

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
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77
all docs

77
docs citations

77
times ranked

5954
citing authors

#	ARTICLE	IF	CITATIONS
1	Signatures of enhanced out-of-plane polarization in asymmetric BaTiO ₃ superlattices integrated on silicon. <i>Nature Communications</i> , 2022, 13, 265.	5.8	13
2	Optical second harmonic signature of phase coexistence in ferroelectric dielectric heterostructures. <i>Physical Review B</i> , 2022, 105, .		
3	Multilevel polarization switching in ferroelectric thin films. <i>Nature Communications</i> , 2022, 13, .	5.8	17
4	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
5	Scanning gradiometry with a single spin quantum magnetometer. <i>Nature Communications</i> , 2022, 13, .	5.8	18
6	Ferroelectric Domain Engineering Using Structural Defect Ordering. <i>Chemistry of Materials</i> , 2022, 34, 6468-6475.	3.2	7
7	Current-driven dynamics and ratchet effect of skyrmion bubbles in a ferrimagnetic insulator. <i>Nature Nanotechnology</i> , 2022, 17, 834-841.	15.6	39
8	Inversion-Symmetry Engineering in Layered Oxide Thin Films. <i>Nano Letters</i> , 2021, 21, 2780-2785.	4.5	10
9	Origin of Terahertz Soft-Mode Nonlinearities in Ferroelectric Perovskites. <i>Physical Review X</i> , 2021, 11, .	2.8	13
10	Birefringence of orthorhombic DyScO ₃ : Toward a terahertz quarter-wave plate. <i>Applied Physics Letters</i> , 2021, 118, 223506.	1.5	5
11	Stabilization and manipulation of in-plane polarization in a ferroelectric dielectric superlattice. <i>Journal of Applied Physics</i> , 2021, 129, .	1.1	3
12	In situ monitoring of epitaxial ferroelectric thin-film growth. <i>Journal of Physics Condensed Matter</i> , 2021, 33, 293001.	0.7	11
13	Switching with ions. <i>Nature Nanotechnology</i> , 2021, 16, 953-954.	15.6	0
14	Monitoring Electrical Biasing of Pb(Zr _{0.2} Ti _{0.8})O ₃ Ferroelectric Thin Films In Situ by DPC-STEM Imaging. <i>Materials</i> , 2021, 14, 4749.	1.3	5
15	Nonvolatile voltage-tunable ferroelectric-superconducting quantum interference memory devices. <i>Applied Physics Letters</i> , 2021, 119, .	1.5	6
16	Training the Polarization in Integrated La _{0.15} Bi _{0.85} FeO ₃ -Based Devices. <i>Advanced Materials</i> , 2021, , 2104688.	11.1	5
17	Multiferroic heterostructures for spintronics. <i>ChemistrySelect</i> , 2021, 6, .	0.7	8
18	Tracking ferroelectric domain formation during epitaxial growth of PbTiO ₃ films. <i>Applied Physics Letters</i> , 2020, 117, .	1.5	22

#	ARTICLE	IF	CITATIONS
19	In-situ monitoring of interface proximity effects in ultrathin ferroelectrics. Nature Communications, 2020, 11, 5815.	5.8	21
20	Interface and surface stabilization of the polarization in ferroelectric thin films. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 28589-28595.	3.3	32
21	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
22	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
23	Robust In-Plane Ferroelectricity in Ultrathin Epitaxial Aurivillius Films. Advanced Materials Interfaces, 2020, 7, 2000202.	1.9	25
24	Imaging and quantification of charged domain walls in BiFeO ₃ . Nanoscale, 2020, 12, 9186-9193.	2.8	25
25	Ferroelectric domain architecture and poling of BaTiO ₃ on Si. Physical Review Materials, 2020, 4, .	2.0	20
26	Epitaxial integration of improper ferroelectric hexagonal YMnO ₃ thin films in heterostructures. Physical Review Materials, 2020, 4, .	0.9	10
27	High-speed domain wall racetracks in a magnetic insulator. Nature Communications, 2019, 10, 4750.	5.8	114
28	Enhanced Nonlinear Yield from Barium Titanate Metasurface Down to the Near Ultraviolet. Advanced Optical Materials, 2019, 7, 1900936.	3.6	21
29	Dynamical Magnetic Field Accompanying the Motion of Ferroelectric Domain Walls. Physical Review Letters, 2019, 123, 127601.	2.9	28
30	Design and Manipulation of Ferroic Domains in Complex Oxide Heterostructures. Materials, 2019, 12, 3108.	1.3	17
31	Depolarizing-Field Effects in Epitaxial Capacitor Heterostructures. Physical Review Letters, 2019, 123, 147601.	2.9	33
32	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
33	Buried In-Plane Ferroelectric Domains in Fe-Doped Single-Crystalline Aurivillius Thin Films. ACS Applied Electronic Materials, 2019, 1, 1019-1028.	2.0	27
34	Current-induced switching of YIG/Pt bilayers with in-plane magnetization due to Oersted fields. Applied Physics Letters, 2019, 114, .	1.5	8
35	The ultrathin limit of improper ferroelectricity. Nature Communications, 2019, 10, 5591.	5.8	44
36	Accelerated Ionic Motion in Amorphous Memristor Oxides for Nonvolatile Memories and Neuromorphic Computing. Advanced Functional Materials, 2019, 29, 1804782.	7.8	51

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37	Magnetic properties and domain structure of ultrathin yttrium iron garnet/Pt bilayers. Physical Review Materials, 2019, 3, .	0.9	30
38	Ultrathin regime growth of atomically flat multiferroic gallium ferrite films with perpendicular magnetic anisotropy. Physical Review Materials, 2019, 3, .	0.9	10
39	Domain-Pattern Transfer across an Artificial Magnetoelectric Interface. Physical Review Applied, 2018, 10, .	1.5	17
40	Probing Ferroic States in Oxide Thin Films Using Optical Second Harmonic Generation. Applied Sciences (Switzerland), 2018, 8, 570.	1.3	47
41	Unexpected termination switching and polarity compensation in $\text{LaAlO}_3/\text{manganite}$ heterostructures. Physical Review Materials, 2018, 2, .		
42	Microstructure and ferroelectricity of BaTiO_3 thin films on Si for integrated photonics. Nanotechnology, 2017, 28, 075706.	1.3	76
43	Tuning the multiferroic mechanisms of TbMnO_3 by epitaxial strain. Scientific Reports, 2017, 7, 44753.	1.6	26
44	Domain Wall Architecture in Tetragonal Ferroelectric Thin Films. Advanced Materials, 2017, 29, 1605145.	11.1	70
45	Understanding the Effect of Doping and Epitaxial Strain on the Ferroelectric Polarization of Layered Perovskite Thin Films. Microscopy and Microanalysis, 2017, 23, 1606-1607.	0.2	0
46	Nanoscale design of polarization in ultrathin ferroelectric heterostructures. Nature Communications, 2017, 8, 1419.	5.8	80
47	Magnetoelectric Force Microscopy on Antiferromagnetic 180° Domains in Cr_2O_3 . Materials, 2017, 10, 1051.	1.3	16
48	Chemical State Evolution in Ferroelectric Films during Tip-Induced Polarization and Electroresistive Switching. ACS Applied Materials & Interfaces, 2016, 8, 29588-29593.	4.0	33
49	The evolution of multiferroics. Nature Reviews Materials, 2016, 1, .	23.3	933
50	Low energy consumption spintronics using multiferroic heterostructures. Journal of Physics Condensed Matter, 2016, 28, 033001.	0.7	68
51	Magnetoresistance of heavy and light metal/ferromagnet bilayers. Applied Physics Letters, 2015, 107, .	1.5	76
52	Probing Ferroelectric Domain Engineering in BiFeO_3 Thin Films by Second Harmonic Generation. Advanced Materials, 2015, 27, 4871-4876.	11.1	73
53	Strain-induced coupling of electrical polarization and structural defects in SrMnO_3 films. Nature Nanotechnology, 2015, 10, 661-665.	15.6	153
54	Probing electric field control of magnetism using ferromagnetic resonance. Nature Communications, 2015, 6, 6082.	5.8	85

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55	Deterministic switching of ferromagnetism at room temperature using an electric field. Nature, 2014, 516, 370-373.	13.7	570
56	BiFeO ₃ /La _{0.7} Sr _{0.3} MnO ₃ heterostructures deposited on spark plasma sintered LaAlO ₃ substrates. Applied Physics Letters, 2014, 104, 082914.	1.5	18
57	Simultaneous imaging of the ferromagnetic and ferroelectric structure in multiferroic heterostructures. APL Materials, 2014, 2, 076109.	2.2	19
58	Electronic Properties of Isosymmetric Phase Boundaries in Highly Strained Ca-Doped BiFeO ₃ . Advanced Materials, 2014, 26, 4376-4380.	11.1	66
59	Ferroelastic domain switching dynamics under electrical and mechanical excitations. Nature Communications, 2014, 5, 3801.	5.8	135
60	The effects of strain relaxation on the dielectric properties of epitaxial ferroelectric Pb(Zr _{0.2} Ti _{0.8})TiO ₃ thin films. Applied Physics Letters, 2014, 105, .	1.5	11
61	Functional ferroic heterostructures with tunable integral symmetry. Nature Communications, 2014, 5, 4295.	5.8	15
62	Interfacial coupling in multiferroic/ferromagnet heterostructures. Physical Review B, 2013, 87, .	1.1	69
63	Epitaxy-distorted spin-orbit Mott insulator in Sr ₂ IrO ₄ thin films. Physical Review B, 2013, 87, .	1.1	70
64	An in situ TEM Study of Ferroelastic Domain Mobility. Microscopy and Microanalysis, 2013, 19, 1500-1501.	0.2	1
65	Directed assembly of nano-scale phase variants in highly strained BiFeO ₃ thin films. Journal of Applied Physics, 2012, 112, 064102.	1.1	35
66	Monolayer and multilayer assemblies of spherically and cubic-shaped iron oxide nanoparticles. Journal of Materials Chemistry, 2011, 21, 16018.	6.7	53
67	Electric-Field-Induced Magnetization Reversal in a Ferromagnet-Multiferroic Heterostructure. Physical Review Letters, 2011, 107, 217202.	2.9	405
68	Microscopic Origin of the Giant Ferroelectric Polarization in Tetragonal-like BiFeO ₃ . Physical Review Letters, 2011, 107, 147602.	2.9	290
69	Ultraflat monocrystalline Pt (111) electrodes. Journal of Applied Physics, 2009, 105, .	1.1	11
70	Room temperature ferrimagnetic thin films of the magnetoelectric Ga _{2-x} FexO ₃ . Journal of Materials Chemistry, 2009, 19, 8876.	6.7	62
71	Epitaxial thin films of multiferroic GaFeO ₃ on conducting indium tin oxide (001) buffered yttrium-stabilized zirconia (001) by pulsed laser deposition. Applied Physics Letters, 2007, 91, 202504.	1.5	40
72	How to obtain a magnetic hard-soft architecture by pulsed laser deposition. Nanotechnology, 2007, 18, 495708.	1.3	1

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73	Asymmetric Character of the Ferroelectric Phase Transition and Charged Domain Walls in a Hybrid Improper Ferroelectric. <i>Advanced Electronic Materials</i> , 0, , 2100434.	2.6	4
74	Nanoscale Design of High-Quality Epitaxial Aurivillius Thin Films. <i>Chemistry of Materials</i> , 0, , .	3.2	8
75	Bringing some bulk into ferroelectric devices. <i>Nature Materials</i> , 0, , .	13.3	1