

# Dennis Meier

## List of Publications by Year in descending order

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71  
papers

3,741  
citations

186265

28  
h-index

128289

60  
g-index

76  
all docs

76  
docs citations

76  
times ranked

4302  
citing authors

#	ARTICLE	IF	CITATIONS
1	Ferroelectric domain walls for nanotechnology. Nature Reviews Materials, 2022, 7, 157-173.	48.7	89
2	Observation of cation-specific critical behavior at the improper ferroelectric phase transition in $\text{GdMn}_2\text{O}_7$ . Physical Review Materials, 2022, 6, .	2.4	3
3	Magnetoelastic properties of multiferroic hexagonal $\text{ErMnO}_3$ . Journal of Magnetism and Magnetic Materials, 2022, 554, 169277.	2.3	6
4	Unveiling Alternating Current Electronic Properties at Ferroelectric Domain Walls. Advanced Electronic Materials, 2022, 8, .	5.1	9
5	Detection of Topological Spin Textures via Nonlinear Magnetic Responses. Nano Letters, 2022, 22, 14-21.	9.1	3
6	Ferroelectric Domain Engineering Using Structural Defect Ordering. Chemistry of Materials, 2022, 34, 6468-6475.	6.7	7
7	The Third Dimension of Ferroelectric Domain Walls. Advanced Materials, 2022, 34, .	21.0	8
8	Anisotropic in-plane dielectric and ferroelectric properties of tensile-strained $\text{BaTiO}_3$ films with three different crystallographic orientations. AIP Advances, 2021, 11, 025016.	1.3	10
9	Insulating improper ferroelectric domain walls as robust barrier layer capacitors. Journal of Applied Physics, 2021, 129, .	2.5	9
10	Contact-free reversible switching of improper ferroelectric domains by electron and ion irradiation. APL Materials, 2021, 9, .	5.1	9
11	Strain relaxation dynamics of multiferroic orthorhombic manganites. Journal of Physics Condensed Matter, 2021, 33, 125402.	1.8	5
12	Observation of Electric-Field-Induced Structural Dislocations in a Ferroelectric Oxide. Nano Letters, 2021, 21, 3386-3392.	9.1	9
13	Dimensionality-Induced Change in Topological Order in Multiferroic Oxide Superlattices. Physical Review Letters, 2021, 126, 157601.	7.8	12
14	Domains and domain walls in ferroic materials. Journal of Applied Physics, 2021, 129, .	2.5	5
15	Precipitation Hardening in Ferroelectric Ceramics. Advanced Materials, 2021, 33, e2102421.	21.0	46
16	A short history of multiferroics. ChemistrySelect, 2021, 6, .	1.5	12
17	Dislocation-Driven Relaxation Processes at the Conical to Helical Phase Transition in $\text{FeGe}$ . ACS Nano, 2021, , .	14.6	0
18	Charged Ferroelectric Domain Walls for Deterministic ac Signal Control at the Nanoscale. Nano Letters, 2021, 21, 9560-9566.	9.1	7

#	ARTICLE	IF	CITATIONS
19	Magnetic and geometric control of spin textures in the itinerant kagome magnet $\text{Fe}_3\text{Sn}_2$ . Physical Review Research, 2021, 3, .		
20	Local control of improper ferroelectric domains in $\text{YMnO}_3$ . Physical Review B, 2020, 102, .	3.2	11
21	Characterization of ferroelectric domain walls by scanning electron microscopy. Journal of Applied Physics, 2020, 128, .	2.5	22
22	First-principles study of topologically protected vortices and ferroelectric domain walls in hexagonal $\text{YGaO}_3$ . Physical Review B, 2020, 102, .	3.2	10
23	Application of a long short-term memory for deconvoluting conductance contributions at charged ferroelectric domain walls. Npj Computational Materials, 2020, 6, .	8.7	15
24	Domain-wall engineering and topological defects in ferroelectric and ferroelastic materials. Nature Reviews Physics, 2020, 2, 634-648.	26.6	154
25	Conductivity control via minimally invasive anti-Frenkel defects in a functional oxide. Nature Materials, 2020, 19, 1195-1200.	27.5	20
26	Local electric-field control of multiferroic spin-spiral domains in $\text{TbMnO}_3$ . Npj Quantum Materials, 2020, 5, .	5.2	10
27	Observation of Unconventional Dynamics of Domain Walls in Uniaxial Ferroelectric Lead Germanate. Advanced Functional Materials, 2020, 30, 2000284.	14.9	14
28	Intrinsic and extrinsic conduction contributions at nominally neutral domain walls in hexagonal manganites. Applied Physics Letters, 2020, 116, .	3.3	11
29	Domain Walls. , 2020, , .		19
30	Domain wall mobility and roughening in doped ferroelectric hexagonal manganites. Physical Review Research, 2020, 2, .	3.6	11
31	Domains and domain walls in multiferroics. ChemistrySelect, 2020, 5, .	1.5	28
32	Electrostatic potential mapping at ferroelectric domain walls by low-temperature photoemission electron microscopy. Applied Physics Letters, 2019, 115, .	3.3	6
33	FIB lift-out of conducting ferroelectric domain walls in hexagonal manganites. Applied Physics Letters, 2019, 115, 122901.	3.3	21
34	Piezoresponse force microscopy and nanoferroic phenomena. Nature Communications, 2019, 10, 1661.	12.8	252
35	Observation of Uncompensated Bound Charges at Improper Ferroelectric Domain Walls. Nano Letters, 2019, 19, 1659-1664.	9.1	28
36	Electronic bulk and domain wall properties in $\text{B}$ -site doped hexagonal $\text{ErMnO}_3$ . Physical Review B, 2018, 97, .	3.2	34

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37	Topological domain walls in helimagnets. Nature Physics, 2018, 14, 465-468.	16.7	47
38	Domain-Pattern Transfer across an Artificial Magnetoelectric Interface. Physical Review Applied, 2018, 10, .	3.8	17
39	Electrical half-wave rectification at ferroelectric domain walls. Nature Nanotechnology, 2018, 13, 1028-1034.	31.5	77
40	Frequency dependent polarisation switching in h-ErMnO <sub>3</sub> . Applied Physics Letters, 2018, 112, .	3.3	26
41	Magnetoelectric inversion of domain patterns. Nature, 2018, 560, 466-470.	27.8	32
42	Charged domain walls in improper ferroelectric hexagonal manganites and gallates. Physical Review Materials, 2018, 2, .	2.4	29
43	Conductivity Contrast and Tunneling Charge Transport in the Vortexlike Ferroelectric Domain Patterns of Multiferroic Hexagonal $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline">Y\text{MnO}_3 \rangle$ . Physical Review Letters, 2017, 118, 036803.	7.8	86
44	Functional electronic inversion layers at ferroelectric domain walls. Nature Materials, 2017, 16, 622-627.	27.5	127
45	Global Formation of Topological Defects in the Multiferroic Hexagonal Manganites. Physical Review X, 2017, 7, .	8.9	40
46	Topological Defects in Hexagonal Manganites: Inner Structure and Emergent Electrostatics. Nano Letters, 2017, 17, 5883-5890.	9.1	56
47	Magnetoelectric Force Microscopy on Antiferromagnetic 180° Domains in Cr <sub>2</sub> O <sub>3</sub> . Materials, 2017, 10, 1051.	2.9	16
48	Measuring Ferroelectric Order Parameters at Domain Walls and Vortices in Hexagonal Manganites with Atomic Resolution STEM. Microscopy and Microanalysis, 2017, 23, 1636-1637.	0.4	0
49	Optimization of Electronic Domain Wall Properties by Aliovalent Cation Substitution. Advanced Electronic Materials, 2016, 2, 1500195.	5.1	35
50	Reversible optical switching of antiferromagnetism in TbMnO <sub>3</sub> . Nature Photonics, 2016, 10, 653-656.	31.4	76
51	Contact-Free Mapping of Electronic Transport Phenomena of Polar Domains in SrMnO <sub>3</sub> Films. Physical Review Applied, 2016, 5, .	3.8	7
52	The evolution of multiferroics. Nature Reviews Materials, 2016, 1, .	48.7	933
53	Local dynamics of topological magnetic defects in the itinerant helimagnet FeGe. Nature Communications, 2016, 7, 12430.	12.8	53
54	Robustness of magnetic and electric domains against charge carrier doping in multiferroic hexagonal ErMnO <sub>3</sub> . New Journal of Physics, 2016, 18, 043015.	2.9	28

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55	Magnetoelectric domain control in multiferroic TbMnO <sub>3</sub> . Science, 2015, 348, 1112-1115.	12.6	107
56	Strain-induced coupling of electrical polarization and structural defects in SrMnO <sub>3</sub> films. Nature Nanotechnology, 2015, 10, 661-665.	31.5	153
57	Functional domain walls in multiferroics. Journal of Physics Condensed Matter, 2015, 27, 463003.	1.8	106
58	Ferroelectric domains in the multiferroic phase of ErMnO <sub>3</sub> imaged by low-temperature photoemission electron microscopy. Journal of Physics: Conference Series, 2015, 592, 012120.	0.4	5
59	Polarization control at spin-driven ferroelectric domain walls. Nature Communications, 2015, 6, 6661.	12.8	30
60	Growth of high-quality hexagonal ErMnO <sub>3</sub> single crystals by the pressurized floating-zone method. Journal of Crystal Growth, 2015, 409, 75-79.	1.5	31
61	Imaging and characterization of conducting ferroelectric domain walls by photoemission electron microscopy. Applied Physics Letters, 2014, 104, .	3.3	27
62	Functional ferroic heterostructures with tunable integral symmetry. Nature Communications, 2014, 5, 4295.	12.8	15
63	Translation domains in multiferroics. Phase Transitions, 2013, 86, 33-52.	1.3	16
64	Independent ferroelectric contributions and rare-earth-induced polarization reversal in multiferroic TbMn <sub>2</sub> O <sub>5</sub> . Physical Review B, 2012, 85, .	3.2	13
65	Mutual induction of magnetic 3d and 4f order in multiferroic hexagonal ErMnO <sub>3</sub> . Physical Review B, 2012, 86, .	3.2	37
66	Anisotropic conductance at improper ferroelectric domain walls. Nature Materials, 2012, 11, 284-288.	27.5	409
67	Observation and Coupling of Domains in a Spin-Spiral Multiferroic. Physical Review Letters, 2009, 102, 107202.	7.8	85
68	Topology and manipulation of multiferroic hybrid domains in $MnWO_4$ . Physical Review B, 2009, 80, .	3.2	27
69	New features in the phase diagram of TbMnO <sub>3</sub> . New Journal of Physics, 2007, 9, 100-100.	2.9	40
70	Anomalous thermal expansion and strong damping of the thermal conductivity of $NdMnO_3$ . Physical Review B, 2006, 73, .	3.2	31
71	Hysteresis effects in the phase diagram of multiferroic GdMnO <sub>3</sub> . Physical Review B, 2006, 73, .	3.2	44