Tony Schenk

List of Publications by Year in descending order

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59 papers	6,077 citations	159585 30 h-index	223800 46 g-index
59 all docs	59 docs citations	59 times ranked	2445 citing authors

#	Article	IF	Citations
1	Physical Mechanisms behind the Fieldâ€Cycling Behavior of HfO₂â€Based Ferroelectric Capacitors. Advanced Functional Materials, 2016, 26, 4601-4612.	14.9	586
2	On the structural origins of ferroelectricity in HfO2 thin films. Applied Physics Letters, 2015, 106, .	3.3	447
3	Stabilizing the ferroelectric phase in doped hafnium oxide. Journal of Applied Physics, 2015, 118, .	2.5	424
4	Impact of different dopants on the switching properties of ferroelectric hafniumoxide. Japanese Journal of Applied Physics, 2014, 53, 08LE02.	1.5	318
5	Wake-up effects in Si-doped hafnium oxide ferroelectric thin films. Applied Physics Letters, 2013, 103, .	3.3	309
6	Structural Changes Underlying Fieldâ€Cycling Phenomena in Ferroelectric HfO₂ Thin Films. Advanced Electronic Materials, 2016, 2, 1600173.	5.1	301
7	Ferroelectric hafnium oxide: A CMOS-compatible and highly scalable approach to future ferroelectric memories. , 2013, , .		271
8	A comprehensive study on the structural evolution of HfO₂thin films doped with various dopants. Journal of Materials Chemistry C, 2017, 5, 4677-4690.	5.5	250
9	Surface and grain boundary energy as the key enabler of ferroelectricity in nanoscale hafnia-zirconia: a comparison of model and experiment. Nanoscale, 2017, 9, 9973-9986.	5.6	249
10	Lanthanum-Doped Hafnium Oxide: A Robust Ferroelectric Material. Inorganic Chemistry, 2018, 57, 2752-2765.	4.0	241
11	Complex Internal Bias Fields in Ferroelectric Hafnium Oxide. ACS Applied Materials & Interfaces, 2015, 7, 20224-20233.	8.0	200
12	Identification of the ferroelectric switching process and dopant-dependent switching properties in orthorhombic HfO2: A first principles insight. Applied Physics Letters, 2014, 104, .	3.3	183
13	About the deformation of ferroelectric hystereses. Applied Physics Reviews, 2014, 1, 041103.	11.3	159
14	Electric Field Cycling Behavior of Ferroelectric Hafnium Oxide. ACS Applied Materials & Interfaces, 2014, 6, 19744-19751.	8.0	154
15	Ferroelectricity in Siâ€Doped HfO₂ Revealed: A Binary Leadâ€Free Ferroelectric. Advanced Materials, 2014, 26, 8198-8202.	21.0	147
16	Ferroelectric and piezoelectric properties of Hf1-xZrxO2 and pure ZrO2 films. Applied Physics Letters, 2017, 110, .	3.3	141
17	Si Doped Hafnium Oxideâ€”A â€œFragileâ€•Ferroelectric System. Advanced Electronic Materials, 2017, 3, 1700131.	5.1	136
18	Atomic Structure of Domain and Interphase Boundaries in Ferroelectric HfO₂. Advanced Materials Interfaces, 2018, 5, 1701258.	3.7	114

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19	Domain Pinning: Comparison of Hafnia and PZT Based Ferroelectrics. Advanced Electronic Materials, 2017, 3, 1600505.	5.1	99
20	Evidence of single domain switching in hafnium oxide based FeFETs: Enabler for multi-level FeFET memory cells. , 2015, , .		93
21	Silicon-doped hafnium oxide anti-ferroelectric thin films for energy storage. Journal of Applied Physics, 2017, 122, .	2.5	93
22	Electric field and temperature scaling of polarization reversal in silicon doped hafnium oxide ferroelectric thin films. Acta Materialia, 2015, 99, 240-246.	7.9	89
23	Nanoscopic studies of domain structure dynamics in ferroelectric La:HfO2 capacitors. Applied Physics Letters, 2018, 112, .	3.3	85
24	On the Origin of the Large Remanent Polarization in La:HfO₂. Advanced Electronic Materials, 2019, 5, 1900303.	5.1	85
25	Strontium doped hafnium oxide thin films: Wide process window for ferroelectric memories. , 2013, , .		84
26	Effect of Annealing Ferroelectric HfO₂ Thin Films: In Situ, High Temperature Xâ€Ray Diffraction. Advanced Electronic Materials, 2018, 4, 1800091.	5.1	81
27	Origin of Temperatureâ€Dependent Ferroelectricity in Siâ€Doped HfO₂. Advanced Electronic Materials, 2018, 4, 1700489.	5.1	67
28	Doped Hafnium Oxide â€“ An Enabler for Ferroelectric Field Effect Transistors. Advances in Science and Technology, 0, , .	0.2	64
29	Effect of acceptor doping on phase transitions of HfO2 thin films for energy-related applications. Nano Energy, 2017, 36, 381-389.	16.0	64
30	Memory technologyâ€”a primer for material scientists. Reports on Progress in Physics, 2020, 83, 086501.	20.1	64
31	Fluid Imprint and Inertial Switching in Ferroelectric La:HfO₂ Capacitors. ACS Applied Materials & Interfaces, 2019, 11, 35115-35121.	8.0	58
32	Pyroelectricity of silicon-doped hafnium oxide thin films. Applied Physics Letters, 2018, 112, 142901.	3.3	42
33	Toward Thick Piezoelectric HfO₂â€Based Films. Physica Status Solidi - Rapid Research Letters, 2020, 14, 1900626.	2.4	41
34	Genuinely Ferroelectric Sub-1-Volt-Switchable Nanodomains in Hf_xZr_(1â€“x)O₂ Ultrathin Capacitors. ACS Applied Materials & Interfaces, 2018, 10, 30514-30521.	8.0	36
35	Impact of charge trapping on the ferroelectric switching behavior of doped HfO₂. Physica Status Solidi (A) Applications and Materials Science, 2016, 213, 270-273.	1.8	28
36	Insights into antiferroelectrics from first-order reversal curves. Applied Physics Letters, 2017, 111, .	3.3	25

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37	Fully Transparent Frictionâ€Modulation Haptic Device Based on Piezoelectric Thin Film. Advanced Functional Materials, 2020, 30, 2003539.	14.9	25
38	Low Temperature Compatible Hafnium Oxide Based Ferroelectrics. Ferroelectrics, 2015, 480, 16-23.	0.6	24
39	Comparison of hafnia and PZT based ferroelectrics for future non-volatile FRAM applications. , 2016, , .		21
40	Film properties of low temperature HfO2 grown with H2O, O3, or remote O2-plasma. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2014, 32, .	2.1	19
41	Local structural investigation of hafnia-zirconia polymorphs in powders and thin films by X-ray absorption spectroscopy. Acta Materialia, 2019, 180, 158-169.	7.9	19
42	Effect of Dopant Ordering on the Stability of Ferroelectric Hafnia. Physica Status Solidi - Rapid Research Letters, 2020, 14, 2000047.	2.4	15
43	Physical Approach to Ferroelectric Impedance Spectroscopy: The Rayleigh Element. Physical Review Applied, 2018, 10, .	3.8	14
44	Dopants in Atomic Layer Deposited HfO2 Thin Films. , 2019, , 49-74.		13
45	Enhancement of ferroelectricity and orientation in solution-derived hafnia thin films through heterogeneous grain nucleation. Applied Physics Letters, 2021, 118, .	3.3	11
46	A New Generation of Memory Devices Enabled by Ferroelectric Hafnia and Zirconia. , 2021, , .		11
47	The Rayleigh law in silicon doped hafnium oxide ferroelectric thin films. Physica Status Solidi - Rapid Research Letters, 2015, 9, 589-593.	2.4	10
48	Correspondence - Dynamic leakage current compensation revisited. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2015, 62, 596-599.	3.0	10
49	Influence of tensile vs. compressive stress on fatigue of lead zirconate titanate thin films. Journal of the European Ceramic Society, 2021, 41, 6991-6999.	5.7	10
50	Highly conductive low-temperature combustion-derived transparent indium tin oxide thin film. Materials Advances, 2021, 2, 700-705.	5.4	9
51	On the importance of pyrolysis for inkjet-printed oxide piezoelectric thin films. Journal of Materials Chemistry C, 2020, 8, 3740-3747.	5.5	7
52	Impact of field cycling on HfO₂ based non-volatile memory devices. , 2016, , .		6
53	Effect of Surface/Interface Energy and Stress on the Ferroelectric Properties. , 2019, , 145-172.		5
54	Influence of substrate stress on in-plane and out-of-plane ferroelectric properties of PZT films. Journal of Applied Physics, 2022, 131, 014101.	2.5	5

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55	Piezoresponse Force Microscopy (PFM). , 2019, , 291-316.		4
56	Field Cycling Behavior of Ferroelectric HfO2-Based Capacitors. , 2019, , 381-398.		4
57	Impact of Electrodes on the Ferroelectric Properties. , 2019, , 341-364.		3
58	Emerging Fluoriteâ€•and Wurtziteâ€Type Ferroelectrics: From (Hf,Zr)O₂ to AlN and Related Materials. Physica Status Solidi - Rapid Research Letters, 2021, 15, 2100201.	2.4	2
59	AFE-like Hysteresis Loops from Doped HfO₂: Field Induced Phase Changes and Depolarization Fields. , 2020, , .		2