Neil D Mathur

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/2239515/publications.pdf

Version: 2024-02-01

103	17,029	76196	34900
papers	citations	40 h-index	98 g-index

106	106	106	12642
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Double bond with a licence to chill. Joule, 2022, 6, 289-290.	11.7	3
2	XPEEM and MFM Imaging of Ferroic Materials. Advanced Electronic Materials, 2022, 8, .	2.6	3
3	Advances in Ferroelectric and Multiferroic Materials. Advanced Electronic Materials, 2022, 8, .	2.6	1
4	Quasi-indirect measurement of electrocaloric temperature change in PbSc0.5Ta0.5O3 via comparison of adiabatic and isothermal electrical polarization data. APL Materials, 2021, 9, .	2.2	6
5	Non-volatile voltage control of in-plane and out-of-plane magnetization in polycrystalline Ni films on ferroelectric PMNâ€“PT (001)pc substrates. Journal of Applied Physics, 2021, 129, 154101.	1.1	5
6	Reversible and irreversible colossal barocaloric effects in plastic crystals. Journal of Materials Chemistry A, 2020, 8, 639-647.	5.2	85
7	Caloric materials for cooling and heating. Science, 2020, 370, 797-803.	6.0	159
8	Itâ€™s not about the mass. Nature Energy, 2020, 5, 941-942.	19.8	4
9	Large magnetoelectric coupling in multiferroic oxide heterostructures assembled via epitaxial lift-off. Nature Communications, 2020, 11, 3190.	5.8	48
10	Voltage-driven annihilation and creation of magnetic vortices in Ni discs. Nanoscale, 2020, 12, 5652-5657.	2.8	10
11	Voltage-driven displacement of magnetic vortex cores. Journal Physics D: Applied Physics, 2020, 53, 434003.	1.3	6
12	Giant and Reversible Inverse Barocaloric Effects near Room Temperature in Ferromagnetic MnCoGeB_{0.03}. Advanced Materials, 2019, 31, e1903577.	11.1	60
13	Shear-strain-mediated magnetoelectric effects revealed by imaging. Nature Materials, 2019, 18, 840-845.	13.3	46
14	Colossal barocaloric effects near room temperature in plastic crystals of neopentylglycol. Nature Communications, 2019, 10, 1803.	5.8	144
15	Giant non-volatile magnetoelectric effects via growth anisotropy in Co40Fe40B20 films on PMN-PT substrates. Applied Physics Letters, 2019, 114, .	1.5	26
16	Large electrocaloric effects in oxide multilayer capacitors over a wide temperature range. Nature, 2019, 575, 468-472.	13.7	171
17	Voltage control of magnetic single domains in Ni discs on ferroelectric BaTiO₃. Journal Physics D: Applied Physics, 2018, 51, 224007.	1.3	23
18	Electrocaloric effects in multilayer capacitors for cooling applications. MRS Bulletin, 2018, 43, 291-294.	1.7	31

#	Article	IF	Citations
19	Multicaloric materials and effects. MRS Bulletin, 2018, 43, 295-299.	1.7	76
20	Enhanced electrocaloric efficiency via energy recovery. Nature Communications, 2018, 9, 1827.	5.8	87
21	Effect of inactive volume on thermocouple measurements of electrocaloric temperature change in multilayer capacitors of 0.9Pb(Mg_{1/3}Nb_{2/3})O₃â€“0.1PbTiO₃. Journal Physics D: Applied Physics, 2017, 50, 424002.	1.3	24
22	Turn your phonon. Nature Materials, 2017, 16, 784-785.	13.3	9
23	Giant barocaloric effects over a wide temperature range in superionic conductor AgI. Nature Communications, 2017, 8, 1851.	5.8	95
24	Elastic and anelastic relaxation behaviour of perovskite multiferroics II: PbZr0.53Ti0.47O3 (PZT)â€“PbFe0.5Ta0.5O3 (PFT). Journal of Materials Science, 2017, 52, 285-304.	1.7	11
25	Preface to Special Topic: Caloric Materials. APL Materials, 2016, 4, .	2.2	5
26	Direct electrocaloric measurement of 0.9Pb(Mg1/3Nb2/3)O3-0.1PbTiO3 films using scanning thermal microscopy. Applied Physics Letters, 2016, 108, .	1.5	46
27	Inverse barocaloric effects in ferroelectric BaTiO3 ceramics. APL Materials, 2016, 4, .	2.2	64
28	Progress on electrocaloric multilayer ceramic capacitor development. APL Materials, 2016, 4, .	2.2	35
29	Long Spin Diffusion Length in Few-Layer Graphene Flakes. Physical Review Letters, 2016, 117, 147201.	2.9	37
30	Taking the temperature of phase transitions in cool materials. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2016, 374, 20150314.	1.6	0
31	Large electrocaloric effects in single-crystal ammonium sulfate. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2016, 374, 20150313.	1.6	8
32	Giant barocaloric effects at low pressure in ferrielectric ammonium sulphate. Nature Communications, 2015, 6, 8801.	5.8	160
33	Perpendicular Local Magnetization Under Voltage Control in Ni Films on Ferroelectric BaTiO₃ Substrates. Advanced Materials, 2015, 27, 1460-1465.	11.1	64
34	Too cool to work. Nature Physics, 2015, 11, 202-205.	6.5	221
35	New developments in caloric materials for cooling applications. AIP Advances, 2015, 5, .	0.6	112
36	Restoration of the third law in spin ice thin films. Nature Communications, 2014, 5, 3439.	5.8	40

#	Article	IF	Citations
37	Caloric materials near ferroic phase transitions. Nature Materials, 2014, 13, 439-450.	13.3	1,129
38	Magnetoelectric phenomena and devices. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2014, 372, 20120453.	1.6	8
39	Exploiting phase separation in monolithic La0.6Ca0.4MnO3 devices. Applied Physics Letters, 2013, 103, 062404.	1.5	2
40	Large linear anhysteretic magnetoelectric voltage coefficients in CoFe2O4/polyvinylidene fluoride 0â€“3 nanocomposites. Journal of Nanoparticle Research, 2013, 15, 1.	0.8	27
41	Direct electrocaloric measurements of a multilayer capacitor using scanning thermal microscopy and infra-red imaging. Applied Physics Letters, 2013, 102, .	1.5	73
42	The Electrocaloric Efficiency of Ceramic and Polymer Films. Advanced Materials, 2013, 25, 3337-3342.	11.1	123
43	Ferroelectric precursor behavior in PbSc<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mrow><mml:mn>0.5</mml:mn></mml:mrow></mml:msub></mml:math>Ta<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mrow><mml:mn>0.5</mml:mn></mml:mrow></mml:msub></mml:math>O<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow />	1.1	45
44	Giant and reversible extrinsic magnetocaloric effects in La0.7Ca0.3MnO3 films due to strain. Nature Materials, 2013, 12, 52-58.	13.3	226
45	Single ferroelectric-domain photovoltaic switch based on lateral BiFeO3 cells. NPG Asia Materials, 2013, 5, e38-e38.	3.8	20
46	Non-volatile electrically-driven repeatable magnetization reversal with no applied magnetic field. Nature Communications, 2013, 4, 1453.	5.8	111
47	Giant Electrocaloric Strength in Singleâ€Crystal BaTiO₃. Advanced Materials, 2013, 25, 1360-1365.	11.1	430
48	Evidence of high rate visible light photochemical decolourisation of Rhodamine B with BiFeO3 nanoparticles associated with BiFeO3 photocorrosion. RSC Advances, 2012, 2, 11843.	1.7	44
49	Structural, Magnetic, and Electrical Properties of Bi_{1â€“x}La_xMnO₃(x = 0.0, 0.1, and 0.2) Solid Solutions. Chemistry of Materials, 2012, 24, 199-208.	3.2	17
50	Equivalence of direct and converse magnetoelectric coefficients in strain-coupled two-phase systems. Applied Physics Letters, 2012, 100, .	1.5	30
51	Electrocaloric Materials for Cooling Applications. Ferroelectrics, 2012, 433, 107-110.	0.3	12
52	Photodetection: Spatially Resolved Photodetection in Leaky Ferroelectric BiFeO3 (Adv. Mater. 10/2012). Advanced Materials, 2012, 24, OP48-OP48.	11.1	0
53	Giant magnetic domain-wall resistance in phase-separated manganite films. Applied Physics Letters, 2010, 97, 253501.	1.5	2
54	Direct and indirect electrocaloric measurements using multilayer capacitors. Journal Physics D: Applied Physics, 2010, 43, 032002.	1.3	180

#	Article	IF	Citations
55	Eliminating the Temperature Dependence of the Response of Magnetoelectric Magnetic-Field Sensors. IEEE Sensors Journal, 2010, 10, 914-917.	2.4	21
56	Predicted cooling powers for multilayer capacitors based on various electrocaloric and electrode materials. Applied Physics Letters, 2009, 95, .	1.5	105
57	Investigation of the electrocaloric effect in a PbMg2/3Nb1/3O3-PbTiO3 relaxor thin film. Applied Physics Letters, 2009, 95, .	1.5	194
58	Magnetically tuned mechanical resonances in magnetoelectric multilayer capacitors. Applied Physics Letters, 2009, 95, .	1.5	36
59	The Materials Science of Functional Oxide Thin Films. Advanced Materials, 2009, 21, 3827-3839.	11.1	66
60	Translating reproducible phase-separated texture in manganites into reproducible two-state low-field magnetoresistance: An imaging and transport study. Physical Review B, 2008, 78, .	1.1	13
61	Converse magnetoelectric coupling in multilayer capacitors. Applied Physics Letters, 2008, 93, .	1.5	28
62	Magnetotransport of manganite superlattices: Investigating the role of a magnetic insulating spacer. Applied Physics Letters, 2008, 93, .	1.5	9
63	Very weak electron-phonon coupling and strong strain coupling in manganites. Physical Review B, 2008, 78, .	1.1	15
64	Limited local electron-lattice coupling in manganites: An electron diffraction study. Physical Review B, 2008, 77, .	1.1	8
65	Experimental difficulties and artefacts in multiferroic and magnetoelectric thin films of BiFeO3, Bi0.6Tb0.3La0.1FeO3and BiMnO3. Philosophical Magazine Letters, 2007, 87, 249-257.	0.5	38
66	Giant sharp and persistent converse magnetoelectric effects in multiferroic epitaxial heterostructures. Nature Materials, 2007, 6, 348-351.	13.3	678
67	Negative magnetocaloric effect from highly sensitive metamagnetism inCoMnSi1â^'xGex. Physical Review B, 2006, 74, .	1.1	121
68	Giant Electrocaloric Effect in Thin-Film PbZr0.95Ti0.05O3. Science, 2006, 311, 1270-1271.	6.0	1,424
69	Another brick in the wall. Nature Physics, 2006, 2, 307-308.	6.5	1
70	Multiferroic and magnetoelectric materials. Nature, 2006, 442, 759-765.	13.7	7,032
71	Effect of ferromagnetic/antiferromagnetic interfaces on the magnetic properties of La2â^•3Sr1â^•3MnO3â^•Pr2â^•3Ca1â^•3MnO3 superlattices. Journal of Applied Physics, 2006, 99, 08C903.	1.1	6
72	Electrical transport between epitaxial manganites and carbon nanotubes. Applied Physics Letters, 2006, 88, 083120.	1.5	13

#	Article	IF	Citations
73	Strain control of superlattice implies weak charge-lattice coupling inLa0.5Ca0.5MnO3. Physical Review B, 2006, 73, .	1.1	26
74	A New Approach to Interconversion of Thermal and Electrical Energy. , 2006, , .		0
75	Spintronic investigation of the phase separated manganite (La,Ca)MnO3. Journal of Applied Physics, 2006, 100, 023903.	1.1	8
76	SchrÃ¶dinger's mousetrap. Nature, 2005, 433, 363-363.	13.7	0
77	Don't mention the â€˜Fâ€™ word. Nature, 2005, 436, 440-440.	13.7	0
78	Growth of highly resistive BiMnO3 films. Applied Physics Letters, 2005, 87, 101906.	1.5	80
79	Nonlinear effects of current on transport in manganite films. Physical Review B, 2005, 71, .	1.1	27
80	Absence of spin scattering of in-plane spring domain walls. Physical Review B, 2005, 71, .	1.1	4
81	Role of disorder in phase coexistence in manganites: Noise in layered films. Physical Review B, 2005, 72, .	1.1	9
82	Magnetoresistive dynamics and noise in low-strain manganite films. Physical Review B, 2005, 71, .	1.1	12
83	Ground state and constrained domain walls in Gdâ•Fe multilayers. Journal of Applied Physics, 2005, 97, 063904.	1.1	9
84	Biaxial strain induced electrical inhomogenities and phase separation in the ferromagnetic metallic phase in thin films of La0.7Ca0.3MnO3: A scanning tunneling potentiometry/spectroscopy study.. Materials Research Society Symposia Proceedings, 2004, 838, 145.	0.1	0
85	Magnetic domain structure and lattice distortions in manganite films under tensile strain. Journal of Applied Physics, 2003, 93, 8322-8324.	1.1	20
86	Magnetization reversal probed by spin-polarized tunneling. Applied Physics Letters, 2002, 80, 2722-2724.	1.5	13
87	A scanning tunneling microscopy and potentiometry study of epitaxial thin films of La0.7Ca0.3MnO3. Materials Research Society Symposia Proceedings, 2002, 738, 7211.	0.1	0
88	Dependence on film thickness of grain boundary low-field magnetoresistance in thin films of La0.7Ca0.3MnO3. Journal of Applied Physics, 2001, 89, 6970-6972.	1.1	7
89	Magnetic anisotropy of thin film La0.7Ca0.3MnO3 on untwinned paramagnetic NdGaO3 (001). Journal of Applied Physics, 2001, 89, 3388-3392.	1.1	40
90	Coherent magnetic reversal in half-metallic manganite tunnel junctions. Applied Physics Letters, 2000, 77, 3803-3805.	1.5	33

#	Article	IF	Citations
91	Mesoscale magnetism at the grain boundaries in colossal magnetoresistive films. Physical Review B, 2000, 63, .	1.1	45
92	Temperature dependent phenomena in La1â^'xSrxMnO3 films studied by magnetic force microscopy. Journal of Applied Physics, 2000, 87, 6743-6745.	1.1	27
93	Currentâ€“voltage characteristics and electrical transport properties of grain boundaries in La1â^'x(Sr/Ca)xMnO3. Journal of Applied Physics, 1999, 85, 7263-7266.	1.1	50
94	Magnetic phases to order. Nature, 1999, 400, 405-406.	13.7	15
95	Resistance of a domain wall in La0.7Ca0.3MnO3. Journal of Applied Physics, 1999, 86, 6287-6290.	1.1	65
96	Magnetotransport and Interface Magnetism in Manganite Heterostructures: Implications for Spin Polarized Tunneling. Materials Research Society Symposia Proceedings, 1999, 602, 3.	0.1	2
97	Magnetically mediated superconductivity in heavy fermion compounds. Nature, 1998, 394, 39-43.	13.7	1,543
98	Magnetoresistance of artificial La0.7Sr0.3MnO3 grain boundaries as a function of misorientation angle. Applied Physics Letters, 1998, 72, 2038-2040.	1.5	126
99	Defect-induced spin disorder and magnetoresistance in single-crystal and polycrystal rare-earth manganite thin films. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 1998, 356, 1593-1615.	1.6	152
100	Low field magnetotransport in La0.7Sr0.3MnO3 films. Journal of Applied Physics, 1998, 83, 7157-7159.	1.1	17
101	Transmission electron microscopy and x-ray structural investigation of La_{0.7}Ca_{0.3}MnO₃ thin films. Journal of Materials Research, 1998, 13, 2161-2169.	1.2	34
102	Not just a load of bolometers. Nature, 1997, 390, 229-231.	13.7	17
103	Large low-field magnetoresistance in La0.7Ca0.3MnO3 induced by artificial grain boundaries. Nature, 1997, 387, 266-268.	13.7	433