	16
67	Exchange coupling in (111)-oriented $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3/\text{CuCr}_2\text{O}_4/\text{Fe}_3\text{O}_4$ magnetic junctions. Applied Physics Letters, 2015, 106, .	3.2	13
68	Magnetotransport in La _{0.7} Sr _{0.3} MnO ₃ /CuCr ₂ O ₄ /Fe ₃ O ₄ magnetic junctions. Applied Physics Letters, 2015, 106, .	3.3	7
69	Manipulating magnetism in piezoelectric materials under piezostain. Physical Review B, 2015, 91, .		
70	Crystalline symmetry controlled magnetic switching in epitaxial (111) La _{0.7} Sr _{0.3} MnO ₃ thin films. APL Materials, 2015, 3, 062501.	5.1	15
71	Nanoscale switch for vortex polarization mediated by Bloch core formation in magnetic hybrid systems. Nature Communications, 2015, 6, 7836.	12.8	32
72	Unconventional switching behavior in La _{0.7} Sr _{0.3} MnO ₃ /La _{0.7} Sr _{0.3} CoO ₃ exchange-spring bilayers. Applied Physics Letters, 2014, 105, .	3.3	26

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73	Topologically confined vortex oscillations in hybrid [Co/Pd]8-Permalloy structures. <i>Applied Physics Letters</i> , 2014, 104, .	3.3	18
74	Thermally induced magnetic relaxation in building blocks of artificial kagome spin ice. <i>Physical Review B</i> , 2014, 89, .	3.2	34
75	Thermal fluctuations in artificial spin ice. <i>Nature Nanotechnology</i> , 2014, 9, 514-519.	31.5	136
76	Single Domain Spin Manipulation by Electric Fields in Strain Coupled Artificial Multiferroic Nanostructures. <i>Physical Review Letters</i> , 2013, 111, 027204.	7.8	189
77	Strain-dependent magnetic configurations in manganite-titanate heterostructures probed with soft X-ray techniques. <i>European Physical Journal B</i> , 2013, 86, 1.	1.5	17
78	Dynamic stabilization of nonequilibrium domain configurations in magnetic squares with high amplitude excitations. <i>Physical Review B</i> , 2013, 87, .	3.2	4
79	Exploring hyper-cubic energy landscapes in thermally active finite artificial spin-ice systems. <i>Nature Physics</i> , 2013, 9, 375-382.	16.7	147
80	Direct Observation of Thermal Relaxation in Artificial Spin Ice. <i>Physical Review Letters</i> , 2013, 111, 057204.	7.8	154
81	Controlling vortex chirality in hexagonal building blocks of artificial spin ice. <i>New Journal of Physics</i> , 2013, 15, 125033.	2.9	16
82	Thermalized ground state of artificial kagome spin ice building blocks. <i>Applied Physics Letters</i> , 2012, 101, .	3.3	57
83	Interplay between magnetism and chemical structure at spinel-spinel interfaces. <i>Journal of Applied Physics</i> , 2012, 111, 093903.	2.5	7
84	Demonstration of laser induced magnetization reversal in GdFeCo nanostructures. <i>Applied Physics Letters</i> , 2012, 101, .	3.3	54
85	Spatially resolved strain-imprinted magnetic states in an artificial multiferroic. <i>Physical Review B</i> , 2012, 86, .	3.2	68
86	Role of magnetic anisotropy in spin-filter junctions. <i>Physical Review B</i> , 2011, 83, .	3.2	12
87	Magnetism at spinel thin film interfaces probed through soft X-ray spectroscopy techniques. <i>Journal of Magnetism and Magnetic Materials</i> , 2010, 322, 2915-2921.	2.3	12
88	Tuning the Magnetic Domain Structure of Spin-polarized Complex Oxide Nanostructures. <i>Materials Research Society Symposia Proceedings</i> , 2010, 1256, 1. <i>Strain-induced Changes in the Electronic Structure of mml:math</i> xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>MnCr</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:msub><mml:mi>	0.1	2
89	mathvariant="bold">O</mml:mi><mml:mn>4</mml:mn></mml:msub></mml:math>Thin Films Probed by X-Ray Magnetic Circular Dichroism. <i>Physical Review Letters</i> , 2010, 105, 067405.	7.8	27
90	Room temperature magnetic barrier layers in magnetic tunnel junctions. <i>Physical Review B</i> , 2010, 81, .	3.2	21

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91	Metallicity in $\text{LaTiO}_{3.2}$ films induced by lattice deformation. Physical Review B, 2010, 81, .		
92	Modified magnetic ground state in $\text{NiMn}_{2.25}$ films. Physical Review B, 2010, 82, .		
93	Disorder and localization at the $\text{LaAlO}_{3.2}/\text{manganite}$ interface. Physical Review B, 2010, 82, .		
94	Orientation and thickness dependence of magnetization at the interfaces of highly spin-polarized manganite thin films. Physical Review B, 2009, 79, .	3.2	56
95	Ferromagnetism in tetragonally distorted LaCoO_3 thin films. Journal of Applied Physics, 2009, 105, .	2.5	46
96	Room-temperature photomagnetism in the spinel ferrite $\text{Mn}_{11}\text{O}_{22}$ seen via soft x-ray magnetic circular. Physical Review B, 2009, 80, .		
97	Room temperature photoinduced magnetization of manganese zinc ferrite. Applied Physics Letters, 2009, 94, .	3.3	15
98	Growth and characterization of superconducting spinel oxide thin films. Physica C: Superconductivity and Its Applications, 2009, 469, 1885-1891.	1.2	19
99	Epitaxial growth and characterization of CaVO_3 thin films. Journal of Magnetism and Magnetic Materials, 2009, 321, 2852-2854.	2.3	14
100	Ultrafast pulsed-laser dissociation of MnH complexes in GaAs. Journal of Applied Physics, 2009, 106, 103918.	2.5	1
101	Enhanced magnetization of CuCr_2O_4 thin films by substrate-induced strain. Journal of Applied Physics, 2009, 105, .	2.5	15
102	Influence of crystal field on anisotropic x-ray magnetic linear dichroism at the $\text{Co}^{3.2}/\text{manganite}$ interface. Physical Review B, 2008, 77, .		
103	Electronic structure of halogen doped CuCr_2Se_4 . Journal of Applied Physics, 2008, 103, 07D711.	2.5	3
104	Magnetism of $\text{NiMn}_2\text{O}_4/\text{Fe}_3\text{O}_4$ spinel interfaces. Journal of Applied Physics, 2008, 103, 07B524.	2.5	9
105	Electrical transport and ferromagnetism in $\text{Ga}_{1-x}\text{Mn}_x\text{As}$ synthesized by ion implantation and pulsed-laser melting. Journal of Applied Physics, 2008, 103, 073913.	2.5	29
106	Control of the magnetic and magnetotransport properties of $\text{La}_{0.67}\text{Sr}_{0.33}\text{MnO}_3$ thin films through epitaxial strain. Applied Physics Letters, 2008, 92, .	3.3	73
107	Interface structure and transport of complex oxide junctions. Journal of Vacuum Science & Technology B, 2008, 26, 1521.	1.3	3
108	Hybrid magnetic tunnel junction/ spin filter device. , 2008, .		0

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109	Angle-Dependent Ni ₂ +X-Ray Magnetic Linear Dichroism: Interfacial Coupling Revisited. <i>Physical Review Letters</i> , 2007, 98, 197201.	7.8	97
110	Probing the role of the barrier layer in magnetic tunnel junction transport. <i>Physical Review B</i> , 2007, 76, .	3.2	37
111	Hydrogen patterning of Ga _{1-x} Mn _x As for planar spintronics. <i>Physica B: Condensed Matter</i> , 2007, 401-402, 447-450.	2.7	9
112	2D-patterned ferromagnetic III-Mn-V semiconductors for planar spintronics. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2007, 4, 1755-1758.	0.8	12
113	Magnetism and transport of CuCr ₂ Se ₄ thin films. <i>Journal of Magnetism and Magnetic Materials</i> , 2007, 318, 65-73.	2.3	30
114	Tuning Magnetic Domain Structure in Nanoscale La _{0.7} Sr _{0.3} MnO ₃ Islands. <i>Nano Letters</i> , 2006, 6, 1287-1291.	9.1	81
115	Thickness-dependent properties of (110)-oriented La _{1.2} Sr _{1.8} Mn ₂ O ₇ thin films. <i>Journal of Applied Physics</i> , 2006, 99, 08S902.	2.5	5
116	Magnetoelectric coupling in epitaxial CoFe ₂ O ₄ on BaTiO ₃ . <i>Applied Physics Letters</i> , 2006, 89, 182506.	3.3	103
117	Disorder-induced carrier localization in ultrathin strained SrRuO ₃ epitaxial films. <i>Journal of Applied Physics</i> , 2006, 99, 08F503.	2.5	15
118	Complex oxide-based magnetic tunnel junctions with nonmagnetic insulating barrier layers. <i>Journal of Applied Physics</i> , 2006, 99, 08K303.	2.5	8
119	Spin-polarized conduction in oxide magnetic tunnel junctions with magnetic and nonmagnetic insulating barrier layers. <i>Applied Physics Letters</i> , 2006, 89, 182504.	3.3	38
120	Anisotropic x-ray magnetic linear dichroism at the FeL _{2,3} edges in Fe ₃ O ₄ . <i>Physical Review B</i> , 2006, 74, .	3.2	95
121	Electrochemical Synthesis of Functionalized Nickel Oxide Nanowires. <i>Electrochemical and Solid-State Letters</i> , 2005, 8, D26.	2.2	27
122	Structural, magnetic, and electronic properties of (110)-oriented epitaxial thin films of the bilayer manganite La _{1.2} Sr _{1.8} Mn ₂ O ₇ . <i>Applied Physics Letters</i> , 2005, 87, 142508.	3.3	6
123	Electric Field-Induced Magnetization Switching in Epitaxial Columnar Nanostructures. <i>Nano Letters</i> , 2005, 5, 1793-1796.	9.1	426
124	Magnetics and magnetoresistance in epitaxial magnetite heterostructures. <i>Journal of Electronic Materials</i> , 2004, 33, 1254-1258.	2.2	7
125	Magnetotransport in Exchange-Coupled Magnetite Junctions. <i>IEEE Transactions on Magnetics</i> , 2004, 40, 2302-2304.	2.1	2
126	Observation of inverse magnetoresistance in epitaxial magnetite/manganite junctions. <i>Journal of Applied Physics</i> , 2003, 93, 7516-7518.	2.5	29

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IF CITATIONS

127	Transport properties of Cr-patterned Yba ₂ Cu ₃ O ₇ thin films. Materials Research Society Symposia Proceedings, 2001, 689, 1.	0.1	0
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