

Dietrich Hesse

List of Publications by Year in descending order

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87888

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105
docs citations

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times ranked

7645
citing authors

#	ARTICLE	IF	CITATIONS
1	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
2	Photocatalytic activity of CaTaO ₂ N nanocrystals obtained from a hydrothermally synthesized oxide precursor. Materials Research Bulletin, 2016, 73, 276-283.	5.2	15
3	Four-state ferroelectric spin-valve. Scientific Reports, 2015, 5, 9749.	3.3	38
4	Origin of tunnel electroresistance effect in PbTiO_3 -based multiferroic tunnel junctions. Physical Review B, 2015, 92, .	3.2	29
5	Electric-Field Control of the Orbital Occupancy and Magnetic Moment of a Transition-Metal Oxide. Physical Review Letters, 2015, 115, 157401.	7.8	51
6	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
7	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
8	Atomic-Scale Structure and Properties of Epitaxial $\text{PbZr}_{0.2}\text{Ti}_{0.8}\text{O}_3/\text{SrRuO}_3$ Heterointerfaces. Advanced Materials Interfaces, 2015, 2, 1500087.	3.7	11
9	Nanodomains and nanometer-scale disorder in multiferroic bismuth ferrite single crystals. Acta Materialia, 2015, 82, 356-368.	7.9	32
10	Origins of domain wall pinning in ferroelectric nanocapacitors. Nano Convergence, 2014, 1, .	12.1	20
11	Interfacial intermixing in $\text{SrRuO}_3/\text{PbTiO}_3/\text{CaMnO}_3$ epitaxial superlattices: A HAADF-STEM study. Physica Status Solidi (A) Applications and Materials Science, 2014, 211, 536-542.	1.8	4
12	Interfacial intermixing in $\text{SrRuO}_3/\text{PbTiO}_3/\text{CaMnO}_3$ epitaxial superlattices: A HAADF-STEM study (Phys. Status Solidi A 311 (2014)). Physica Status Solidi (A) Applications and Materials Science, 2014, 211, .	1.8	0
13	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
14	Preparation and characterization of nanosized magnesium ferrite powders by a starch-gel process and corresponding ceramics. Journal of Materials Science, 2013, 48, 6509-6518.	3.7	74
15	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
16	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
17	Role of domain walls in the abnormal photovoltaic effect in BiFeO ₃ . Nature Communications, 2013, 4, .	12.8	461
18	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

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19	Universality of Polarization Switching Dynamics in Ferroelectric Capacitors Revealed by 5D Piezoresponse Force Microscopy. <i>Advanced Functional Materials</i> , 2013, 23, 3971-3979.	14.9	22
20	Enhanced ferroelectric and dielectric properties of (111)-oriented highly cation-ordered PbSc _{0.5} Ta _{0.5} O ₃ thin films. <i>Journal of Applied Physics</i> , 2013, 114, .	2.5	5
21	Growth temperature dependence of crystal symmetry in Nb-doped BaTiO ₃ thin films. <i>Journal of Advanced Dielectrics</i> , 2013, 03, 1350009.	2.4	5
22	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
23	Field dependency of magnetoelectric coupling in multilayered nanocomposite arrays: Possible contribution from surface spins. <i>Applied Physics Letters</i> , 2012, 101, .	3.3	10
24	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
25	Magnetoelectric Coupling in Ordered Arrays of Multilayered Heteroepitaxial BaTiO ₃ /CoFeO ₄ Nanodots. <i>Nano Letters</i> , 2011, 11, 3202-3206.	9.1	94
26	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
27	Nonlinear Phenomena in Multiferroic Nanocapacitors: Joule Heating and Electromechanical Effects. <i>ACS Nano</i> , 2011, 5, 9104-9112.	14.6	69
28	Tip-enhanced photovoltaic effects in bismuth ferrite. <i>Nature Communications</i> , 2011, 2, .	12.8	375
29	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
30	Toward Discrete Multilayered Composite Structures: Do Hollow Networks Form in a Polycrystalline Infinite Nanoplane by the Kirkendall Effect?. <i>Chemistry of Materials</i> , 2011, 23, 4445-4451.	6.7	13
31	A study of intermixing in perovskite superlattices by simulation-supported <i>c</i> -corrected HAADF-STEM. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2011, 208, 2144-2149.	1.8	16
32	Ferromagnetism and Morphology of Annealed Fe ₂ O ₃ /Co _X O _Y /ZnO Thin Films. <i>Advanced Engineering Materials</i> , 2011, 13, 330-335.	3.5	1
33	Nanostructured Ferroelectrics: Fabrication and Structure-Property Relations. <i>Advanced Materials</i> , 2011, 23, 4599-4613.	21.0	74
34	Cross talk by extensive domain wall motion in arrays of ferroelectric nanocapacitors. <i>Applied Physics Letters</i> , 2011, 99, 202901.	3.3	10
35	Reversible plasma switching in epitaxial BiFeO ₃ thin films. <i>Applied Physics Letters</i> , 2010, 96, 202902.	3.3	19
36	Temperature-Dependent Solid-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. <i>Advanced Engineering Materials</i> , 2010, 12, 509-516.	3.5	12

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37	Direct Evidence for Cation Nonstoichiometry and Cottrell Atmospheres Around Dislocation Cores in Functional Oxide Interfaces. <i>Advanced Materials</i> , 2010, 22, 2430-2434.	21.0	58
38	Controlled Positioning of Large Interfacial Nanocavities via Stress-Engineered Void Localization. <i>Small</i> , 2010, 6, 1603-1607.	10.0	27
39	Domain structures and piezoelectric properties of Pb(Zr _{0.2} Ti _{0.8})O ₃ nanocapacitors. <i>Journal of Applied Physics</i> , 2010, 108, .	2.5	9
40	Individual switching of film-based nanoscale epitaxial ferroelectric capacitors. <i>Journal of Applied Physics</i> , 2010, 108, .	2.5	18
41	Switching kinetics in epitaxial BiFeO ₃ thin films. <i>Journal of Applied Physics</i> , 2010, 107, .	2.5	41
42	Non-Kolmogorov-Avrami-Ishibashi Switching Dynamics in Nanoscale Ferroelectric Capacitors. <i>Nano Letters</i> , 2010, 10, 1266-1270.	9.1	58
43	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
44	Epitaxial, cation-ordered, ferroelectric PbSc _{0.5} Ta _{0.5} O ₃ thin films prepared by pulsed laser deposition. <i>Applied Physics Letters</i> , 2009, 95, 022907.	3.3	11
45	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. <i>Journal of Applied Physics</i> , 2009, 105, .	2.5	16
46	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
47	Ferroelectric Switching in Multiferroic Magnetite (Fe ₃ O ₄) Thin Films. <i>Advanced Materials</i> , 2009, 21, 4452-4455.	21.0	148
48	Ferroelectric nanostructures. <i>Journal of Vacuum Science & Technology B</i> , 2009, 27, 498.	1.3	12
49	Epitaxial growth of multilayered (Bi,La) ₄ Ti ₃ O ₁₂ /Pb(Zr,Ti)O ₃ ferroelectric thin films with different orientations. <i>Journal of Electroceramics</i> , 2008, 21, 72-77.	2.0	1
50	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 . <i>Applied Physics A: Materials Science and Processing</i> , 2008, 91, 323-326.	2.3	4
51	Transmission Electron Microscopy in situ Fabrication of ZnO/Al ₂ O ₃ Composite Nanotubes by Electron-Beam-Irradiation-Induced Local Etching of ZnO/Al ₂ O ₃ Core/Shell Nanowires. <i>Small</i> , 2008, 4, 2112-2117.	10.0	32
52	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 . <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2008, 205, 2711-2715.	1.8	8
53	Functional Perovskites - From Epitaxial Films to Nanostructured Arrays. <i>Advanced Functional Materials</i> , 2008, 18, 3892-3906.	14.9	113
54	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

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55	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
56	Individually addressable epitaxial ferroelectric nanocapacitor arrays with near Tb inch ² density. <i>Nature Nanotechnology</i> , 2008, 3, 402-407.	31.5	270
57	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
58	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
59	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. <i>Applied Physics Letters</i> , 2008, 92, 152506.	3.3	38
60	Surface Reaction of ZnO Nanowires with Electron-Beam Generated Alumina Vapor. <i>Journal of Physical Chemistry C</i> , 2008, 112, 6770-6774.	3.1	15
61	Coexistence of ferroelectricity and antiferroelectricity in epitaxial PbZrO ₃ films with different orientations. <i>Journal of Applied Physics</i> , 2008, 103, .	2.5	71
62	Ferroelectric/Antiferroelectric Pb(Zr _{0.8} Ti _{0.2})O ₃ /PbZrO ₃ Epitaxial Multilayers: Growth and Thickness-Dependent Properties. <i>Ferroelectrics</i> , 2008, 370, 140-146.	0.6	7
63	Thickness-driven antiferroelectric-to-ferroelectric phase transition of thin PbZrO ₃ layers in epitaxial PbZrO ₃ /Pb(Zr _{0.8} Ti _{0.2})O ₃ multilayers. <i>Applied Physics Letters</i> , 2007, 91, .	3.3	52
64	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. <i>Applied Physics Letters</i> , 2007, 90, 072909.	3.3	37
65	Influence of Surface Diffusion on the Formation of Hollow Nanostructures Induced by the Kirkendall Effect: A The Basic Concept. <i>Nano Letters</i> , 2007, 7, 993-997.	9.1	363
66	Monocrystalline spinel nanotube fabrication based on the Kirkendall effect. <i>Nature Materials</i> , 2006, 5, 627-631.	27.5	699
67	Self-assembled nanoscale ferroelectrics. <i>Journal of Materials Science</i> , 2006, 41, 1-11.	3.7	65
68	Growth and Characterization of (012)- and (001)-Oriented Epitaxial Anatase Thin Films. <i>Advances in Science and Technology</i> , 2006, 46, 146.	0.2	0
69	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. <i>Journal of Applied Physics</i> , 2006, 100, 064101.	2.5	6
70	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. <i>Applied Physics Letters</i> , 2006, 89, 062905.	3.3	36
71	Epitaxial growth of non-c-axis-oriented ferroelectric rare-earth element-substituted bismuth titanate thin films on Si(100). <i>Journal of Applied Physics</i> , 2006, 100, 044108.	2.5	10
72	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. <i>Applied Physics Letters</i> , 2006, 88, 062909.	3.3	16

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73	Single-crystalline MgAl ₂ O ₄ spinel nanotubes using a reactive and removable MgO nanowire template. Nanotechnology, 2006, 17, 5157-5162.	2.6	69
74	Self-assembled nanoscale ferroelectrics. , 2006, , 1-11.		1
75	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
76	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
77	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
78	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
79	Microstructural Characterization of BaTiO ₃ Ceramic Nanoparticles Synthesized by the Hydrothermal Technique. Solid State Phenomena, 2005, 106, 41-46.	0.3	13
80	Interfaces in nanosize perovskite titanate ferroelectrics "microstructure and impact on selected properties. International Journal of Materials Research, 2005, 96, 448-451.	0.8	2
81	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
82	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
83	Elastic coupling between 90° twin walls and interfacial dislocations in epitaxial ferroelectric perovskites: A quantitative high-resolution transmission electron microscopy study. Physical Review B, 2005, 72, .	3.2	40
84	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. Applied Physics Letters, 2005, 86, 082906.	3.3	42
85	Lateral Size of Self-Patterned Nanostructures Controlled by Multi-Step Deposition. Solid State Phenomena, 2005, 106, 117-122.	0.3	5
86	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
87	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
88	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
89	Impact of misfit dislocations on the polarization instability of epitaxial nanostructured ferroelectric perovskites. Nature Materials, 2004, 3, 87-90.	27.5	347
90	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

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91	Growth of uniformly a-axis-oriented ferroelectric lanthanum-substituted bismuth titanate films on silicon substrates. <i>Journal of Applied Physics</i> , 2003, 93, 5592-5601.	2.5	33
92	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
93	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
94	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
95	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. <i>Integrated Ferroelectrics</i> , 2001, 39, 73-80.	0.7	4
96	Epitaxial growth of ferroelectric SrBi ₂ Ta ₂ O ₉ thin films of mixed (100) and (116) orientation on SrLaGaO ₄ (110). <i>Applied Physics Letters</i> , 2001, 79, 2961-2963.	3.3	20
97	Growth and characterization of non-c-oriented epitaxial ferroelectric SrBi ₂ Ta ₂ O ₉ films on buffered Si(100). <i>Applied Physics Letters</i> , 2000, 77, 3260-3262.	3.3	38
98	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
99	Ferroelectric-semiconductor heterostructures obtained by direct wafer bonding. <i>Applied Physics Letters</i> , 1997, 70, 3416-3418.	3.3	32