

Dietrich Hesse

List of Publications by Year in descending order

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papers

6,985
citations

87888

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56724

83
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105
all docs

105
docs citations

105
times ranked

7645
citing authors

#	ARTICLE	IF	CITATIONS
1	Monocrystalline spinel nanotube fabrication based on the Kirkendall effect. <i>Nature Materials</i> , 2006, 5, 627-631.	27.5	699
2	Ferroelectric Bi _{3.25} La _{0.75} Ti ₃ O ₁₂ Films of Uniform a-Axis Orientation on Silicon Substrates. <i>Science</i> , 2002, 296, 2006-2009.	12.6	518
3	Atomic-scale study of electric dipoles near charged and uncharged domain walls in ferroelectric films. <i>Nature Materials</i> , 2008, 7, 57-61.	27.5	467
4	Role of domain walls in the abnormal photovoltaic effect in BiFeO ₃ . <i>Nature Communications</i> , 2013, 4, .	12.8	461
5	Direct Observation of Continuous Electric Dipole Rotation in Flux-Closure Domains in Ferroelectric Pb(Zr,Ti)O ₃ . <i>Science</i> , 2011, 331, 1420-1423.	12.6	382
6	Tip-enhanced photovoltaic effects in bismuth ferrite. <i>Nature Communications</i> , 2011, 2, .	12.8	375
7	Influence of Surface Diffusion on the Formation of Hollow Nanostructures Induced by the Kirkendall Effect: The Basic Concept. <i>Nano Letters</i> , 2007, 7, 993-997.	9.1	363
8	Impact of misfit dislocations on the polarization instability of epitaxial nanostructured ferroelectric perovskites. <i>Nature Materials</i> , 2004, 3, 87-90.	27.5	347
9	Individually addressable epitaxial ferroelectric nanocapacitor arrays with near Tb inch ⁻² density. <i>Nature Nanotechnology</i> , 2008, 3, 402-407.	31.5	270
10	Direct imaging of the spatial and energy distribution of nucleation centres in ferroelectric materials. <i>Nature Materials</i> , 2008, 7, 209-215.	27.5	250
11	Ferroelectric Switching in Multiferroic Magnetite (Fe ₃ O ₄) Thin Films. <i>Advanced Materials</i> , 2009, 21, 4452-4455.	21.0	148
12	Anisotropic ferroelectric properties of epitaxially twinned Bi _{3.25} La _{0.75} Ti ₃ O ₁₂ thin films grown with three different orientations. <i>Applied Physics Letters</i> , 2002, 80, 1040-1042.	3.3	127
13	Functional Perovskites " From Epitaxial Films to Nanostructured Arrays. <i>Advanced Functional Materials</i> , 2008, 18, 3892-3906.	14.9	113
14	Tunnel electroresistance in junctions with ultrathin ferroelectric Pb(Zr _{0.2} Ti _{0.8})O ₃ barriers. <i>Applied Physics Letters</i> , 2012, 100, .	3.3	96
15	Magnetolectric Coupling in Ordered Arrays of Multilayered Heteroepitaxial BaTiO ₃ /CoFe ₂ O ₄ Nanodots. <i>Nano Letters</i> , 2011, 11, 3202-3206.	9.1	94
16	The influence of the top-contact metal on the ferroelectric properties of epitaxial ferroelectric Pb(Zr _{0.2} Ti _{0.8})O ₃ thin films. <i>Journal of Applied Physics</i> , 2008, 104, .	2.5	89
17	Microstructure and Properties of Well-Ordered Multiferroic Pb(Zr,Ti)O ₃ /CoFe ₂ O ₄ Nanocomposites. <i>ACS Nano</i> , 2010, 4, 1099-1107.	14.6	86
18	Structural and electrical anisotropy of (001)-, (116)-, and (103)-oriented epitaxial SrBi ₂ Ta ₂ O ₉ thin films on SrTiO ₃ substrates grown by pulsed laser deposition. <i>Journal of Applied Physics</i> , 2000, 88, 6658-6664.	2.5	84

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19	High-Density Periodically Ordered Magnetic Cobalt Ferrite Nanodot Arrays by Template-Assisted Pulsed Laser Deposition. <i>Advanced Functional Materials</i> , 2009, 19, 3450-3455.	14.9	74
20	Nanostructured Ferroelectrics: Fabrication and Structure-Property Relations. <i>Advanced Materials</i> , 2011, 23, 4599-4613.	21.0	74
21	Preparation and characterization of nanosized magnesium ferrite powders by a starch-gel process and corresponding ceramics. <i>Journal of Materials Science</i> , 2013, 48, 6509-6518.	3.7	74
22	Influence of Temperature on Evolution of Coaxial ZnO/Al ₂ O ₃ One-Dimensional Heterostructures: From Core-Shell Nanowires to Spinel Nanotubes and Porous Nanowires. <i>Journal of Physical Chemistry C</i> , 2008, 112, 4068-4074.	3.1	73
23	Coexistence of ferroelectricity and antiferroelectricity in epitaxial PbZrO ₃ films with different orientations. <i>Journal of Applied Physics</i> , 2008, 103, .	2.5	71
24	Single-crystalline MgAl ₂ O ₄ spinel nanotubes using a reactive and removable MgO nanowire template. <i>Nanotechnology</i> , 2006, 17, 5157-5162.	2.6	69
25	Nonlinear Phenomena in Multiferroic Nanocapacitors: Joule Heating and Electromechanical Effects. <i>ACS Nano</i> , 2011, 5, 9104-9112.	14.6	69
26	Self-assembled nanoscale ferroelectrics. <i>Journal of Materials Science</i> , 2006, 41, 1-11.	3.7	65
27	Piezoresponse Scanning Force Microscopy: What Quantitative Information Can We Really Get Out of Piezoresponse Measurements on Ferroelectric Thin Films. <i>Integrated Ferroelectrics</i> , 2002, 44, 113-124.	0.7	63
28	Direct Evidence for Cation Non-Stoichiometry and Cottrell Atmospheres Around Dislocation Cores in Functional Oxide Interfaces. <i>Advanced Materials</i> , 2010, 22, 2430-2434.	21.0	58
29	Non-Kolmogorov-Avrami-Ishibashi Switching Dynamics in Nanoscale Ferroelectric Capacitors. <i>Nano Letters</i> , 2010, 10, 1266-1270.	9.1	58
30	Thickness-driven antiferroelectric-to-ferroelectric phase transition of thin PbZrO ₃ /Pb(Zr _{0.8} Ti _{0.2})O ₃ multilayers. <i>Applied Physics Letters</i> , 2007, 91, .	3.3	52
31	Electric-Field Control of the Orbital Occupancy and Magnetic Moment of a Transition-Metal Oxide. <i>Physical Review Letters</i> , 2015, 115, 157401.	7.8	51
32	First-Order Reversal Curve Probing of Spatially Resolved Polarization Switching Dynamics in Ferroelectric Nanocapacitors. <i>ACS Nano</i> , 2012, 6, 491-500.	14.6	50
33	Growth, structure, and properties of all-epitaxial ferroelectric (Bi,La) ₄ Ti ₃ O ₁₂ ·Pb(Zr _{0.4} Ti _{0.6})O ₃ ·(Bi,La) ₄ Ti ₃ O ₁₂ trilayered thin films on SrRuO ₃ -covered SrTiO ₃ (011) substrates. <i>Applied Physics Letters</i> , 2005, 86, 082906.	3.3	42
34	Switching kinetics in epitaxial BiFeO ₃ thin films. <i>Journal of Applied Physics</i> , 2010, 107, .	2.5	41
35	Fabrication and characterization of extended arrays of Ag ₂ S/Ag nanodot resistive switches. <i>Applied Physics Letters</i> , 2011, 98, 243109.	3.3	41
36	Elastic coupling between 90° twin walls and interfacial dislocations in epitaxial ferroelectric perovskites: A quantitative high-resolution transmission electron microscopy study. <i>Physical Review B</i> , 2005, 72, .	3.2	40

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37	Growth and characterization of non-c-oriented epitaxial ferroelectric SrBi ₂ Ta ₂ O ₉ films on buffered Si(100). Applied Physics Letters, 2000, 77, 3260-3262.	3.3	38
38	Interfacial strain effects in epitaxial multiferroic heterostructures of PbZr _x Ti _{1-x} O ₃ •La _{0.7} Sr _{0.3} MnO ₃ grown by pulsed-laser deposition. Applied Physics Letters, 2008, 92, 152506.	3.3	38
39	Four-state ferroelectric spin-valve. Scientific Reports, 2015, 5, 9749.	3.3	38
40	Structure and properties of epitaxial ferroelectric PbZr _{0.4} Ti _{0.6} O ₃ •PbZr _{0.6} Ti _{0.4} O ₃ superlattices grown on SrTiO ₃ (001) by pulsed laser deposition. Applied Physics Letters, 2007, 90, 072909.	3.3	37
41	Anisotropic ferro- and piezoelectric properties of sol-gel-grown Bi _{3.15} Nd _{0.85} Ti ₃ O ₁₂ films with two different orientations on Pt•Ti•SiO ₂ •Si. Applied Physics Letters, 2006, 89, 062905.	3.3	36
42	Growth of uniformly a-axis-oriented ferroelectric lanthanum-substituted bismuth titanate films on silicon substrates. Journal of Applied Physics, 2003, 93, 5592-5601.	2.5	33
43	Ferroelectric-semiconductor heterostructures obtained by direct wafer bonding. Applied Physics Letters, 1997, 70, 3416-3418.	3.3	32
44	Well-ordered large-area arrays of epitaxial ferroelectric (Bi,La) ₄ Ti ₃ O ₁₂ nanostructures fabricated by gold nanotube-membrane lithography. Applied Physics Letters, 2005, 86, 152906.	3.3	32
45	Transmission Electron Microscopy in situ Fabrication of ZnO/Al ₂ O ₃ Composite Nanotubes by Electron•Beam•Induced Local Etching of ZnO/Al ₂ O ₃ Core/Shell Nanowires. Small, 2008, 4, 2112-2117.	10.0	32
46	Nanodomains and nanometer-scale disorder in multiferroic bismuth ferrite single crystals. Acta Materialia, 2015, 82, 356-368.	7.9	32
47	Formation of Ferroelectric Perovskite Nanostructure Patterns Using Latex Sphere Monolayers as Masks: An Ambient Gas Pressure Effect during Pulsed Laser Deposition. Small, 2005, 1, 837-841.	10.0	29
48	Origin of tunnel electroresistance effect in $PbTiO_3$ -based multiferroic tunnel junctions. Physical Review B, 2015, 92, .	3.2	29
49	Controlled Positioning of Large Interfacial Nanocavities via Stress•Engineered Void Localization. Small, 2010, 6, 1603-1607.	10.0	27
50	Universality of Polarization Switching Dynamics in Ferroelectric Capacitors Revealed by 5D Piezoresponse Force Microscopy. Advanced Functional Materials, 2013, 23, 3971-3979.	14.9	22
51	Epitaxial growth of ferroelectric SrBi ₂ Ta ₂ O ₉ thin films of mixed (100) and (116) orientation on SrLaGaO ₄ (110). Applied Physics Letters, 2001, 79, 2961-2963.	3.3	20
52	Origins of domain wall pinning in ferroelectric nanocapacitors. Nano Convergence, 2014, 1, .	12.1	20
53	Reversible plasma switching in epitaxial BiFeO ₃ thin films. Applied Physics Letters, 2010, 96, 202902.	3.3	19
54	Individual switching of film-based nanoscale epitaxial ferroelectric capacitors. Journal of Applied Physics, 2010, 108, .	2.5	18

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55	Microstructure and ferroelectric properties of epitaxial cation ordered PbSc _{0.5} Ta _{0.5} O ₃ thin films grown on electroded and buffered Si(100). Journal of Applied Physics, 2013, 114, .	2.5	18
56	Microstructure of highly strained BiFeO ₃ thin films: Transmission electron microscopy and electron-energy loss spectroscopy studies. Journal of Applied Physics, 2014, 115, 043526.	2.5	18
57	90° a~b domains in epitaxial ferroelectric Bi _{3.25} La _{0.75} Ti ₃ O ₁₂ films. Applied Physics Letters, 2004, 85, 2029-2031.	3.3	17
58	Microstructure of (104)-oriented Bi _{3.25} La _{0.75} Ti ₃ O ₁₂ and Bi _{3.54} Nd _{0.46} Ti ₃ O ₁₂ ferroelectric thin films on multiply twinned SrRuO ₃ /Pt(111) electrodes on YSZ(100)-buffered Si(100). Physica Status Solidi A, 2005, 202, 2287-2298.	1.7	16
59	Growth and properties of (104)-oriented ferroelectric Nd-substituted Bi ₄ Ti ₃ O ₁₂ films on Si(100) using (111)-oriented SrRuO ₃ •Pt electrodes. Applied Physics Letters, 2006, 88, 062909.	3.3	16
60	Impact of misfit relaxation and a-domain formation on the electrical properties of tetragonal PbZr _{0.4} Ti _{0.6} O ₃ /PbZr _{0.2} Ti _{0.8} O ₃ thin film heterostructures: Experiment and theoretical approach. Journal of Applied Physics, 2009, 105, .	2.5	16
61	A study of intermixing in perovskite superlattices by simulationâ€supported <i>corrected</i> HAADFâ€STEM. Physica Status Solidi (A) Applications and Materials Science, 2011, 208, 2144-2149.	1.8	16
62	Epitaxial growth of multiferroic BiFeO ₃ thin films with (101) and (111) orientations on (100) Si substrates. Applied Physics Letters, 2013, 102, .	3.3	16
63	Microstructure and ferroelectric properties of low-fatigue epitaxial, all (001)-oriented (Bi,La) ₄ Ti ₃ O ₁₂ •Pb(Zr _{0.4} Ti _{0.6})O ₃ •(Bi,La) ₄ Ti ₃ O ₁₂ trilayered thin films on (001) SrTiO ₃ substrates. Journal of Applied Physics, 2005, 98, 014101.	2.5	15
64	Surface Reaction of ZnO Nanowires with Electron-Beam Generated Alumina Vapor. Journal of Physical Chemistry C, 2008, 112, 6770-6774.	3.1	15
65	Fine-grained BaTiO ₃ •MgFe ₂ O ₄ composites prepared by a Pechini-like process. Journal of Alloys and Compounds, 2015, 638, 141-147.	5.5	15
66	Photocatalytic activity of CaTaO ₂ N nanocrystals obtained from a hydrothermally synthesized oxide precursor. Materials Research Bulletin, 2016, 73, 276-283.	5.2	15
67	Existence of a magnetically ordered hole gas at the La _{0.7} Sr _{0.3} MnO ₃ /SrRuO ₃ interface. European Physical Journal B, 2013, 86, 1.	1.5	14
68	Microstructural Characterization of BaTiO ₃ Ceramic Nanoparticles Synthesized by the Hydrothermal Technique. Solid State Phenomena, 2005, 106, 41-46.	0.3	13
69	Toward Discrete Multilayered Composite Structures: Do Hollow Networks Form in a Polycrystalline Infinite Nanoplane by the Kirkendall Effect?. Chemistry of Materials, 2011, 23, 4445-4451.	6.7	13
70	Microstructure and properties of epitaxial Sr ₂ FeMoO ₆ films containing SrMoO ₄ precipitates. Journal of Materials Science, 2015, 50, 3131-3138.	3.7	13
71	Ferroelectric nanostructures. Journal of Vacuum Science & Technology B, 2009, 27, 498.	1.3	12
72	Temperatureâ€Dependent Solidâ€State Reactions With and Without Kirkendall Effect in Al ₂ O ₃ /ZnO, Fe ₂ O ₃ /ZnO, and Co _X O _Y /ZnO Oxide Thin Film Systems. Advanced Engineering Materials, 2010, 12, 509-516.	3.5	12

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73	Epitaxial, cation-ordered, ferroelectric PbSc _{0.5} Ta _{0.5} O ₃ thin films prepared by pulsed laser deposition. Applied Physics Letters, 2009, 95, 022907.	3.3	11
74	Atomic-Scale Structure and Properties of Epitaxial PbZr _{0.2} Ti _{0.8} O ₃ /SrRuO ₃ Heterointerfaces. Advanced Materials Interfaces, 2015, 2, 1500087.	3.7	11
75	Topotaxial Formation of Mg ₄ Nb ₂ O ₉ and MgNb ₂ O ₆ Thin Films on MgO (001) Single Crystals by Vapor-Solid Reaction. Journal of the American Ceramic Society, 2003, 86, 1049-1051.	3.8	10
76	Epitaxial growth of non-c-axis-oriented ferroelectric rare-earth element-substituted bismuth titanate thin films on Si(100). Journal of Applied Physics, 2006, 100, 044108.	2.5	10
77	Cross talk by extensive domain wall motion in arrays of ferroelectric nanocapacitors. Applied Physics Letters, 2011, 99, 202901.	3.3	10
78	Field dependency of magnetoelectric coupling in multilayered nanocomposite arrays: Possible contribution from surface spins. Applied Physics Letters, 2012, 101, .	3.3	10
79	Growth and characterization of epitaxial ferroelectric lanthanum-substituted bismuth titanate nanostructures with three different orientations. Journal of Applied Physics, 2005, 98, 124302.	2.5	9
80	Domain structures and piezoelectric properties of Pb(Zr _{0.2} Ti _{0.8})O ₃ nanocapacitors. Journal of Applied Physics, 2010, 108, .	2.5	9
81	Oriented growth and ferroelectric anisotropy of sol-gel derived Bi _{3.15} Nd _{0.85} Ti ₃ O ₁₂ thin films on Nb-doped SrTiO ₃ . Physica Status Solidi (A) Applications and Materials Science, 2008, 205, 2711-2715.	1.8	8
82	Ferroelectric/Antiferroelectric Pb(Zr _{0.8} Ti _{0.2})O ₃ /PbZrO ₃ Epitaxial Multilayers: Growth and Thickness-Dependent Properties. Ferroelectrics, 2008, 370, 140-146.	0.6	7
83	Microstructure of (110)-oriented epitaxial SrRuO ₃ thin films grown on off-cut single crystal YSZ(100) substrates. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2005, 118, 60-65.	3.5	6
84	Influence of miscut Y ₂ O ₃ -stabilized ZrO ₂ substrates on the azimuthal domain structure and ferroelectric properties of epitaxial La-substituted Bi ₄ Ti ₃ O ₁₂ films. Journal of Applied Physics, 2006, 100, 064101.	2.5	6
85	Lateral Size of Self-Patterned Nanostructures Controlled by Multi-Step Deposition. Solid State Phenomena, 2005, 106, 117-122.	0.3	5
86	Enhanced ferroelectric and dielectric properties of (111)-oriented highly cation-ordered PbSc _{0.5} Ta _{0.5} O ₃ thin films. Journal of Applied Physics, 2013, 114, .	2.5	5
87	Growth temperature dependence of crystal symmetry in Nb-doped BaTiO ₃ thin films. Journal of Advanced Dielectrics, 2013, 03, 1350009.	2.4	5
88	Coherent Fe-rich nano-scale perovskite oxide phase in epitaxial Sr ₂ FeMoO ₆ films grown on cubic and scandate substrates. Journal of Applied Physics, 2017, 121, .	2.5	5
89	Growth and characterization of non-c-axis-oriented SrBi ₂ Ta ₂ O ₉ epitaxial thin films on Si(100) substrates with SrRuO ₃ bottom electrodes. Integrated Ferroelectrics, 2001, 39, 73-80.	0.7	4
90	Sol-gel derived ferroelectric Bi _{3.15} Nd _{0.85} Ti ₃ O ₁₂ thin films of predominant 100/010/119 orientation deposited both on Nb-doped (011)SrTiO ₃ and on (011)SrRuO ₃ /(011)SrTiO ₃ . Applied Physics A: Materials Science and Processing, 2008, 91, 323-326.	2.3	4

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91	Interfacial intermixing in Sr ₃ RuO ₇ /Pb _{0.7} Ca _{0.3} MnO ₃ epitaxial superlattices: A HAADF-STEM study. Physica Status Solidi (A) Applications and Materials Science, 2014, 211, 536-542.	1.8	4
92	Reducing azimuthal domains in epitaxial ferroelectric lanthanum-substituted bismuth titanate films using miscut yttria-stabilized zirconia substrates. Applied Physics Letters, 2005, 86, 142903.	3.3	3
93	ALL-EPITAXIAL MULTILAYERED FERROELECTRIC (Bi,La) ₄ Ti ₃ O ₁₂ /Pb(Zr _{0.4} Ti _{0.6})O ₃ THIN FILMS ON SrTiO ₃ SUBSTRATES BY PULSED LASER DEPOSITION. Integrated Ferroelectrics, 2005, 76, 147-154.	0.7	2
94	Interfaces in nanosize perovskite titanate ferroelectrics "microstructure and impact on selected properties. International Journal of Materials Research, 2005, 96, 448-451.	0.8	2
95	Epitaxial growth of multilayered (Bi,La) ₄ Ti ₃ O ₁₂ /Pb(Zr,Ti)O ₃ ferroelectric thin films with different orientations. Journal of Electroceramics, 2008, 21, 72-77.	2.0	1
96	Ferromagnetism and Morphology of Annealed Fe ₂ O ₃ /Co _X O _Y /ZnO Thin Films. Advanced Engineering Materials, 2011, 13, 330-335.	3.5	1
97	Self-assembled nanoscale ferroelectrics. , 2006, , 1-11.		1
98	Growth and Characterization of (012)- and (001)-Oriented Epitaxial Anatase Thin Films. Advances in Science and Technology, 2006, 46, 146.	0.2	0
99	Interfacial intermixing in Sr ₃ RuO ₇ /Pb _{0.7} Ca _{0.3} MnO ₃ epitaxial superlattices: A HAADF-STEM study (Phys. Status Solidi A 3 (2014)). Physica Status Solidi (A) Applications and Materials Science, 2014, 211, ..	1.8	0