

Taehwan Moon

List of Publications by Citations

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37
papers

2,987
citations

25
h-index

37
g-index

37
ext. papers

3,532
ext. citations

8.9
avg, IF

5.02
L-index

#	Paper	IF	Citations
37	Ferroelectricity and antiferroelectricity of doped thin HfO ₂ -based films. <i>Advanced Materials</i> , 2015 , 27, 1811-31	24	554
36	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
35	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
34	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
33	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
32	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
31	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
30	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
29	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
28	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
27	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
26	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
25	Giant Negative Electrocaloric Effects of Hf Zr O Thin Films. <i>Advanced Materials</i> , 2016 , 28, 7956-7961	24	91
24	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
23	Time-Dependent Negative Capacitance Effects in Al ₂ O ₃ /BaTiO ₃ Bilayers. <i>Nano Letters</i> , 2016 , 16, 4375-81	11.5	59
22	Preparation and characterization of ferroelectric HfZrO thin films grown by reactive sputtering. <i>Nanotechnology</i> , 2017 , 28, 305703	3.4	48
21	Voltage Drop in a Ferroelectric Single Layer Capacitor by Retarded Domain Nucleation. <i>Nano Letters</i> , 2017 , 17, 7796-7802	11.5	43

20	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
19	Dispersion in Ferroelectric Switching Performance of Polycrystalline HfZrO Thin Films. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 35374-35384	9.5	38
18	Frustration of Negative Capacitance in Al ₂ O ₃ /BaTiO ₃ Bilayer Structure. <i>Scientific Reports</i> , 2016 , 6, 19039	4.9	37
17	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
16	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
15	Alternative interpretations for decreasing voltage with increasing charge in ferroelectric capacitors. <i>Scientific Reports</i> , 2016 , 6, 20825	4.9	36
14	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
13	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
12	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
11	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
10	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
9	Composition, Microstructure, and Electrical Performance of Sputtered SnO Thin Films for p-Type Oxide Semiconductor. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 3810-3821	9.5	13
8	2D Electron Gas at the Interface of Atomic-Layer-Deposited Al ₂ O ₃ /TiO ₂ on SrTiO ₃ Single Crystal Substrate. <i>Advanced Electronic Materials</i> , 2019 , 5, 1800527	6.4	13
7	Unexpectedly low barrier of ferroelectric switching in HfO ₂ via topological domain walls. <i>Materials Today</i> , 2021 , 50, 8-8	21.8	11
6	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
5	Unveiling the Origin of Robust Ferroelectricity in Sub-2 nm Hafnium Zirconium Oxide Films. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 36499-36506	9.5	5
4	Origin of the Threshold Voltage Shift in a Transistor with a 2D Electron Gas Channel at the Al ₂ O ₃ /SrTiO ₃ Interface. <i>Advanced Electronic Materials</i> , 2020 , 6, 1901286	6.4	4
3	Diode Property and Positive Temperature Coefficient of Resistance of Pt/Al ₂ O ₃ /Nb:SrTiO ₃ . <i>Advanced Electronic Materials</i> , 2018 , 4, 1800388	6.4	4

- 2 Threshold Voltage Modulation in a Transistor with a Two-Dimensional Electron Gas Channel at the Interface between Al₂O₃ and Sub-5 nm ZnO Films. *ACS Applied Electronic Materials*, **2021**, 3, 3247-3255 4 2
- 1 Characterization of a 2D Electron Gas at the Interface of Atomic-Layer Deposited Al₂O₃/ZnO Thin Films for a Field-Effect Transistor. *Advanced Electronic Materials*, **2021**, 7, 2000876 6.4 2