

Ulrich Boettger

List of Publications by Year in descending order

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31
papers

1,386
citations

471509

17
h-index

501196

28
g-index

31
all docs

31
docs citations

31
times ranked

1689
citing authors

#	ARTICLE	IF	CITATIONS
1	Origin of the Ultra-Nonlinear Switching Kinetics in Oxide-Based Resistive Switches. <i>Advanced Functional Materials</i> , 2011, 21, 4487-4492.	14.9	300
2	Physics of the Switching Kinetics in Resistive Memories. <i>Advanced Functional Materials</i> , 2015, 25, 6306-6325.	14.9	233
3	Simulation of multilevel switching in electrochemical metallization memory cells. <i>Journal of Applied Physics</i> , 2012, 111, .	2.5	151
4	Exploiting the switching dynamics of HfO ₂ -based ReRAM devices for reliable analog memristive behavior. <i>APL Materials</i> , 2019, 7, .	5.1	94
5	Uniting Gradual and Abrupt set Processes in Resistive Switching Oxides. <i>Physical Review Applied</i> , 2016, 6, .	3.8	61
6	Nanobattery Effect in RRAMs—Implications on Device Stability and Endurance. <i>IEEE Electron Device Letters</i> , 2014, 35, 208-210.	3.9	56
7	Short-time piezoelectric measurements in ferroelectric thin films using a double-beam laser interferometer. <i>Review of Scientific Instruments</i> , 2003, 74, 2613-2615.	1.3	48
8	The ultimate switching speed limit of redox-based resistive switching devices. <i>Faraday Discussions</i> , 2019, 213, 197-213.	3.2	48
9	Origin of the SET Kinetics of the Resistive Switching in Tantalum Oxide Thin Films. <i>IEEE Electron Device Letters</i> , 2014, 35, 259-261.	3.9	47
10	Analysis of Transient Currents During Ultrafast Switching of TiO_2 Nanocrossbar Devices. <i>IEEE Electron Device Letters</i> , 2011, 32, 1116-1118.	3.9	46
11	Investigation of the Impact of High Temperatures on the Switching Kinetics of Redox-Based Resistive Switching Cells using a High-Speed Nanoheater. <i>Advanced Electronic Materials</i> , 2017, 3, 1700294.	5.1	41
12	Local atomic structure of thin and ultrathin films <i>via</i> rapid high-energy X-ray total scattering at grazing incidence. <i>IUCr</i> , 2019, 6, 290-298.	2.2	40
13	Effects of ferroelectric switching on the piezoelectric small-signal response (d_{33}) and electrostriction (M_{33}) of lead zirconate titanate thin films. <i>Journal of Applied Physics</i> , 2004, 95, 4976-4980.	2.5	29
14	Interrelation of Sweep and Pulse Analysis of the SET Process in SrTiO ₃ Resistive Switching Memories. <i>IEEE Electron Device Letters</i> , 2014, 35, 924-926.	3.9	27
15	Impact of the Ohmic Electrode on the Endurance of Oxide-Based Resistive Switching Memory. <i>IEEE Transactions on Electron Devices</i> , 2021, 68, 1024-1030.	3.0	26
16	Composition influences on the electrical and electromechanical properties of lead zirconate titanate thin films. <i>Journal of Applied Physics</i> , 2006, 100, 124105.	2.5	22
17	Study of the SET switching event of VCM-based memories on a picosecond timescale. <i>Journal of Applied Physics</i> , 2020, 127, .	2.5	20
18	Effects of ferroelectric fatigue on the piezoelectric properties (d_{33}) of tetragonal lead zirconate titanate thin films. <i>Applied Physics Letters</i> , 2005, 86, 112908.	3.3	15

#	ARTICLE	IF	CITATIONS
19	Intrinsic RESET Speed Limit of Valence Change Memories. ACS Applied Electronic Materials, 2021, 3, 5563-5572.	4.3	15
20	Monte Carlo simulations of imprint behavior in ferroelectrics. Applied Physics Letters, 2005, 87, 242902.	3.3	13
21	Characterization of Chemical Solution Deposition-Derived Lead Hafnate Titanate Thin Films. Journal of the American Ceramic Society, 2005, 88, 1312-1314.	3.8	11
22	Determining the Electrical Charging Speed Limit of ReRAM Devices. IEEE Journal of the Electron Devices Society, 2021, 9, 667-678.	2.1	11
23	Integration of Piezoelectric PZT Thin Films with Internal Electrodes into an Actuator Structure for MEMS Applications. Integrated Ferroelectrics, 2002, 50, 21-32.	0.7	10
24	The influence of non-stoichiometry on the switching kinetics of strontium-titanate ReRAM devices. Journal of Applied Physics, 2016, 120, .	2.5	9
25	Fabrication of Multilayer $\text{Pb}(\text{Zr}_{0.53}\text{Ti}_{0.47})\text{O}_3$ Film Crystallized by Laser Annealing. Japanese Journal of Applied Physics, 2013, 52, 09KA06.	1.5	4
26	Statistical modeling of electrochemical metallization memory cells. , 2014, , .		4
27	On the Existence of Two Different Resistive Switching Mechanisms in Metal Organic Charge Transfer Complex Thin Films. , 2006, , .		2
28	Fabrication and Characterization of a PZT thin Film Actuator for a Micro Electromechanical Switch Application. Materials Research Society Symposia Proceedings, 2001, 688, 1.	0.1	1
29	PZT and PMN-PT Thin Film Cantilevers: Comparison between Monomorph and Bimorph Structures. Materials Research Society Symposia Proceedings, 2001, 688, 1.	0.1	1
30	Impact of the processing temperature on the laser-based crystallization of chemical solution deposited lead zirconate titanate thin films on short timescales. Journal of Applied Physics, 2022, 131, .	2.5	1
31	Signal Form Influences on the Fatigue Behavior of PZT Thin Film Capacitors. Applications of Ferroelectrics, IEEE International Symposium on, 2007, , .	0.0	0