Woongkyu Lee

List of Publications by Year
in descending order

45 papers	1,959 citations	361296 20 h-index	243529 44 g-index
46 all docs	46 docs citations	46 times ranked	1964 citing authors

#	ARTICLE	IF	CITATIONS
1	Evolution of phases and ferroelectric properties of thin Hf0.5Zr0.5O2 films according to the thickness and annealing temperature. Applied Physics Letters, 2013, 102, .	1.5	480
2	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.	2.8	249
3	Effect of forming gas annealing on the ferroelectric properties of Hf0.5Zr0.5O2 thin films with and without Pt electrodes. Applied Physics Letters, 2013, 102, .	1.5	141
4	Study on the degradation mechanism of the ferroelectric properties of thin Hf_{0.5}Zr_{0.5}O₂ films on TiN and Ir electrodes. Applied Physics Letters, 2014, 105, 072902.	1.5	133
5	Atomic Layer Deposition of SrTiO₃ Thin Films with Highly Enhanced Growth Rate for Ultrahigh Density Capacitors. Chemistry of Materials, 2011, 23, 2227-2236.	3.2	112
6	Atomic Layer Deposition of SrTiO₃ Films with Cyclopentadienyl-Based Precursors for Metalâ€“Insulatorâ€“Metal Capacitors. Chemistry of Materials, 2013, 25, 953-961.	3.2	69
7	Structure and Electrical Properties of Al-Doped HfO₂ and ZrO₂ Films Grown via Atomic Layer Deposition on Mo Electrodes. ACS Applied Materials & Interfaces, 2014, 6, 22474-22482.	4.0	63
8	Improvement in the leakage current characteristic of metal-insulator-metal capacitor by adopting RuO2 film as bottom electrode. Applied Physics Letters, 2011, 99, .	1.5	58
9	Conformal Formation of (GeTe2)(1â€“x)(Sb2Te3)x Layers by Atomic Layer Deposition for Nanoscale Phase Change Memories. Chemistry of Materials, 2012, 24, 2099-2110.	3.2	48
10	Influences of metal, non-metal precursors, and substrates on atomic layer deposition processes for the growth of selected functional electronic materials. Coordination Chemistry Reviews, 2013, 257, 3154-3176.	9.5	48
11	Cs₂SnI₆-Encapsulated Multidye-Sensitized All-Solid-State Solar Cells. ACS Applied Materials & Interfaces, 2019, 11, 21424-21434.	4.0	35
12	Improved Initial Growth Behavior of SrO and SrTiO₃ Films Grown by Atomic Layer Deposition Using {Sr(demamp)(tmhd)}₂ as Sr-Precursor. Chemistry of Materials, 2015, 27, 3881-3891.	3.2	32
13	Evaluating the Top Electrode Material for Achieving an Equivalent Oxide Thickness Smaller than 0.4 nm from an Al-Doped TiO₂ Film. ACS Applied Materials & Interfaces, 2014, 6, 21632-21637.	4.0	31
14	Role of Interfacial Reaction in Atomic Layer Deposition of TiO₂ Thin Films Using Ti(O-<i>i</i>Pr)₂(tmhd)₂ on Ru or RuO₂ Substrates. Chemistry of Materials, 2011, 23, 976-983.	3.2	26
15	The mechanism for the suppression of leakage current in high dielectric TiO2 thin films by adopting ultra-thin HfO2 films for memory application. Journal of Applied Physics, 2011, 110, 024105.	1.1	26
16	Growth of Conductive SrRuO₃ Films by Combining Atomic Layer Deposited SrO and Chemical Vapor Deposited RuO₂ Layers. Chemistry of Materials, 2012, 24, 4686-4692.	3.2	26
17	Study on Initial Growth Behavior of RuO₂ Film Grown by Pulsed Chemical Vapor Deposition: Effects of Substrate and Reactant Feeding Time. Chemistry of Materials, 2012, 24, 1407-1414.	3.2	23
18	Controlling the Electrical Characteristics of ZrO₂/Al₂O₃/ZrO₂ Capacitors by Adopting a Ru Top Electrode Grown via Atomic Layer Deposition. Physica Status Solidi - Rapid Research Letters, 2019, 13, 1800454.	1.2	23

#	Article	IF	Citations
19	Electrical properties of TiO2-based MIM capacitors deposited by TiCl4 and TTIP based atomic layer deposition processes. Microelectronic Engineering, 2011, 88, 1514-1516.	1.1	21
20	Controlling the Al-Doping Profile and Accompanying Electrical Properties of Rutile-Phased TiO₂ Thin Films. ACS Applied Materials & Interfaces, 2014, 6, 7910-7917.	4.0	21
21	Nanoscale Characterization of TiO₂ Films Grown by Atomic Layer Deposition on RuO₂ Electrodes. ACS Applied Materials & Interfaces, 2014, 6, 2486-2492.	4.0	21
22	Controlling the initial growth behavior of SrTiO3 films by interposing Al2O3 layers between the film and the Ru substrate. Journal of Materials Chemistry, 2012, 22, 15037.	6.7	19
23	CsPbBr₃ Perovskite Quantum Dot Lightâ€Emitting Diodes Using Atomic Layer Deposited Al₂O₃ and ZnO Interlayers. Physica Status Solidi - Rapid Research Letters, 2020, 14, 1900573.	1.2	19
24	Impact of Bimetal Electrodes on Dielectric Properties of TiO₂ and Al-Doped TiO₂ Films. ACS Applied Materials & Interfaces, 2012, 4, 4726-4730.	4.0	18
25	Chemistry of active oxygen in RuO_x and its influence on the atomic layer deposition of TiO₂ films. Journal of Materials Chemistry C, 2014, 2, 9993-10001.	2.7	18
26	MoO₂ as a thermally stable oxide electrode for dynamic random-access memory capacitors. Journal of Materials Chemistry C, 2018, 6, 13250-13256.	2.7	18
27	Resistance switching behavior of atomic layer deposited SrTiO3 film through possible formation of Sr2Ti6O13 or Sr1Ti11O20 phases. Scientific Reports, 2016, 6, 20550.	1.6	17
28	Electrical Properties of ZrO₂/Al₂O₃/ZrO₂â€Based Capacitors with TiN, Ru, and TiN/Ru Top Electrode Materials. Physica Status Solidi - Rapid Research Letters, 2018, 12, 1800356.	1.2	16
29	Growth and Phase Separation Behavior in Ge-Doped Sbâˆ'Te Thin Films Deposited by Combined Plasma-Enhanced Chemical Vapor and Atomic Layer Depositions. Journal of Physical Chemistry C, 2010, 114, 17899-17904.	1.5	15
30	Quantitative Analysis of the Incorporation Behaviors of Sr and Ti Atoms During the Atomic Layer Deposition of SrTiO₃ Thin Films. ACS Applied Materials & Interfaces, 2018, 10, 8836-8844.	4.0	15
31	Processing, Structure, and Transistor Performance: Combustion versus Pulsed Laser Growth of Amorphous Oxides. ACS Applied Electronic Materials, 2019, 1, 548-557.	2.0	15
32	Effect of Growth Temperature during the Atomic Layer Deposition of the SrTiO₃ Seed Layer on the Properties of RuO₂/SrTiO₃/Ru Capacitors for Dynamic Random Access Memory Applications. ACS Applied Materials & Interfaces, 2018, 10, 41544-41551.	4.0	13
33	Investigating the Reasons for the Difficult Erase Operation of a Chargeâ€Trap Flash Memory Device with Amorphous Oxide Semiconductor Thinâ€Film Channel Layers. Physica Status Solidi - Rapid Research Letters, 2021, 15, 2000549.	1.2	13
34	Substrate-Dependent Growth Behavior of Atomic-Layer-Deposited Zinc Oxide and Zinc Tin Oxide Thin Films for Thin-Film Transistor Applications. Journal of Physical Chemistry C, 2020, 124, 26780-26792.	1.5	12
35	Enhanced Brightness and Device Lifetime of Quantum Dot Lightâ€Emitting Diodes by Atomic Layer Deposition. Advanced Materials Interfaces, 2020, 7, 2000343.	1.9	12
36	Asymmetry in electrical properties of Alâ€doped TiO₂ film with respect to bias voltage. Physica Status Solidi - Rapid Research Letters, 2015, 9, 410-413.	1.2	10

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37	Atomic layer deposition of TiO₂ and Alâ€doped TiO₂ films on Ir substrates for ultralow leakage currents. Physica Status Solidi - Rapid Research Letters, 2011, 5, 262-264.	1.2	9
38	Reducing the nano-scale defect formation of atomic-layer-deposited SrTiO3 films by adjusting the cooling rate of the crystallization annealing of the seed layer. Thin Solid Films, 2015, 589, 723-729.	0.8	9
39	Substrate Effects on the Growth Behavior of Atomic-Layer-Deposited Ru Thin Films Using RuO₄ Precursor and N₂/H₂ Mixed Gas. Journal of Physical Chemistry C, 2019, 123, 22539-22549.	1.5	8
40	Leakage Current Control of SrTiO₃ Thin Films through Al Doping at the Interface between Dielectric and Electrode Layers via Atomic Layer Deposition. Physica Status Solidi - Rapid Research Letters, 2019, 13, 1900373.	1.2	5
41	Effect of the Annealing Temperature of the Seed Layer on the Following Main Layer in Atomicâ€Layerâ€Deposited SrTiO 3 Thin Films. Physica Status Solidi - Rapid Research Letters, 2019, 13, 1800557.	1.2	3
42	CsPbBr₃ Perovskite Quantum Dot Lightâ€Emitting Diodes Using Atomic Layer Deposited Al₂O₃ and ZnO Interlayers. Physica Status Solidi - Rapid Research Letters, 2020, 14, 2070012.	1.2	3
43	Trap Reduction through O 3 Postâ€Deposition Treatment of Y 2 O 3 Thin Films Grown by Atomic Layer Deposition on Ge Substrates. Advanced Electronic Materials, 2021, 7, 2000819.	2.6	3
44	Comparison of high-k Y₂O₃/TiO₂ bilayer and Y-doped TiO₂ thin films on Ge substrate. Journal Physics D: Applied Physics, 2021, 54, 185110.	1.3	2
45	Lightâ€Emitting Diodes: Enhanced Brightness and Device Lifetime of Quantum Dot Lightâ€Emitting Diodes by Atomic Layer Deposition (Adv. Mater. Interfaces 12/2020). Advanced Materials Interfaces, 2020, 7, 2070067.	1.9	1