

Thomas Tybell

List of Publications by Year in descending order

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114
papers

4,428
citations

185998
28
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106150
65
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116
all docs

116
docs citations

116
times ranked

4871
citing authors

#	ARTICLE	IF	CITATIONS
1	Domain Wall Creep in Epitaxial Ferroelectric Pb(Zr _{0.2} Ti _{0.8})O ₃ Thin Films. Physical Review Letters, 2002, 89, 097601.	2.9	488
2	Ferroelectricity in thin perovskite films. Applied Physics Letters, 1999, 75, 856-858.	1.5	449
3	Size-Dependent Properties of Multiferroic BiFeO ₃ Nanoparticles. Chemistry of Materials, 2007, 19, 6478-6484.	3.2	290
4	Local, Nonvolatile Electronic Writing of Epitaxial Pb(Zr _{0.52} Ti _{0.48})O ₃ /SrRuO ₃ Heterostructures. Science, 1997, 276, 1100-1103.	6.0	256
5	Electrostatic Modulation of Superconductivity in Ultrathin GdBa ₂ Cu ₃ O _{7-x} Films. Science, 1999, 284, 1152-1155.	6.0	254
6	The Ferroic Phase Transitions of BiFeO ₃ . Advanced Materials, 2008, 20, 3692-3696.	11.1	196
7	Nanoscale control of ferroelectric polarization and domain size in epitaxial Pb(Zr _{0.2} Ti _{0.8})O ₃ thin films. Applied Physics Letters, 2001, 79, 530-532.	1.5	191
8	Atomap: a new software tool for the automated analysis of atomic resolution images using two-dimensional Gaussian fitting. Advanced Structural and Chemical Imaging, 2017, 3, 9.	4.0	159
9	Synthesis of BiFeO ₃ by Wet Chemical Methods. Journal of the American Ceramic Society, 2007, 90, 3430-3434.	1.9	148
10	Control and imaging of ferroelectric domains over large areas with nanometer resolution in atomically smooth epitaxial Pb(Zr _{0.2} Ti _{0.8})O ₃ thin films. Applied Physics Letters, 1998, 72, 1454-1456.	1.5	133
11	The Nature of Polarization Fatigue in BiFeO ₃ . Advanced Materials, 2011, 23, 1621-1625.	11.1	127
12	Nanoscale studies of domain wall motion in epitaxial ferroelectric thin films. Journal of Applied Physics, 2006, 100, 051608.	1.1	112
13	Controlling spin current polarization through non-collinear antiferromagnetism. Nature Communications, 2020, 11, 4671.	5.8	103
14	Structure and Properties of Multiferroic Oxygen Hyperstoichiometric BiFe _{1+x} Mn _x O _{3+1'} . Chemistry of Materials, 2009, 21, 5176-5186.	3.2	95
15	High-frequency surface acoustic wave device based on thin-film piezoelectric interdigital transducers. Applied Physics Letters, 2004, 85, 1757-1759.	1.5	64
16	Study of defect-dipoles in an epitaxial ferroelectric thin film. Applied Physics Letters, 2010, 96, .	1.5	61
17	Interstitial oxygen as a source of p-type conductivity in hexagonal manganites. Nature Communications, 2016, 7, 13745.	5.8	61
18	Photochemical switching of ultrathin PbTiO ₃ films. Applied Physics Letters, 2008, 92, 112901.	1.5	58

#	ARTICLE	IF	CITATIONS
19	Phase transitions, electrical conductivity and chemical stability of BiFeO ₃ at high temperatures. Journal of Solid State Chemistry, 2010, 183, 1205-1208.	1.4	45
20	Structural phases driven by oxygen vacancies at the La _{0.7} Sr _{0.3} MnO ₃ /SrTiO ₃ hetero-interface. Applied Physics Letters, 2015, 106, .	1.5	42
21	Thickness dependence of dynamic and static magnetic properties of pulsed laser deposited La _{0.7} Sr _{0.3} MnO ₃ films on SrTiO ₃ (001). Journal of Magnetism and Magnetic Materials, 2014, 369, 197-204.	1.0	40
22	Antiferromagnetic Domain Reconfiguration in Embedded LaFeO ₃ Thin Film Nanostructures. Nano Letters, 2010, 10, 4578-4583.	4.5	37
23	PbTiO ₃ nanorod arrays grown by self-assembly of nanocrystals. Nanotechnology, 2008, 19, 225605.	1.3	36
24	Ferroelectric stripe domains in PbTiO ₃ thin films: Depolarization field and domain randomness. Journal of Applied Physics, 2008, 104, .	1.1	35
25	High-temperature semiconducting cubic phase of BiFeO ₃ . Physical Review B, 2009, 79, .	1.1	33
26	Effect of Polar (111)-Oriented SrTiO ₃ on Initial Perovskite Growth. Crystal Growth and Design, 2016, 16, 2357-2362.	1.4	32
27	Surface stability of epitaxial La _{0.7} Sr _{0.3} MnO ₃ thin films on (111)-oriented SrTiO ₃ . Journal of Applied Physics, 2013, 113, .	1.1	31
28	Crossover from Spin-Flop Coupling to Collinear Spin Alignment in Antiferromagnetic/Ferromagnetic Nanostructures. Nano Letters, 2012, 12, 2386-2390.	4.5	29
29	Spin-Flop Coupling and Exchange Bias in Embedded Complex Oxide Micromagnets. Physical Review Letters, 2013, 111, 107201.	2.9	28
30	Origin of suppressed polarization in BiFeO ₃ films. Applied Physics Letters, 2010, 97, 212904.	1.5	27
31	Comparison of TEM specimen preparation of perovskite thin films by tripod polishing and conventional ion milling. Journal of Electron Microscopy, 2008, 57, 175-179.	0.9	26
32	Concurrent magnetic and structural reconstructions at the interface of (111)-oriented $L_{1-x}A_xMn_{0.7}S_{1-x}$ thin films. Effects of nanostructuring and substrate symmetry on antiferromagnetic domain structure in $Mn_{1-x}La_xFeO_3$ thin films. Physical Review B, 2011, 84, .	1.1	26
33	Effects of nanostructuring and substrate symmetry on antiferromagnetic domain structure in $Mn_{1-x}La_xFeO_3$ thin films. Physical Review B, 2011, 84, .	1.1	24
34	Surface stoichiometry of La _{0.7} Sr _{0.3} MnO ₃ during in vacuo preparation; A synchrotron photoemission study. Surface Science, 2012, 606, 1360-1366.	0.8	24
35	High temperature transport kinetics in heteroepitaxial LaFeO ₃ thin films. Solid-State Electronics, 2003, 47, 2279-2282.	0.8	23
36	Imaging of out-of-plane interfacial strain in epitaxial PbTiO ₃ /SrTiO ₃ thin films. Applied Physics Letters, 2005, 86, 092907.	1.5	23

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37	Oxygen vacancies in the bulk and at neutral domain walls in hexagonal YMnO_3 . Physical Review B, 2018, 98, .		
38	Stable $\{110\}$ textured Ag ribbons for biaxially-aligned $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ coated tapes. Superconductor Science and Technology, 2000, 13, 912-919.	1.8	21
39	Electron energy loss spectroscopy investigation of Pb and Ti hybridization with O at the $\text{PbTiO}_3/\text{SrTiO}_3$ interface. Journal of Applied Physics, 2011, 109, 034104.	1.1	20
40	Long-range spontaneous structural ordering in barium stannate thin films. Applied Physics Letters, 2010, 97, 081906.	1.5	19
41	Consequences of High Adatom Energy during Pulsed Laser Deposition of $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$. Crystal Growth and Design, 2012, 12, 562-566.	1.4	19
42	Polarization direction and stability in ferroelectric lead titanate thin films. Journal of Applied Physics, 2009, 106, .	1.1	18
43	Epitaxial antiperovskite/perovskite heterostructures for materials design. Science Advances, 2020, 6, eaba4017.	4.7	18
44	Goldstone-like phonon modes in a (111)-strained perovskite. Physical Review Materials, 2018, 2, .	0.9	18
45	Assessing electron beam sensitivity for SrTiO_3 and $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$ using electron energy loss spectroscopy. Ultramicroscopy, 2016, 169, 98-106.	0.8	17
46	Thickness and temperature dependence of the magnetodynamic damping of pulsed laser deposited $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$ on (111)-oriented SrTiO_3 . Journal of Magnetism and Magnetic Materials, 2016, 420, 280-284.	1.0	17
47	First-principles study of the effect of (111) strain on octahedral rotations and structural phases of LaAlO_3 . Physical Review B, 2017, 95, .	1.1	17
48	Epitaxial $\text{K}_{0.5}\text{Na}_{0.5}\text{NbO}_3$ thin films by aqueous chemical solution deposition. Royal Society Open Science, 2019, 6, 180989.	1.1	17
49	Polarization control in ferroelectric PbTiO_3 nanorods. Journal of Applied Physics, 2010, 108, 124320.	1.1	16
50	In-plane quasi-single-domain BaTiO_3 via interfacial symmetry engineering. Nature Communications, 2021, 12, 6784.	5.8	16
51	Crystalline and dielectric properties of sputter deposited PbTiO_3 thin films. Journal of Applied Physics, 2008, 103, .	1.1	15
52	Epilayer control of photodeposited materials during UV photocatalysis. Applied Physics Letters, 2009, 94, 232901.	1.5	15
53	Crystalline symmetry controlled magnetic switching in epitaxial (111) $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$ thin films. APL Materials, 2015, 3, 062501.	2.2	15
54	Nanoscale structuring of SrRuO_3 thin film surfaces by scanning tunneling microscopy. Applied Surface Science, 2007, 253, 4704-4708.	3.1	14

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55	Qualitative determination of surface roughness by <i>in situ</i> reflection high energy electron diffraction. Applied Physics Letters, 2012, 100, .	1.5	14
56	Sub-bandgap photocurrent effects on dynamic pyroelectric measurement in Pt/PbTiO ₃ /Nb:SrTiO ₃ heterostructures. Journal of Applied Physics, 2012, 112, .	1.1	13
57	Effects of thermal annealing in oxygen on the antiferromagnetic order and domain structure of epitaxial LaFeO ₃ thin films. Thin Solid Films, 2005, 486, 108-112.	0.8	12
58	Formation and electronic properties of oxygen annealed Au/Ni and Pt/Ni contacts to p-type GaN. Semiconductor Science and Technology, 2007, 22, 186-193.	1.0	12
59	PbO-deficient PbTiO ₃ : Mass transport, structural effects and possibility for intrinsic screening of the ferroelectric polarization. Applied Physics Letters, 2011, 98, .	1.5	12
60	On the Effect of Water-Induced Degradation of Thin-Film Piezoelectric Microelectromechanical Systems. Journal of Microelectromechanical Systems, 2021, 30, 105-115.	1.7	12
61	Three-dimensional subnanoscale imaging of unit cell doubling due to octahedral tilting and cation modulation in strained perovskite thin films. Physical Review Materials, 2019, 3, .	0.9	12
62	Structural coupling across the LaAlO ₃ /SrTiO ₃ interface: High-resolution x-ray diffraction study. Physical Review B, 2011, 84, .	1.1	11
63	Photocatalytic Synthesis of Silver-Oxide Clathrate Ag ₇ O ₈ NO ₃ . Journal of the Electrochemical Society, 2010, 157, E181.	1.3	10
64	Effect of (111)-oriented strain on the structure and magnetic properties of La _{0.7} Sr _{0.3} MnO ₃ thin films. Journal of Physics Condensed Matter, 2018, 30, 255702.	0.7	10
65	In-plane structural order of domain engineered La _{0.7} Sr _{0.3} MnO ₃ thin films. Philosophical Magazine, 2013, 93, 1549-1562.	0.7	9
66	Structural investigation of epitaxial LaFeO ₃ thin films on (111) oriented SrTiO ₃ by transmission electron microscopy. Journal of Physics: Conference Series, 2015, 644, 012002.	0.3	9
67	Sputter-deposited (Pb,La)(Zr,Ti)O ₃ thin films: Effect of substrate and optical properties. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2009, 27, 548-553.	0.9	8
68	Growth and characterization of (Pb,La)(Zr,Ti)O ₃ thin film epilayers on SrTiO ₃ -buffered Si(001). Thin Solid Films, 2010, 518, 5471-5477.	0.8	8
69	Controlling the switching field in nanomagnets by means of domain-engineered antiferromagnets. Physical Review B, 2015, 92, .	1.1	8
70	Bi vacancy formation in BiFeO ₃ epitaxial thin films under compressive (001)-strain from first principles. Journal of Materials Chemistry C, 2019, 7, 4870-4878.	2.7	8
71	Preparation of {110} textured Ag ribbons for biaxially aligned superconducting tapes. IEEE Transactions on Applied Superconductivity, 2001, 11, 3371-3374.	1.1	7
72	Magnetic domain configuration of (111)-oriented LaFeO ₃ epitaxial thin films. APL Materials, 2017, 5, .	2.2	7

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73	Strain-phonon coupling in (111)-oriented perovskite oxides. Physical Review B, 2017, 96, .	1.1	7
74	Spatially Confined Spin Polarization and magnetic sublattice control in (La,Sr)MnO ₃ Thin Films by Oxygen Vacancy Ordering. Scientific Reports, 2017, 7, 4386.	1.6	7
75	Performance and reliability of PZT-based piezoelectric micromirrors operated in realistic environments. , 2018, , .		7
76	Magnetic domain formation in ultrathin complex oxide ferromagnetic/antiferromagnetic bilayers. Applied Physics Letters, 2018, 113, .	1.5	7
77	Electrochemically driven degradation of chemical solution deposited ferroelectric thin-films in humid ambient. Journal of Applied Physics, 2020, 127, 244101.	1.1	7
78	Characterization of crystalline Pb _{0.92} La _{0.08} Zr _{0.4} Ti _{0.6} O ₃ thin films grown by off-axis radio frequency magnetron sputtering. Thin Solid Films, 2005, 492, 71-74.	0.8	6
79	Role of antiferromagnetic spin axis on magnetic reconstructions at the (111)-oriented $L_{a-0.7}S_{0.3}MnO_3$ thin films. Journal of Applied Physics, 2019, 125, 174101.	0.9	6
80	Ferroelectric field effect in SrCuO ₂ and SrRuO ₃ films. Journal of Low Temperature Physics, 1996, 105, 1517-1522.	0.6	5
81	Epitaxial (Pb,La)(Zr,Ti)O ₃ thin films on buffered Si(100) by on-axis radio frequency magnetron sputtering. Thin Solid Films, 2009, 517, 2623-2626.	0.8	5
82	Twinned-domain-induced magnonic modes in epitaxial LSMO/STO films. New Journal of Physics, 2017, 19, 063002.	1.2	5
83	Octahedral coupling in (111)- and (001)-oriented La _{2/3} Sr _{1/3} MnO ₃ /SrTiO ₃ heterostructures. Journal of Applied Physics, 2018, 124, .	1.1	5
84	Synthesis and characterization of (111)-oriented BaTiO ₃ thin films. Materials Research Express, 2019, 6, 056409.	0.8	5
85	Scanning probe microscopy for the imaging and control of ferroelectric oxides. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 1998, 56, 173-177.	1.7	4
86	Surface acoustic wave resonator from thick MOVPE-grown layers of GaN(0001) on sapphire. Materials Research Society Symposia Proceedings, 2002, 743, L6.37.1.	0.1	4
87	A Novel High Frequency Surface Acoustic Wave Device Based on Piezoelectric Interdigital Transducers. Integrated Ferroelectrics, 2004, 63, 55-62.	0.3	4
88	The fabrication and characterization of PbTiO ₃ nanomesas realized on nanostructured SrRuO ₃ /SrTiO ₃ templates. Nanotechnology, 2009, 20, 255705.	1.3	4
89	Photo-Electrochemical Synthesis of Silver-Oxide Clathrate Ag ₇ O ₈ NO ₃ on SrTiO ₃ . Electrochemical and Solid-State Letters, 2012, 15, E19.	2.2	4
90	Thickness dependent uniaxial magnetic anisotropy due to step-edges in (111)-oriented La _{0.7} Sr _{0.3} MnO ₃ thin films. Journal of Magnetism and Magnetic Materials, 2019, 487, 165304.	1.0	4

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91	Emergent spin-flop coupling and exchange bias in $\text{LaFeO}_3/\text{LaFeO}_3/\text{LaFeO}_3$ heterostructures. <i>Journal of Applied Physics</i> , 2021, 124, 174101.	1.1	4
92	Emergent premises in student experiences of a first-year electrical engineering course. <i>European Journal of Engineering Education</i> , 2021, 46, 302-317.	1.5	4
93	Nanoscale Etching of Metallic Perovskites Using STM. <i>Materials Research Society Symposia Proceedings</i> , 2004, 811, 140.	0.1	3
94	The case for electro-optic waveguide devices from ferroelectric $(\text{Pb},\text{La})(\text{Zr},\text{Ti})\text{O}_3$ thin film epilayers. , 2009, , .		2
95	Magneto-dynamic properties of complex oxide $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3/\text{SrTiO}_3$ heterostructure interface. <i>Applied Physics Letters</i> , 2019, 114, .	1.5	2
96	Enhanced magnetic signal along edges of embedded epitaxial $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$ nanostructures. <i>Journal of Magnetism and Magnetic Materials</i> , 2021, 521, 167324.	1.0	2
97	Magnetodynamic properties of dipole-coupled 1D magnonic crystals. <i>Journal of Magnetism and Magnetic Materials</i> , 2021, 539, 168376.	1.0	2
98	Microwave measurements on thin $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ films of different thickness. <i>European Physical Journal D</i> , 1996, 46, 1081-1082.	0.4	1
99	The microwave surface impedance of $\text{DyBa}_2/\text{Cu}_3/\text{O}_{7-x}$ very thin films. <i>IEEE Transactions on Applied Superconductivity</i> , 1997, 7, 1877-1880.	1.1	1
100	Simulation of Photonic Band Gap Waveguides in Lead-Lanthanum Zirconate-Titanate. , 2006, , .		1
101	Point contact investigations of film and interface magnetoresistance of $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$ heterostructures on Nb:SrTiO_3 . <i>Journal of Magnetism and Magnetic Materials</i> , 2015, 374, 433-439.	1.0	1
102	Towards Mapping Perovskite Oxide 3-D Structure Using Two-Dimensional Pixelated STEM Detector. <i>Microscopy and Microanalysis</i> , 2016, 22, 476-477.	0.2	1
103	Atomap - Automated Analysis of Atomic Resolution STEM Images. <i>Microscopy and Microanalysis</i> , 2017, 23, 426-427.	0.2	1
104	Uniaxial e_g vector control in perovskite oxide thin films by anisotropic strain engineering. <i>Physical Review B</i> , 2021, 103, .	1.1	1
105	Propagation properties of spin wave in Co_2FeAl Heusler alloy ultrathin films. <i>Materials Research Express</i> , 2021, 8, 086101.	0.8	1
106	Microwave losses and propagation in $\text{SrTiO}_3/\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ bilayers on LaAlO_3 . <i>European Physical Journal D</i> , 1996, 46, 1083-1084.	0.4	0
107	Electronic Doping in Epitaxial $\text{Pb}(\text{Zr}_{0.52}\text{Ti}_{0.48})\text{O}_3/\text{SrRuO}_3$ Heterostructures using a Ferroelectric Field Effect. <i>Materials Research Society Symposia Proceedings</i> , 1997, 474, 313.	0.1	0
108	Nonvolatile, Reversible Writing of Electronic Nanostructures in Epitaxial Ferroelectric / Metallic Oxide Heterostructures using a Field Effect. <i>Materials Research Society Symposia Proceedings</i> , 1997, 493, 291.	0.1	0

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109	Electronic nanostructures in epitaxial ferroelectric oxide heterostructures. , 1998, 3481, 435.		0
110	Nanoscale study of dpolarization phenomena in Pb(Zr 0.2 Ti 0.8)O 3 thin films. , 2002, 4811, 256.		0
111	Nanoscale surface modification of La0.7Sr0.3MnO3 thin films. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2010, 28, 407-410.	0.6	0
112	Domain relaxation in La0.7Sr0.3MnO3/SrTiO3 thin films due to declamping. Microscopy and Microanalysis, 2012, 18, 1868-1869.	0.2	0
113	Synthesis of epitaxial multiferroic oxide thin films. , 2012, , 73-98.		0
114	Teaching freshmen engineering communication. , 2016, , .		0