

# Taehwan Moon

## List of Publications by Year in descending order

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37  
papers

4,156  
citations

185998  
28  
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329751  
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g-index

37  
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37  
docs citations

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times ranked

2330  
citing authors

#	ARTICLE	IF	CITATIONS
1	Ferroelectricity and Antiferroelectricity of Doped Thin HfO <sub>2</sub> -Based Films. <i>Advanced Materials</i> , 2015, 27, 1811-1831.	11.1	777
2	Evolution of phases and ferroelectric properties of thin Hf <sub>0.5</sub> Zr <sub>0.5</sub> O <sub>2</sub> films according to the thickness and annealing temperature. <i>Applied Physics Letters</i> , 2013, 102, .	1.5	480
3	Thin Hf <sub>x</sub> Zr <sub>1-x</sub> O <sub>2</sub> 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.	10.2	286
4	The effects of crystallographic orientation and strain of thin Hf <sub>0.5</sub> Zr <sub>0.5</sub> O <sub>2</sub> film on its ferroelectricity. <i>Applied Physics Letters</i> , 2014, 104, .	1.5	268
5	A study on the wake-up effect of ferroelectric Hf <sub>0.5</sub> Zr <sub>0.5</sub> O <sub>2</sub> films by pulse-switching measurement. <i>Nanoscale</i> , 2016, 8, 1383-1389.	2.8	195
6	Grain size engineering for ferroelectric Hf <sub>0.5</sub> Zr <sub>0.5</sub> O <sub>2</sub> films by an insertion of Al <sub>2</sub> O <sub>3</sub> interlayer. <i>Applied Physics Letters</i> , 2014, 105, .	1.5	187
7	Toward a multifunctional monolithic device based on pyroelectricity and the electrocaloric effect of thin antiferroelectric Hf <sub>x</sub> Zr <sub>1-x</sub> O <sub>2</sub> films. <i>Nano Energy</i> , 2015, 12, 131-140.	8.2	174
8	Effect of Zr Content on the Wake-Up Effect in Hf <sub>x</sub> Zr <sub>1-x</sub> O <sub>2</sub> Films. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 15466-15475.	4.0	172
9	Understanding the formation of the metastable ferroelectric phase in hafnia-zirconia solid solution thin films. <i>Nanoscale</i> , 2018, 10, 716-725.	2.8	159
10	Study on the degradation mechanism of the ferroelectric properties of thin Hf <sub>0.5</sub> Zr <sub>0.5</sub> O <sub>2</sub> films on TiN and Ir electrodes. <i>Applied Physics Letters</i> , 2014, 105, 072902.	1.5	133
11	Ferroelectric properties and switching endurance of Hf <sub>0.5</sub> Zr <sub>0.5</sub> O <sub>2</sub> films on TiN bottom and TiN or RuO <sub>2</sub> top electrodes. <i>Physica Status Solidi - Rapid Research Letters</i> , 2014, 8, 532-535.	1.2	131
12	Study on the size effect in Hf <sub>0.5</sub> Zr <sub>0.5</sub> O <sub>2</sub> films thinner than 8 nm before and after wake-up field cycling. <i>Applied Physics Letters</i> , 2015, 107, .	1.5	124
13	Giant Negative Electrocaloric Effects of Hf <sub>0.5</sub> Zr <sub>0.5</sub> O <sub>2</sub> Thin Films. <i>Advanced Materials</i> , 2016, 28, 7956-7961.	11.1	115
14	Scale-up and optimization of HfO <sub>2</sub> -ZrO <sub>2</sub> solid solution thin films for the electrostatic supercapacitors. <i>Nano Energy</i> , 2017, 39, 390-399.	8.2	87
15	Time-Dependent Negative Capacitance Effects in Al <sub>2</sub> O <sub>3</sub> /BaTiO <sub>3</sub> Bilayers. <i>Nano Letters</i> , 2016, 16, 4375-4381.	4.5	75
16	Preparation and characterization of ferroelectric Hf <sub>0.5</sub> Zr <sub>0.5</sub> O <sub>2</sub> thin films grown by reactive sputtering. <i>Nanotechnology</i> , 2017, 28, 305703.	1.3	75
17	A comprehensive study on the mechanism of ferroelectric phase formation in hafnia-zirconia nanolaminates and superlattices. <i>Applied Physics Reviews</i> , 2019, 6, .	5.5	73
18	Morphotropic Phase Boundary of Hf <sub>1-x</sub> Zr <sub>x</sub> O <sub>2</sub> Thin Films for Dynamic Random Access Memories. <i>ACS Applied Materials &amp; Interfaces</i> , 2018, 10, 42666-42673.	4.0	68

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19	Voltage Drop in a Ferroelectric Single Layer Capacitor by Retarded Domain Nucleation. Nano Letters, 2017, 17, 7796-7802.	4.5	66
20	Dispersion in Ferroelectric Switching Performance of Polycrystalline Hf <sub>0.5</sub> Zr <sub>0.5</sub> O <sub>2</sub> Thin Films. ACS Applied Materials & Interfaces, 2018, 10, 35374-35384.	4.0	55
21	Nucleation-Limited Ferroelectric Orthorhombic Phase Formation in Hf <sub>0.5</sub> Zr <sub>0.5</sub> O <sub>2</sub> Thin Films. Advanced Electronic Materials, 2019, 5, 1800436.	2.6	55
22	Transient Negative Capacitance Effect in Atomic Layer-Deposited Al <sub>2</sub> O <sub>3</sub> /Hf <sub>0.3</sub> Zr <sub>0.7</sub> O <sub>2</sub> Bilayer Thin Film. Advanced Functional Materials, 2019, 29, 1808228.	7.8	47
23	Frustration of Negative Capacitance in Al <sub>2</sub> O <sub>3</sub> /BaTiO <sub>3</sub> Bilayer Structure. Scientific Reports, 2016, 6, 19039.	1.6	44
24	Two-step polarization switching mediated by a nonpolar intermediate phase in Hf <sub>0.4</sub> Zr <sub>0.6</sub> O <sub>2</sub> thin films. Nanoscale, 2016, 8, 13898-13907.	2.8	44
25	Alternative interpretations for decreasing voltage with increasing charge in ferroelectric capacitors. Scientific Reports, 2016, 6, 20825.	1.6	43
26	Unexpectedly low barrier of ferroelectric switching in HfO <sub>2</sub> via topological domain walls. Materials Today, 2021, 50, 8-15.	8.3	40
27	A Comparative Study on the Ferroelectric Performances in Atomic Layer Deposited Hf <sub>0.5</sub> Zr <sub>0.5</sub> O <sub>2</sub> Thin Films Using Tetrakis(ethylmethylamino) and Tetrakis(dimethylamino) Precursors. Nanoscale Research Letters, 2020, 15, 72.	3.1	38
28	Interfacial charge-induced polarization switching in Al <sub>2</sub> O <sub>3</sub> /Pb(Zr,Ti)O <sub>3</sub> bi-layer. Journal of Applied Physics, 2015, 118, .	1.1	30
29	Unveiling the Origin of Robust Ferroelectricity in Sub-2 nm Hafnium Zirconium Oxide Films. ACS Applied Materials & Interfaces, 2021, 13, 36499-36506.	4.0	24
30	Effect of the annealing temperature of thin Hf <sub>0.3</sub> Zr <sub>0.7</sub> O <sub>2</sub> films on their energy storage behavior. Physica Status Solidi - Rapid Research Letters, 2014, 8, 857-861.	1.2	19
31	2D Electron Gas at the Interface of Atomic Layer-Deposited Al <sub>2</sub> O <sub>3</sub> /TiO <sub>2</sub> on SrTiO <sub>3</sub> Single Crystal Substrate. Advanced Electronic Materials, 2019, 5, 1800527.	2.6	18
32	Composition, Microstructure, and Electrical Performance of Sputtered SnO Thin Films for p-Type Oxide Semiconductor. ACS Applied Materials & Interfaces, 2018, 10, 3810-3821.	4.0	16
33	Research Update: Diode performance of the Pt/Al <sub>2</sub> O <sub>3</sub> /two-dimensional electron gas/SrTiO <sub>3</sub> structure and its time-dependent resistance evolution. APL Materials, 2017, 5, .	2.2	8
34	Origin of the Threshold Voltage Shift in a Transistor with a 2D Electron Gas Channel at the Al <sub>2</sub> O <sub>3</sub> /SrTiO <sub>3</sub> Interface. Advanced Electronic Materials, 2020, 6, 1901286.	2.6	8
35	Characterization of a 2D Electron Gas at the Interface of Atomic Layer Deposited Al <sub>2</sub> O <sub>3</sub> /ZnO Thin Films for a Field-Effect Transistor. Advanced Electronic Materials, 2021, 7, 2000876.	2.6	8
36	Diode Property and Positive Temperature Coefficient of Resistance of Pt/Al <sub>2</sub> O <sub>3</sub> /Nb:SrTiO <sub>3</sub> . Advanced Electronic Materials, 2018, 4, 1800388.	2.6	7

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37	Threshold Voltage Modulation in a Transistor with a Two-Dimensional Electron Gas Channel at the Interface between Al <sub>2</sub> O <sub>3</sub> and Sub-5 nm ZnO Films. ACS Applied Electronic Materials, 2021, 3, 3247-3255.	2.0	7