Susanne Hoffmann-Eifert

List of Publications by Year
in descending order

110 papers	3,580 citations	147801 31 h-index	149698 56 g-index
113 all docs	113 docs citations	113 times ranked	3712 citing authors

#	Article	IF	Citations
1	Effect of the Threshold Kinetics on the Filament Relaxation Behavior of Agâ€Based Diffusive Memristors. Advanced Functional Materials, 2022, 32, .	14.9	33
2	NEUROTEC I: Neuro-inspired Artificial Intelligence Technologies for the Electronics of the Future. , 2022, , .		0
3	The importance of singly charged oxygen vacancies for electrical conduction in monoclinic HfO2. Journal of Applied Physics, 2021, 129, .	2.5	8
4	Utilizing the Switching Stochasticity of HfO2/TiOx-Based ReRAM Devices and the Concept of Multiple Device Synapses for the Classification of Overlapping and Noisy Patterns. Frontiers in Neuroscience, 2021, 15, 661856.	2.8	26
5	Review of Manufacturing Process Defects and Their Effects on Memristive Devices. Journal of Electronic Testing: Theory and Applications (JETTA), 2021, 37, 427-437.	1.2	8
6	Reliability Aspects of Memristive Devices for Computation-in-Memory Applications. , 2021, , .		0
7	Intrinsic RESET Speed Limit of Valence Change Memories. ACS Applied Electronic Materials, 2021, 3, 5563-5572.	4.3	15
8	Cation diffusion in polycrystalline thin films of monoclinic HfO2 deposited by atomic layer deposition. APL Materials, 2020, 8, .	5.1	7
9	Comprehensive model for the electronic transport in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mtext>Pt/SrTi</mml:mtext><mml:msub><mml:mi mathvariant="normal">O</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:mrow></mml:math> analog memristive devices. Physical Review B, 2020, 102, .	3.2	20
10	Variability-Aware Modeling of Filamentary Oxide-Based Bipolar Resistive Switching Cells Using SPICE Level Compact Models. IEEE Transactions on Circuits and Systems I: Regular Papers, 2020, 67, 4618-4630.	5.4	72
11	Evolution of short-range order in chemically and physically grown thin film bilayer structures for electronic applications. Nanoscale, 2020, 12, 13103-13112.	5.6	13
12	Interface effects on memristive devices. , 2019, , 171-202.		7
13	Exploiting the switching dynamics of HfO2-based ReRAM devices for reliable analog memristive behavior. APL Materials, 2019, 7, .	5.1	94
14	Role of the Electrode Material on the RESET Limitation in Oxide ReRAM Devices. Advanced Electronic Materials, 2018, 4, 1700243.	5.1	20
15	Characterization of HfO<inf>2</inf>/TiO<inf>x</inf> ReRAM Cells in Pulse Operation Mode. , 2018, , .		0
16	KMC Simulation of the Electroforming, Set and Reset Processes in Redox-Based Resistive Switching Devices. IEEE Nanotechnology Magazine, 2018, 17, 1181-1188.	2.0	21
17	Improved Switching Stability and the Effect of an Internal Series Resistor in HfO₂/TiO_{<italic>x</italic>} Bilayer ReRAM Cells. IEEE Transactions on Electron Devices, 2018, 65, 3229-3236.	3.0	95
18	Understanding the Coexistence of Two Bipolar Resistive Switching Modes with Opposite Polarity in Pt/TiO₂/Ti/Pt Nanosized ReRAM Devices. ACS Applied Materials & Interfaces, 2018, 10, 29766-29778.	8.0	71

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19	A SIMS study of cation and anion diffusion in tantalum oxide. Physical Chemistry Chemical Physics, 2018, 20, 989-996.	2.8	21
20	Overcoming the RESET Limitation in Tantalum Oxide-Based ReRAM Using an Oxygen-Blocking Layer. , 2017, , .		1
21	Mobility Modulation and Suppression of Defect Formation in Two-Dimensional Electron Systems by Charge-Transfer Management. ACS Applied Materials & Interfaces, 2017, 9, 10888-10896.	8.0	12
22	Thermodynamic Ground States of Complex Oxide Heterointerfaces. ACS Applied Materials & Interfaces, 2017, 9, 1086-1092.	8.0	34
23	Design rules for threshold switches based on a field triggered thermal runaway mechanism. Journal of Computational Electronics, 2017, 16, 1175-1185.	2.5	10
24	Interfaces Formed by ALD Metal Oxide Growth on Metal Layers. ECS Transactions, 2017, 80, 87-95.	0.5	3
25	(Invited) Tuning the Switching Behavior of Nano-Crossbar Reram Devices By Design and Process Treatment of ALD Functional Oxide Layer Stacks. ECS Meeting Abstracts, 2017, , .	0.0	0
26	Two Stable Switching Modes with Opposite Polarity in Pt/TiO2/Ti Cells Based on Concurring Phenomena Close to the Pt/TiO2 Interface. ECS Meeting Abstracts, 2017, , .	0.0	0
27	Interfaces Formed by ALD Metal Oxide Growth on Metal Layers. ECS Meeting Abstracts, 2017, , .	0.0	0
28	Multidimensional Simulation of Threshold Switching in NbO₂ Based on an Electric Field Triggered Thermal Runaway Model. Advanced Electronic Materials, 2016, 2, 1600169.	5.1	95
29	Resistance switching behavior of atomic layer deposited SrTiO3 film through possible formation of Sr2Ti6O13 or Sr1Ti11O20 phases. Scientific Reports, 2016, 6, 20550.	3.3	17
30	The influence of non-stoichiometry on the switching kinetics of strontium-titanate ReRAM devices. Journal of Applied Physics, 2016, 120, .	2.5	9
31	Disentanglement of growth dynamic and thermodynamic effects in LaAlO3/SrTiO3 heterostructures. Scientific Reports, 2016, 6, 22410.	3.3	31
32	Uniting Gradual and Abrupt set Processes in Resistive Switching Oxides. Physical Review Applied, 2016, 6, .	3.8	61
33	Tuning the Performance of Pt/HfO₂/Ti/Pt ReRAM Devices Obtained from Plasma-Enhanced Atomic Layer Deposition for HfO₂ Thin Films. ECS Transactions, 2016, 75, 177-184.	0.5	18
34	Forming-free metal-oxide ReRAM by oxygen ion implantation process. , 2016, , .		13
35	Space charges and defect concentration profiles at complex oxide interfaces. Physical Review B, 2016, 93, .	3.2	51
36	Energy dissipation during pulsed switching of strontium-titanate based resistive switching memory devices. , 2016, , .		6

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37	Simulation of threshold switching based on an electric field induced thermal runaway. , 2016, , .		3
38	Defect Control of Conventional and Anomalous Electron Transport at Complex Oxide Interfaces. Physical Review X, 2016, 6, .	8.9	42
39	Internal Cell Resistance as the Origin of Abrupt Reset Behavior in HfO2-Based Devices Determined from Current Compliance Series. , 2016, , .		13
40	Realization of Boolean Logic Functionality Using Redoxâ€Based Memristive Devices. Advanced Functional Materials, 2015, 25, 6414-6423.	14.9	127
41	Resistive Switching of Individual, Chemically Synthesized TiO₂Nanoparticles. Small, 2015, 11, 6444-6456.	10.0	24
42	Impedance spectroscopy study of the unipolar and bipolar resistive switching states of atomic layer deposited polycrystalline ZrO₂ thin films. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 751-766.	1.8	20
43	Transport limits in defect-engineered LaAlO₃/SrTiO₃ bilayers. Nanoscale, 2015, 7, 1013-1022.	5.6	39
44	Electroforming of Fe:STO samples for resistive switching made visible by electrocoloration observed by high resolution optical microscopy. Materials Research Society Symposia Proceedings, 2014, 1691, 31.	0.1	9
45	Influence of stoichiometry on the performance of MIM capacitors from plasmaâ€assisted ALD Sr_xTi_yO_z films. Physica Status Solidi (A) Applications and Materials Science, 2014, 211, 389-396.	1.8	10
46	Impact of composition and crystallization behavior of atomic layer deposited strontium titanate films on the resistive switching of Pt/STO/TiN devices. Journal of Applied Physics, 2014, 116, 064503.	2.5	11
47	Do dislocations act as atomic autobahns for oxygen in the perovskite oxide SrTiO₃?. Nanoscale, 2014, 6, 12864-12876.	5.6	118
48	Atomic Layer Deposition of Transparent VO_x Thin Films for Resistive Switching Applications. Chemical Vapor Deposition, 2014, 20, 291-297.	1.3	28
49	Atomic Layer Deposition of TiO_x/Al₂O₃ Bilayer Structures for Resistive Switching Memory Applications. Chemical Vapor Deposition, 2014, 20, 282-290.	1.3	14
50	Study of atomic layer deposited Zr<scp>O</scp>₂ and Zr<scp>O</scp>₂/<scp>T</scp>i<scp>O</scp>₂ films for resistive switching application. Physica Status Solidi (A) Applications and Materials Science, 2014, 211, 301-309.	1.8	15
51	Finite-size versus interface-proximity effects in thin-film epitaxial<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mtext>SrTiO</mml:mtext><mml:mn>3</mml:mn></mml:msub></mml:math> Physical Review B, 2014, 89, .	3.2	47
52	FeRAM. , 2014, , 149-171.		2
53	Growth and Crystallization of TiO₂Thin Films by Atomic Layer Deposition Using a Novel Amido Guanidinate Titanium Source and Tetrakis-dimethylamido-titanium. Chemistry of Materials, 2013, 25, 2934-2943.	6.7	75
54	Atomic-Scale Measurement of Structure and Chemistry of a Single-Unit-Cell Layer of LaAlO₃ Embedded in SrTiO₃. Microscopy and Microanalysis, 2013, 19, 310-318.	0.4	24

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55	Stoichiometry dependence and thermal stability of conducting NdGaO3/SrTiO3 heterointerfaces. Applied Physics Letters, 2013, 102, .	3.3	32
56	[Zr(NEtMe)₂(guan-NEtMe)₂] as a Novel Atomic Layer Deposition Precursor: ZrO₂ Film Growth and Mechanistic Studies. Chemistry of Materials, 2013, 25, 3088-3095.	6.7	23
57	(Invited) ALD Grown Functional Oxide Layers for Nonvolatile Resistive Switching Memory Applications. ECS Transactions, 2013, 50, 9-14.	0.5	2
58	Orientation and Microstructure Design. , 2013, , 407-429.		0
59	Influence of charge compensation mechanisms on the sheet electron density at conducting LaAlO3/SrTiO3-interfaces. Applied Physics Letters, 2012, 100, .	3.3	48
60	Relation Between Enhancement in Growth and Thickness-Dependent Crystallization in ALD TiO[sub 2] Thin Films. Journal of the Electrochemical Society, 2011, 158, D6.	2.9	44
61	Nanostructured resistive memory cells based on 8-nm-thin TiO2 films deposited by atomic layer deposition. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2011, 29, 01AD01.	1.2	20
62	High Growth Rate in Atomic Layer Deposition of TiO2 thin films by UV Irradiation. Electrochemical and Solid-State Letters, 2011, 14, H146.	2.2	14
63	High temperature conductance characteristics of LaAlO3/SrTiO3-heterostructures under equilibrium oxygen atmospheres. Applied Physics Letters, 2010, 97, .	3.3	43
64	SrTiO3 thin film capacitors on silicon substrates with insignificant interfacial passive layers. Applied Physics Letters, 2010, 97, 132907.	3.3	24
65	Liquid Injection Atomic Layer Deposition of Metallic Ru Thin Films from Ru(tmhd)₃ and of High-k TiO₂ Thin Films from Ti(O-i-Pr)₂(tmhd)₂. ECS Transactions, 2009, 25, 289-298.	0.5	3
66	Liquid Injection Atomic Layer Deposition of Crystalline TiO[sub 2] Thin Films with a Smooth Morphology from Ti(O-i-Pr)[sub 2](DPM)[sub 2]. Journal of the Electrochemical Society, 2009, 156, D296.	2.9	23
67	Growth of Noble Metal Ru Thin Films by Liquid Injection Atomic Layer Deposition. Journal of Physical Chemistry C, 2009, 113, 11329-11335.	3.1	26
68	Growth Behavior of Atomic-Layer-Deposited Pb(Zr,Ti)O[sub x] Thin Films on Planar Substrate and Three-Dimensional Hole Structures. Journal of the Electrochemical Society, 2008, 155, D715.	2.9	25
69	Liquid injection atomic layer deposition of perovskite-type multi-component oxide thin films for ferroelectric and higher-k three dimensional capacitor structures. , 2008, , .		2
70	Liquid Injection Atomic Layer Deposition of TiO[sub x] Films Using Ti[OCH(CH[sub 3])[sub 2]][sub 4]. Journal of the Electrochemical Society, 2007, 154, G134.	2.9	18
71	Liquid Injection ALD of Pb(Zr,Ti)O[sub x] Thin Films by a Combination of Self-Regulating Component Oxide Processes. Journal of the Electrochemical Society, 2007, 154, G262.	2.9	26
72	Liquid Injection Atomic Layer Deposition of Pb(Zr,Ti)O<inf>3</inf> Thin Films on Three Dimensional Structures. Applications of Ferroelectrics, IEEE International Symposium on, 2007, , .	0.0	3

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73	Growth of ternary PbTiOx films in a combination of binary oxide atomic layer depositions. Journal of Applied Physics, 2007, 101, 014114.	2.5	26
74	Electrical Conductivity of Epitaxial SrTiO₃ Thin Films as a Function of Oxygen Partial Pressure and Temperature. Journal of the American Ceramic Society, 2006, 89, 2845-2852.	3.8	62
75	Liquid-Injection Atomic Layer Deposition of TiO[sub x] and Pbâ€“Tiâ€“O Films. Journal of the Electrochemical Society, 2006, 153, F199.	2.9	18
76	MOCVD GROWTH OF (Pb,Ba)(Zr,Ti)O3 THIN FILMS FOR MEMORY APPLICATIONS. Integrated Ferroelectrics, 2005, 75, 225-233.	0.7	1
77	Ba substituted Pb(ZrxTi1-x)O3 thin films grown by MOCVD. Materials Research Society Symposia Proceedings, 2005, 902, 1.	0.1	0
78	Sr diffusion in undoped and La-doped SrTiO3single crystals under oxidizing conditions. Physical Chemistry Chemical Physics, 2005, 7, 2053-2060.	2.8	122
79	Nanocrystalline Alkaline Earth Titanates and Their Conductivity Characteristics Under Changing Oxygen Ambients. Journal of Electroceramics, 2004, 13, 599-603.	2.0	5
80	Characterization of BaTiO3â€”BaZrO3 Solid Solution Thin Films Prepared by MOCVD. Integrated Ferroelectrics, 2003, 55, 795-805.	0.7	1
81	Sharp ferroelectric phase transition in strained single-crystalline SrRuO3/Ba0.7Sr0.3TiO3/SrRuO3 capacitors. Applied Physics Letters, 2003, 83, 5011-5013.	3.3	38
82	Shift of Phase Transition Temperature in Strontium Titanate Thin Films. Integrated Ferroelectrics, 2003, 58, 1371-1379.	0.7	16
83	Characterization of BaTiO 3 --BaZrO 3 Solid Solution Thin Films Prepared by MOCVD. Integrated Ferroelectrics, 2003, 55, 795-805.	0.7	1
84	(Pb 1â^'x Ba x)TiO 3 Thin Films Prepared by Liquid Delivery MOCVD: Influence of the Process Parameters on Film Formation and Electrical Properties. Ferroelectrics, 2002, 268, 143-148.	0.6	0
85	Origin of soft-mode stiffening and reduced dielectric response inSrTiO3thin films. Physical Review B, 2002, 66, .	3.2	114
86	Title is missing!. , 2002, 9, 5-16.		78
87	Advanced chemical deposition techniques - from research to production. Integrated Ferroelectrics, 2001, 36, 3-20.	0.7	61
88	Digital reflection-type phase shifter based on a ferroelectric planar capacitor. IEEE Microwave and Wireless Components Letters, 2001, 11, 407-409.	3.2	32
89	Far infrared and Raman spectroscopy of ferroelectric soft mode in SrTiO3 thin films and ceramics. Integrated Ferroelectrics, 2001, 32, 11-20.	0.7	8
90	Morphology and electrical properties of SrTiO3-films on conductive oxide films. Journal of the European Ceramic Society, 2001, 21, 1597-1600.	5.7	15

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91	Electrical conductivity and segregation effects of doped SrTiO3 thin films. Journal of the European Ceramic Society, 2001, 21, 1673-1676.	5.7	23
92	Polar grain boundaries in undoped SrTiO3 ceramics. Journal of the European Ceramic Society, 2001, 21, 2681-2686.	5.7	16
93	High temperature conductivity behavior of doped SrTiO3 thin films. Integrated Ferroelectrics, 2001, 33, 363-372.	0.7	7
94	Chemical deposition methods for ferroelectric thin films. Ferroelectrics, 2001, 259, 205-214.	0.6	7
95	Finite element simulations of interdigital electrode structures on high permittivity thin films. Integrated Ferroelectrics, 2001, 32, 63-72.	0.7	4
96	Defects in alkaline earth titanate thin films - the conduction behavior of doped BST. Integrated Ferroelectrics, 2001, 38, 229-237.	0.7	2
97	Dielectric, infrared, and Raman response of undopedSrTiO3ceramics: Evidence of polar grain boundaries. Physical Review B, 2001, 64, .	3.2	248
98	Laserannealing studies of barium strontium titanate thin films using short laser pulses. Integrated Ferroelectrics, 2000, 30, 129-138.	0.7	7
99	Influence of crystallization kinetics on texture of solâ€“gel PZT and BST thin films. Journal of the European Ceramic Society, 1999, 19, 1391-1395.	5.7	14
100	A novel integrated thin film capacitor realized by a multilayer ceramicâ€“electrode sandwich structure. Journal of the European Ceramic Society, 1999, 19, 1413-1415.	5.7	23
101	Control of the morphology of CSD-prepared (Ba,Sr)TiO3 thin films. Journal of the European Ceramic Society, 1999, 19, 1339-1343.	5.7	171
102	Ferroelectric thin films grown on tensile substrates: Renormalization of the Curieâ€“Weiss law and apparent absence of ferroelectricity. Journal of Applied Physics, 1999, 85, 1698-1701.	2.5	143
103	Functional graded high-K (Ba1â^'xSrx)TiO3 thin films for capacitor structures with low temperature coefficient. Integrated Ferroelectrics, 1999, 24, 169-179.	0.7	27
104	Influence of Precursor Chemistry on the Formation of MTiO3 (M = Ba, Sr) Ceramic Thin Films. Journal of Sol-Gel Science and Technology, 1998, 12, 67-79.	2.4	119
105	The effect of Zr on the microstructure of Ba(Ti1â^'yZry)O3 thin films prepared by chemical-solution deposition. Materials Letters, 1998, 35, 375-379.	2.6	6
106	Microstructure of columnar-grained SrTiO₃ and BaTiO₃ thin films prepared by chemical solution deposition. Journal of Materials Research, 1998, 13, 2206-2217.	2.6	87
107	Resistance degradation behavior of Ba0.7Sr0.3TiO3 thin films compared to mechanisms found in titanate ceramics and single crystals. Integrated Ferroelectrics, 1998, 22, 83-94.	0.7	24
108	Dielectric properties, leakage behaviour, and resistance degradation of thin films of the solid solution series Ba(Ti1-yZry)O3. Integrated Ferroelectrics, 1997, 17, 141-152.	0.7	56

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109	Dopant influence on dielectric losses, leakage behaviour, and resistance degradation of SrTiO3 thin films. Thin Solid Films, 1997, 305, 66-73.	1.8	87
110	Structural and electrical properties of wet-chemically deposited Sr(Ti1-yZry)O3 (y=0â€¦1) thin films. Integrated Ferroelectrics, 1995, 10, 155-164.	0.7	22