

Minhyuk Park

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78
papers

4,242
citations

35
h-index

65
g-index

81
ext. papers

5,192
ext. citations

8.6
avg, IF

5.6
L-index

#	Paper	IF	Citations
78	Ferroelectricity and antiferroelectricity of doped thin HfO ₂ -based films. <i>Advanced Materials</i> , 2015 , 27, 1811-31	24	554
77	Evolution of phases and ferroelectric properties of thin Hf _{0.5} Zr _{0.5} O ₂ films according to the thickness and annealing temperature. <i>Applied Physics Letters</i> , 2013 , 102, 242905	3.4	352
76	Thin Hf _x Zr _{1-x} O ₂ Films: A New Lead-Free System for Electrostatic Supercapacitors with Large Energy Storage Density and Robust Thermal Stability. <i>Advanced Energy Materials</i> , 2014 , 4, 1400610	21.8	221
75	The effects of crystallographic orientation and strain of thin Hf _{0.5} Zr _{0.5} O ₂ film on its ferroelectricity. <i>Applied Physics Letters</i> , 2014 , 104, 072901	3.4	191
74	Surface and grain boundary energy as the key enabler of ferroelectricity in nanoscale hafnia-zirconia: a comparison of model and experiment. <i>Nanoscale</i> , 2017 , 9, 9973-9986	7.7	162
73	A study on the wake-up effect of ferroelectric Hf _{0.5} Zr _{0.5} O ₂ films by pulse-switching measurement. <i>Nanoscale</i> , 2016 , 8, 1383-9	7.7	153
72	Toward a multifunctional monolithic device based on pyroelectricity and the electrocaloric effect of thin antiferroelectric Hf _x Zr _{1-x} O ₂ films. <i>Nano Energy</i> , 2015 , 12, 131-140	17.1	144
71	Grain size engineering for ferroelectric Hf _{0.5} Zr _{0.5} O ₂ films by an insertion of Al ₂ O ₃ interlayer. <i>Applied Physics Letters</i> , 2014 , 105, 192903	3.4	134
70	Effect of Zr Content on the Wake-Up Effect in Hf _{1-x} Zr _x O ₂ Films. <i>ACS Applied Materials & Interfaces</i> , 2016 , 8, 15466-75	9.5	132
69	Temporary formation of highly conducting domain walls for non-destructive read-out of ferroelectric domain-wall resistance switching memories. <i>Nature Materials</i> , 2018 , 17, 49-56	27	131
68	Effect of forming gas annealing on the ferroelectric properties of Hf _{0.5} Zr _{0.5} O ₂ thin films with and without Pt electrodes. <i>Applied Physics Letters</i> , 2013 , 102, 112914	3.4	117
67	Si Doped Hafnium Oxide: A Fragile Ferroelectric System. <i>Advanced Electronic Materials</i> , 2017 , 3, 1700131	6.4	105
66	Understanding the formation of the metastable ferroelectric phase in hafnia-zirconia solid solution thin films. <i>Nanoscale</i> , 2018 , 10, 716-725	7.7	103
65	Ferroelectric properties and switching endurance of Hf _{0.5} Zr _{0.5} O ₂ films on TiN bottom and TiN or RuO ₂ top electrodes. <i>Physica Status Solidi - Rapid Research Letters</i> , 2014 , 8, 532-535	2.5	102
64	Study on the degradation mechanism of the ferroelectric properties of thin Hf _{0.5} Zr _{0.5} O ₂ films on TiN and Ir electrodes. <i>Applied Physics Letters</i> , 2014 , 105, 072902	3.4	99
63	Study on the size effect in Hf _{0.5} Zr _{0.5} O ₂ films thinner than 8 nm before and after wake-up field cycling. <i>Applied Physics Letters</i> , 2015 , 107, 192907	3.4	92
62	Giant Negative Electrocaloric Effects of Hf Zr O Thin Films. <i>Advanced Materials</i> , 2016 , 28, 7956-7961	24	91

61	Domain Pinning: Comparison of Hafnia and PZT Based Ferroelectrics. <i>Advanced Electronic Materials</i> , 2017 , 3, 1600505	6.4	76
60	Thermodynamic and Kinetic Origins of Ferroelectricity in Fluorite Structure Oxides. <i>Advanced Electronic Materials</i> , 2019 , 5, 1800522	6.4	71
59	Origin of Ferroelectric Phase in Undoped HfO ₂ Films Deposited by Sputtering. <i>Advanced Materials Interfaces</i> , 2019 , 6, 1900042	4.6	68
58	Mitigating wakeup effect and improving endurance of ferroelectric HfO ₂ -ZrO ₂ thin films by careful La-doping. <i>Journal of Applied Physics</i> , 2019 , 125, 034101	2.5	64
57	Scale-up and optimization of HfO ₂ -ZrO ₂ solid solution thin films for the electrostatic supercapacitors. <i>Nano Energy</i> , 2017 , 39, 390-399	17.1	59
56	Time-Dependent Negative Capacitance Effects in Al ₂ O ₃ /BaTiO ₃ Bilayers. <i>Nano Letters</i> , 2016 , 16, 4375-81	11.5	59
55	Effect of acceptor doping on phase transitions of HfO ₂ thin films for energy-related applications. <i>Nano Energy</i> , 2017 , 36, 381-389	17.1	50
54	Review of defect chemistry in fluorite-structure ferroelectrics for future electronic devices. <i>Journal of Materials Chemistry C</i> , 2020 , 8, 10526-10550	7.1	50
53	On the Origin of the Large Remanent Polarization in La:HfO ₂ . <i>Advanced Electronic Materials</i> , 2019 , 5, 1900303	6.4	50
52	Effect of Annealing Ferroelectric HfO ₂ Thin Films: In Situ, High Temperature X-Ray Diffraction. <i>Advanced Electronic Materials</i> , 2018 , 4, 1800091	6.4	48
51	Origin of Temperature-Dependent Ferroelectricity in Si-Doped HfO ₂ . <i>Advanced Electronic Materials</i> , 2018 , 4, 1700489	6.4	44
50	A comprehensive study on the mechanism of ferroelectric phase formation in hafnia-zirconia nanolaminates and superlattices. <i>Applied Physics Reviews</i> , 2019 , 6, 041403	17.3	41
49	Dispersion in Ferroelectric Switching Performance of Polycrystalline HfZrO Thin Films. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 35374-35384	9.5	38
48	Frustration of Negative Capacitance in Al ₂ O ₃ /BaTiO ₃ Bilayer Structure. <i>Scientific Reports</i> , 2016 , 6, 19039	4.9	37
47	Morphotropic Phase Boundary of HfZr O Thin Films for Dynamic Random Access Memories. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 42666-42673	9.5	37
46	Two-step polarization switching mediated by a nonpolar intermediate phase in Hf _{0.4} Zr _{0.6} O ₂ thin films. <i>Nanoscale</i> , 2016 , 8, 13898-907	7.7	36
45	Alternative interpretations for decreasing voltage with increasing charge in ferroelectric capacitors. <i>Scientific Reports</i> , 2016 , 6, 20825	4.9	36
44	Nucleation-Limited Ferroelectric Orthorhombic Phase Formation in Hf _{0.5} Zr _{0.5} O ₂ Thin Films. <i>Advanced Electronic Materials</i> , 2019 , 5, 1800436	6.4	36

43	Fluorite-structure antiferroelectrics. <i>Reports on Progress in Physics</i> , 2019 , 82, 124502	14.4	33
42	Transient Negative Capacitance Effect in Atomic-Layer-Deposited Al ₂ O ₃ /Hf _{0.3} Zr _{0.7} O ₂ Bilayer Thin Film. <i>Advanced Functional Materials</i> , 2019 , 29, 1808228	15.6	31
41	Understanding ferroelectric phase formation in doped HfO thin films based on classical nucleation theory. <i>Nanoscale</i> , 2019 , 11, 19477-19487	7.7	29
40	La-doped Hf _{0.5} Zr _{0.5} O ₂ thin films for high-efficiency electrostatic supercapacitors. <i>Applied Physics Letters</i> , 2018 , 113, 123902	3.4	25
39	Interfacial charge-induced polarization switching in Al ₂ O ₃ /Pb(Zr,Ti)O ₃ bi-layer. <i>Journal of Applied Physics</i> , 2015 , 118, 224105	2.5	24
38	The fundamentals and applications of ferroelectric HfO ₂ . <i>Nature Reviews Materials</i> ,	73.3	22
37	A perspective on semiconductor devices based on fluorite-structured ferroelectrics from the materials-device integration perspective. <i>Journal of Applied Physics</i> , 2020 , 128, 240904	2.5	21
36	Interplay between oxygen defects and dopants: effect on structure and performance of HfO ₂ -based ferroelectrics. <i>Inorganic Chemistry Frontiers</i> , 2021 , 8, 2650-2672	6.8	21
35	Improved ferroelectric property of very thin Mn-doped BiFeO ₃ films by an inlaid Al ₂ O ₃ tunnel switch. <i>Journal of Applied Physics</i> , 2011 , 110, 074111	2.5	20
34	Tristate Memory Using Ferroelectric/Insulator/Semiconductor Heterojunctions for 50% Increased Data Storage. <i>Advanced Functional Materials</i> , 2011 , 21, 4305-4313	15.6	18
33	A Comparative Study on the Ferroelectric Performances in Atomic Layer Deposited HfZrO Thin Films Using Tetrakis(ethylmethylamino) and Tetrakis(dimethylamino) Precursors. <i>Nanoscale Research Letters</i> , 2020 , 15, 72	5	18
32	Domains and domain dynamics in fluorite-structured ferroelectrics. <i>Applied Physics Reviews</i> , 2021 , 8, 021312	17.3	18
31	Effect of the annealing temperature of thin Hf _{0.3} Zr _{0.7} O ₂ films on their energy storage behavior. <i>Physica Status Solidi - Rapid Research Letters</i> , 2014 , 8, 857-861	2.5	16
30	Ultra-flexible and rollable 2D-MoS/Si heterojunction-based near-infrared photodetector direct synthesis. <i>Nanoscale</i> , 2021 , 13, 672-680	7.7	15
29	Polarization reversal behavior in the Pt/Pb(Zr,Ti)O ₃ /Pt and Pt/Al ₂ O ₃ /Pb(Zr,Ti)O ₃ /Pt capacitors for different reversal directions. <i>Applied Physics Letters</i> , 2010 , 96, 212902	3.4	14
28	Study of ferroelectric characteristics of Hf _{0.5} Zr _{0.5} O ₂ thin films grown on sputtered or atomic-layer-deposited TiN bottom electrodes. <i>Applied Physics Letters</i> , 2020 , 117, 022902	3.4	12
27	Ultra-thin ferroelectrics. <i>Materials Science and Engineering Reports</i> , 2021 , 145, 100622	30.9	12
26	Reversible transition between the polar and antipolar phases and its implications for wake-up and fatigue in HfO ₂ -based ferroelectric thin film.. <i>Nature Communications</i> , 2022 , 13, 645	17.4	11

25	Quality of Life and Physical Ability Changes After Hospital-Based Cardiac Rehabilitation in Patients With Myocardial Infarction. <i>Annals of Rehabilitation Medicine</i> , 2017 , 41, 121-128	1.7	10
24	Field-Induced Ferroelectric Hf _{1-x} Zr _x O ₂ Thin Films for High-k Dynamic Random Access Memory. <i>Advanced Electronic Materials</i> , 2020 , 6, 2000631	6.4	10
23	Enhanced Ferroelectric Properties in Hf _{0.5} Zr _{0.5} O ₂ Films Using a Hf _{0.61} N _{0.72} Interfacial Layer. <i>Advanced Electronic Materials</i> , 2100042	6.4	8
22	Suppressed Stochastic Switching Behavior and Improved Synaptic Functions in an Atomic Switch Embedded with a 2D NbSe Material. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 10161-10170	9.5	8
21	Broad Phase Transition of Fluorite-Structured Ferroelectrics for Large Electrocaloric Effect. <i>Physica Status Solidi - Rapid Research Letters</i> , 2019 , 13, 1900177	2.5	7
20	Giant Dielectric Permittivity in Ferroelectric Thin Films: Domain Wall Ping Pong. <i>Scientific Reports</i> , 2015 , 5, 14618	4.9	7
19	Research Update: Diode performance of the Pt/Al ₂ O ₃ /two-dimensional electron gas/SrTiO ₃ structure and its time-dependent resistance evolution. <i>APL Materials</i> , 2017 , 5, 042301	5.7	6
18	An analysis of imprinted hysteresis loops for a ferroelectric Pb(Zr,Ti)O ₃ thin film capacitor using the switching transient current measurements. <i>Journal of Applied Physics</i> , 2009 , 105, 044106	2.5	6
17	Polarization switching and discharging behaviors in serially connected ferroelectric Pt/Pb(Zr,Ti)O ₃ /Pt and paraelectric capacitors. <i>Journal of Applied Physics</i> , 2011 , 109, 114113	2.5	5
16	Interfacial engineering of a Mo/HfZrO/Si capacitor using the direct scavenging effect of a thin Ti layer. <i>Chemical Communications</i> , 2021 , 57, 12452-12455	5.8	5
15	Strong, Ductile, and Tough Nanocrystal-Assembled Freestanding Gold Nanosheets.. <i>Nano Letters</i> , 2022 ,	11.5	3
14	Binary ferroelectric oxides for future computing paradigms. <i>MRS Bulletin</i> , 2021 , 46, 1071-1079	3.2	3
13	Effect of residual impurities on polarization switching kinetics in atomic-layer-deposited ferroelectric Hf _{0.5} Zr _{0.5} O ₂ thin films. <i>Acta Materialia</i> , 2021 , 222, 117405	8.4	3
12	Structural Origin of Temperature-Dependent Ferroelectricity 2019 , 193-216		2
11	Modulating the Ferroelectricity of Hafnium Zirconium Oxide Ultrathin Films via Interface Engineering to Control the Oxygen Vacancy Distribution. <i>Advanced Materials Interfaces</i> , 2101647	4.6	2
10	Transformation of Freestanding Carbon-Containing Gold Nanosheets into Au Nanoparticles Encapsulated within Amorphous Carbon: Implications for Surface Modification of Complex-Shaped Materials and Structures. <i>ACS Applied Nano Materials</i> , 2021 , 4, 5098-5105	5.6	2
9	Effects of Rapid Thermal Annealing on the Structural, Optical, and Electrical Properties of Au/CuPc/n-Si (MPS)-type Schottky Barrier Diodes. <i>Applied Physics A: Materials Science and Processing</i> , 2021 , 127, 1	2.6	1
8	Emerging Fluorite- and Wurtzite-Type Ferroelectrics: From (Hf,Zr)O ₂ to AlN and Related Materials. <i>Physica Status Solidi - Rapid Research Letters</i> , 2021 , 15, 2100201	2.5	1

7	Self-Constructed micro-origami of 2D metal. <i>Applied Materials Today</i> , 2021 , 23, 101039	6.6	1
6	Improved ferroelectricity in $\text{Hf}_{0.5}\text{Zr}_{0.5}\text{O}_2$ by inserting an upper HfO_xNy interfacial layer. <i>Applied Physics Letters</i> , 2021 , 119, 122902	3.4	1
5	Energy conversion and storage using artificially induced antiferroelectricity in $\text{HfO}_2/\text{ZrO}_2$ nanolaminates. <i>Composites Part B: Engineering</i> , 2022 , 236, 109824	10	1
4	Comparison of balance ability and physical fitness according to the growth period in taekwondo players. <i>Journal of Exercise Rehabilitation</i> , 2021 , 17, 354-361	1.8	0
3	Etching-Free Ultrafast Fabrication of Self-Rolled Metallic Nanosheets with Controllable Twisting. <i>Nano Letters</i> , 2021 , 21, 7159-7165	11.5	0
2	Electrocaloric Effect in Emerging Fluorite-Structure Ferroelectrics. <i>Korean Journal of Materials Research</i> , 2020 , 30, 480-488	0.2	
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