

Morgan Trassin

List of Publications by Year in descending order

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75
papers

4,379
citations

185998

28
h-index

106150

65
g-index

77
all docs

77
docs citations

77
times ranked

5954
citing authors

#	ARTICLE	IF	CITATIONS
1	The evolution of multiferroics. Nature Reviews Materials, 2016, 1, .	23.3	933
2	Deterministic switching of ferromagnetism at room temperature using an electric field. Nature, 2014, 516, 370-373.	13.7	570
3	Electric-Field-Induced Magnetization Reversal in a Ferromagnet-Multiferroic Heterostructure. Physical Review Letters, 2011, 107, 217202.	2.9	405
4	Microscopic Origin of the Giant Ferroelectric Polarization in Tetragonal-like BiFeO_3 . Physical Review Letters, 2011, 107, 147602.	2.9	290
5	Strain-induced coupling of electrical polarization and structural defects in SrMnO ₃ films. Nature Nanotechnology, 2015, 10, 661-665.	15.6	153
6	Ferroelastic domain switching dynamics under electrical and mechanical excitations. Nature Communications, 2014, 5, 3801.	5.8	135
7	High-speed domain wall racetracks in a magnetic insulator. Nature Communications, 2019, 10, 4750.	5.8	114
8	Probing electric field control of magnetism using ferromagnetic resonance. Nature Communications, 2015, 6, 6082.	5.8	85
9	Nanoscale design of polarization in ultrathin ferroelectric heterostructures. Nature Communications, 2017, 8, 1419.	5.8	80
10	Magnetoconductance of heavy and light metal/ferromagnet bilayers. Applied Physics Letters, 2015, 107, .	1.5	76
11	Microstructure and ferroelectricity of BaTiO ₃ thin films on Si for integrated photonics. Nanotechnology, 2017, 28, 075706.	1.3	76
12	Probing Ferroelectric Domain Engineering in BiFeO ₃ Thin Films by Second Harmonic Generation. Advanced Materials, 2015, 27, 4871-4876.	11.1	73
13	Epitaxy-distorted spin-orbit Mott insulator in SrIrO ₂ thin films. Physical Review B, 2013, 87, .	1.1	70
14	Domain Wall Architecture in Tetragonal Ferroelectric Thin Films. Advanced Materials, 2017, 29, 1605145.	11.1	70
15	Interfacial coupling in multiferroic/ferromagnet heterostructures. Physical Review B, 2013, 87, .	1.1	69
16	Low energy consumption spintronics using multiferroic heterostructures. Journal of Physics Condensed Matter, 2016, 28, 033001.	0.7	68
17	Electronic Properties of Isosymmetric Phase Boundaries in Highly Strained Ca-Doped BiFeO ₃ . Advanced Materials, 2014, 26, 4376-4380.	11.1	66
18	Room temperature ferrimagnetic thin films of the magnetoelectric Ga _{2-x} Fe _x O ₃ . Journal of Materials Chemistry, 2009, 19, 8876.	6.7	62

#	ARTICLE	IF	CITATIONS
19	Monolayer and multilayer assemblies of spherically and cubic-shaped iron oxide nanoparticles. <i>Journal of Materials Chemistry</i> , 2011, 21, 16018.	6.7	53
20	Accelerated Ionic Motion in Amorphous Memristor Oxides for Nonvolatile Memories and Neuromorphic Computing. <i>Advanced Functional Materials</i> , 2019, 29, 1804782.	7.8	51
21	Probing Ferroic States in Oxide Thin Films Using Optical Second Harmonic Generation. <i>Applied Sciences (Switzerland)</i> , 2018, 8, 570.	1.3	47
22	The ultrathin limit of improper ferroelectricity. <i>Nature Communications</i> , 2019, 10, 5591.	5.8	44
23	Epitaxial thin films of multiferroic GaFeO ₃ on conducting indium tin oxide (001) buffered yttrium-stabilized zirconia (001) by pulsed laser deposition. <i>Applied Physics Letters</i> , 2007, 91, 202504.	1.5	40
24	Current-driven dynamics and ratchet effect of skyrmion bubbles in a ferrimagnetic insulator. <i>Nature Nanotechnology</i> , 2022, 17, 834-841.	15.6	39
25	Directed assembly of nano-scale phase variants in highly strained BiFeO ₃ thin films. <i>Journal of Applied Physics</i> , 2012, 112, 064102.	1.1	35
26	Chemical State Evolution in Ferroelectric Films during Tip-Induced Polarization and Electroresistive Switching. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 29588-29593.	4.0	33
27	Depolarizing-Field Effects in Epitaxial Capacitor Heterostructures. <i>Physical Review Letters</i> , 2019, 123, 147601.	2.9	33
28	Interface and surface stabilization of the polarization in ferroelectric thin films. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 28589-28595.	3.3	32
29	Magnetic properties and domain structure of ultrathin yttrium iron garnet/Pt bilayers. <i>Physical Review Materials</i> , 2019, 3, .	0.9	30
30	Dynamical Magnetic Field Accompanying the Motion of Ferroelectric Domain Walls. <i>Physical Review Letters</i> , 2019, 123, 127601.	2.9	28
31	Buried In-Plane Ferroelectric Domains in Fe-Doped Single-Crystalline Aurivillius Thin Films. <i>ACS Applied Electronic Materials</i> , 2019, 1, 1019-1028.	2.0	27
32	Tuning the multiferroic mechanisms of TbMnO ₃ by epitaxial strain. <i>Scientific Reports</i> , 2017, 7, 44753.	1.6	26
33	Robust In-Plane Ferroelectricity in Ultrathin Epitaxial Aurivillius Films. <i>Advanced Materials Interfaces</i> , 2020, 7, 2000202.	1.9	25
34	Imaging and quantification of charged domain walls in BiFeO ₃ . <i>Nanoscale</i> , 2020, 12, 9186-9193.	2.8	25
35	Tracking ferroelectric domain formation during epitaxial growth of PbTiO ₃ films. <i>Applied Physics Letters</i> , 2020, 117, .	1.5	22
36	Enhanced Nonlinear Yield from Barium Titanate Metasurface Down to the Near Ultraviolet. <i>Advanced Optical Materials</i> , 2019, 7, 1900936.	3.6	21

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37	In-situ monitoring of interface proximity effects in ultrathin ferroelectrics. Nature Communications, 2020, 11, 5815.	5.8	21
38	Ferroelectric domain architecture and poling of BaTiO_3 on Si. Physical Review Materials, 2020, 4, .	0.9	20
39	Simultaneous imaging of the ferromagnetic and ferroelectric structure in multiferroic heterostructures. APL Materials, 2014, 2, 076109.	2.2	19
40	$\text{BiFeO}_3/\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$ heterostructures deposited on spark plasma sintered LaAlO_3 substrates. Applied Physics Letters, 2014, 104, 082914.	1.5	18
41	Scanning gradiometry with a single spin quantum magnetometer. Nature Communications, 2022, 13, .	5.8	18
42	Domain-Pattern Transfer across an Artificial Magnetolectric Interface. Physical Review Applied, 2018, 10, .	1.5	17
43	Design and Manipulation of Ferroic Domains in Complex Oxide Heterostructures. Materials, 2019, 12, 3108.	1.3	17
44	Multilevel polarization switching in ferroelectric thin films. Nature Communications, 2022, 13, .	5.8	17
45	Magnetolectric Force Microscopy on Antiferromagnetic 180° Domains in Cr_2O_3 . Materials, 2017, 10, 1051.	1.3	16
46	Functional ferroic heterostructures with tunable integral symmetry. Nature Communications, 2014, 5, 4295.	5.8	15
47	Origin of Terahertz Soft-Mode Nonlinearities in Ferroelectric Perovskites. Physical Review X, 2021, 11, .	2.8	13
48	Signatures of enhanced out-of-plane polarization in asymmetric BaTiO_3 superlattices integrated on silicon. Nature Communications, 2022, 13, 265.	5.8	13
49	Ultraflat monocrystalline Pt (111) electrodes. Journal of Applied Physics, 2009, 105, .	1.1	11
50	The effects of strain relaxation on the dielectric properties of epitaxial ferroelectric $\text{Pb}(\text{Zr}_{0.2}\text{Ti}_{0.8})\text{TiO}_3$ thin films. Applied Physics Letters, 2014, 105, .	1.5	11
51	In situ monitoring of epitaxial ferroelectric thin-film growth. Journal of Physics Condensed Matter, 2021, 33, 293001.	0.7	11
52	Unexpected termination switching and polarity compensation in LaAlO_3 heterostructures. Physical Review Materials, 2018, 2, .	0.9	11
53	Inversion-Symmetry Engineering in Layered Oxide Thin Films. Nano Letters, 2021, 21, 2780-2785.	4.5	10
54	Ultrathin regime growth of atomically flat multiferroic gallium ferrite films with perpendicular magnetic anisotropy. Physical Review Materials, 2019, 3, .	0.9	10

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55	Epitaxial integration of improper ferroelectric hexagonal YMnO ₃ thin films in heterostructures. Physical Review Materials, 2020, 4, .	0.9	10
56	Current-induced switching of YIG/Pt bilayers with in-plane magnetization due to Oersted fields. Applied Physics Letters, 2019, 114, .	1.5	8
57	Multiferroic heterostructures for spintronics. ChemistrySelect, 2021, 6, .	0.7	8
58	Nanoscale Design of High-Quality Epitaxial Aurivillius Thin Films. Chemistry of Materials, 0, , .	3.2	8
59	Metastable monoclinic [110] layered perovskite Dy ₂ Ti ₂ O ₇ thin films for ferroelectric applications. RSC Advances, 2019, 9, 19895-19904.	1.7	7
60	Optical second harmonic signature of phase coexistence in ferroelectric dielectric heterostructures. Physical Review B, 2022, 105, .		
61	Ferroelectric Domain Engineering Using Structural Defect Ordering. Chemistry of Materials, 2022, 34, 6468-6475.	3.2	7
62	Non-auxetic/auxetic transitions inducing modifications of the magnetic anisotropy in CoFe ₂ O ₄ thin films. Journal of Alloys and Compounds, 2020, 836, 155425.	2.8	6
63	Nonvolatile voltage-tunable ferroelectric-superconducting quantum interference memory devices. Applied Physics Letters, 2021, 119, .	1.5	6
64	Bulk-like dielectric and magnetic properties of sub 100Ånm thick single crystal Cr ₂ O ₃ films on an epitaxial oxide electrode. Scientific Reports, 2020, 10, 14721.	1.6	5
65	Birefringence of orthorhombic DyScO ₃ : Toward a terahertz quarter-wave plate. Applied Physics Letters, 2021, 118, 223506.	1.5	5
66	Monitoring Electrical Biasing of Pb(Zr _{0.2} Ti _{0.8})O ₃ Ferroelectric Thin Films In Situ by DPC-STEM Imaging. Materials, 2021, 14, 4749.	1.3	5
67	Training the Polarization in Integrated La _{0.15} Bi _{0.85} FeO ₃ Based Devices. Advanced Materials, 2021, , 2104688.	11.1	5
68	Asymmetric Character of the Ferroelectric Phase Transition and Charged Domain Walls in a Hybrid Improper Ferroelectric. Advanced Electronic Materials, 0, , 2100434.	2.6	4
69	Stabilization and manipulation of in-plane polarization in a ferroelectric dielectric superlattice. Journal of Applied Physics, 2021, 129, .	1.1	3
70	How to obtain a magnetic hard-soft architecture by pulsed laser deposition. Nanotechnology, 2007, 18, 495708.	1.3	1
71	An in situ TEM Study of Ferroelastic Domain Mobility. Microscopy and Microanalysis, 2013, 19, 1500-1501.	0.2	1
72	Bringing some bulk into ferroelectric devices. Nature Materials, 0, , .	13.3	1

#	ARTICLE	IF	CITATIONS
73	Manipulation of charged domain walls in geometric improper ferroelectric thin films: A phase-field study. <i>Physical Review Materials</i> , 2022, 6, .	0.9	1
74	Understanding the Effect of Doping and Epitaxial Strain on the Ferroelectric Polarization of Layered Perovskite Thin Films. <i>Microscopy and Microanalysis</i> , 2017, 23, 1606-1607.	0.2	0
75	Switching with ions. <i>Nature Nanotechnology</i> , 2021, 16, 953-954.	15.6	0