Han-Bo-Ram Lee

List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	Atomic Layer Deposition of Metal Oxides on Pristine and Functionalized Graphene. Journal of the American Chemical Society, 2008, 130, 8152-8153.	6.6	623
2	Applications of atomic layer deposition to nanofabrication and emerging nanodevices. Thin Solid Films, 2009, 517, 2563-2580.	0.8	533
3	Utilization of a Buffered Dielectric to Achieve High Field-Effect Carrier Mobility in Graphene Transistors. Nano Letters, 2009, 9, 4474-4478.	4.5	341
4	Active MnO _x Electrocatalysts Prepared by Atomic Layer Deposition for Oxygen Evolution and Oxygen Reduction Reactions. Advanced Energy Materials, 2012, 2, 1269-1277.	10.2	298
5	Flexible Wireless Temperature Sensors Based on Ni Microparticleâ€Filled Binary Polymer Composites. Advanced Materials, 2013, 25, 850-855.	11.1	281
6	Selective metal deposition at graphene line defects by atomic layer deposition. Nature Communications, 2014, 5, 4781.	5.8	243
7	Atomic Layer Deposition on 2D Materials. Chemistry of Materials, 2017, 29, 3809-3826.	3.2	182
8	One-step hydrothermal synthesis of graphene decorated V2O5 nanobelts for enhanced electrochemical energy storage. Scientific Reports, 2015, 5, 8151.	1.6	170
9	Seeding Atomic Layer Deposition of High- <i>k</i> Dielectrics on Epitaxial Graphene with Organic Self-Assembled Monolayers. ACS Nano, 2011, 5, 5223-5232.	7.3	167
10	Wafer-scale, conformal and direct growth of MoS2 thin films by atomic layer deposition. Applied Surface Science, 2016, 365, 160-165.	3.1	119
11	Self-Assembly Based Plasmonic Arrays Tuned by Atomic Layer Deposition for Extreme Visible Light Absorption. Nano Letters, 2013, 13, 3352-3357.	4.5	118
12	Hydrophobicity of Rare Earth Oxides Grown by Atomic Layer Deposition. Chemistry of Materials, 2015, 27, 148-156.	3.2	106
13	Effects of Self-Assembled Monolayers on Solid-State CdS Quantum Dot Sensitized Solar Cells. ACS Nano, 2011, 5, 1495-1504.	7.3	93
14	High-Quality Cobalt Thin Films by Plasma-Enhanced Atomic Layer Deposition. Electrochemical and Solid-State Letters, 2006, 9, G323.	2.2	90
15	Thermal and plasma enhanced atomic layer deposition ruthenium and electrical characterization as a metal electrode. Microelectronic Engineering, 2008, 85, 39-44.	1.1	89
16	Growth of Pt Nanowires by Atomic Layer Deposition on Highly Ordered Pyrolytic Graphite. Nano Letters, 2013, 13, 457-463.	4.5	86
17	Atomic Layer Deposition of Ni Thin Films and Application to Area-Selective Deposition. Journal of the Electrochemical Society, 2011, 158, D1.	1.3	79
18	Area-Selective Atomic Layer Deposition Using Si Precursors as Inhibitors. Chemistry of Materials, 2018, 30, 7603-7610.	3.2	78

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19	Atomic Layer Deposition of CdS Quantum Dots for Solid‣tate Quantum Dot Sensitized Solar Cells. Advanced Energy Materials, 2011, 1, 1169-1175.	10.2	76
20	Atomic Layer Deposition for Semiconductors. , 2014, , .		75
21	Self-Limiting Layer Synthesis of Transition Metal Dichalcogenides. Scientific Reports, 2016, 6, 18754.	1.6	74
22	Reaction Mechanism of Area-Selective Atomic Layer Deposition for Al ₂ O ₃ Nanopatterns. ACS Applied Materials & Interfaces, 2017, 9, 41607-41617.	4.0	73
23	Microstructure-Dependent Nucleation in Atomic Layer Deposition of Pt on TiO ₂ . Chemistry of Materials, 2012, 24, 279-286.	3.2	72
24	Recent Advances in Atomic Layer Deposition. Chemistry of Materials, 2016, 28, 1943-1947.	3.2	72
25	Deposition of Ultrathin Polythiourea Films by Molecular Layer Deposition. Chemistry of Materials, 2010, 22, 5563-5569.	3.2	71
26	Improved Corrosion Resistance and Mechanical Properties of CrN Hard Coatings with an Atomic Layer Deposited Al ₂ O ₃ Interlayer. ACS Applied Materials & Interfaces, 2015, 7, 26716-26725.	4.0	69
27	Fluorine functionalization of epitaxial graphene for uniform deposition of thin high- \hat{I}° dielectrics. Carbon, 2012, 50, 2307-2314.	5.4	66
28	High Quality Area-Selective Atomic Layer Deposition Co Using Ammonia Gas as a Reactant. Journal of the Electrochemical Society, 2010, 157, D10.	1.3	65
29	Nucleation-Controlled Growth of Nanoparticles by Atomic Layer Deposition. Chemistry of Materials, 2012, 24, 4051-4059.	3.2	57
30	Internal and External Atomic Steps in Graphite Exhibit Dramatically Different Physical and Chemical Properties. ACS Nano, 2015, 9, 3814-3819.	7.3	57
31	Nanoconfined Atomic Layer Deposition of TiO 2 /Pt Nanotubes: Toward Ultrasmall Highly Efficient Catalytic Nanorockets. Advanced Functional Materials, 2017, 27, 1700598.	7.8	54
32	Highly conductive and flexible fiber for textile electronics obtained by extremely low-temperature atomic layer deposition of Pt. NPG Asia Materials, 2016, 8, e331-e331.	3.8	51
33	Distribution of oxygen functional groups of graphene oxide obtained from low-temperature atomic layer deposition of titanium oxide. RSC Advances, 2017, 7, 13979-13984.	1.7	51
34	Vapor transport deposition and epitaxy of orthorhombic SnS on glass and NaCl substrates. Applied Physics Letters, 2013, 103, .	1.5	49
35	A composite layer of atomic-layer-deposited Al2O3 and graphene for flexible moisture barrier. Carbon, 2017, 116, 553-561.	5.4	45
36	Atomic level deposition to extend Moore's law and beyond. International Journal of Extreme Manufacturing, 2020, 2, 022002.	6.3	44

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37	Nucleation and Growth of the HfO ₂ Dielectric Layer for Graphene-Based Devices. Chemistry of Materials, 2015, 27, 5868-5877.	3.2	43
38	Plasma-Enhanced Atomic Layer Deposition of Cobalt Using Cyclopentadienyl Isopropyl Acetamidinato-Cobalt as a Precursor. Japanese Journal of Applied Physics, 2010, 49, 05FA10.	0.8	42
39	Atomic layer deposited aluminum oxide films on graphite and graphene studied by XPS and AFM. Physica Status Solidi C: Current Topics in Solid State Physics, 2010, 7, 398-401.	0.8	41
40	Effect of O ₃ on Growth of Pt by Atomic Layer Deposition. Journal of Physical Chemistry C, 2014, 118, 12325-12332.	1.5	41
41	Atomic layer deposition of Y-stabilized ZrO2 for advanced DRAM capacitors. Journal of Alloys and Compounds, 2017, 722, 307-312.	2.8	40
42	Comparative study of the growth characteristics and electrical properties of atomic-layer-deposited HfO ₂ films obtained from metal halide and amide precursors. Journal of Materials Chemistry C, 2018, 6, 7367-7376.	2.7	40
43	Effects of Al Precursors on Deposition Selectivity of Atomic Layer Deposition of Al ₂ O ₃ Using Ethanethiol Inhibitor. Chemistry of Materials, 2020, 32, 8921-8929.	3.2	40
44	Plasma-Enhanced Atomic Layer Deposition of Ni. Japanese Journal of Applied Physics, 2010, 49, 05FA11.	0.8	38
45	The low temperature atomic layer deposition of ruthenium and the effect of oxygen exposure. Journal of Materials Chemistry, 2012, 22, 25154.	6.7	36
46	Area Selective Atomic Layer Deposition of Cobalt Thin Films. ECS Transactions, 2008, 16, 219-225.	0.3	35
47	Atomic Layer Deposition of Co Using N2â^•H2 Plasma as a Reactant. Journal of the Electrochemical Society, 2011, 158, H1179.	1.3	33
48	Highly-conformal nanocrystalline molybdenum nitride thin films by atomic layer deposition as a diffusion barrier against Cu. Journal of Alloys and Compounds, 2016, 663, 651-658.	2.8	33
49	Spontaneous Formation of Vertical Magneticâ€Metalâ€Nanorod Arrays During Plasmaâ€Enhanced Atomic Layer Deposition. Small, 2008, 4, 2247-2254.	5.2	32
50	Growth characteristics and electrical properties of SiO2 thin films prepared using plasma-enhanced atomic layer deposition and chemical vapor deposition with an aminosilane precursor. Journal of Materials Science, 2016, 51, 5082-5091.	1.7	31
51	Icephobic Coating through a Self-Formed Superhydrophobic Surface Using a Polymer and Microsized Particles. ACS Applied Materials & Interfaces, 2022, 14, 3334-3343.	4.0	31
52	Molecular oxidation of surface –CH3 during atomic layer deposition of Al2O3 with H2O, H2O2, and O3: A theoretical study. Applied Surface Science, 2018, 457, 376-380.	3.1	29
53	A controlled growth of WNx and WCx thin films prepared by atomic layer deposition. Materials Letters, 2016, 168, 218-222.	1.3	28
54	Complementary Unipolar WS ₂ Fieldâ€Effect Transistors Using Fermi‣evel Depinning Layers. Advanced Electronic Materials, 2016, 2, 1500278.	2.6	28

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55	Reversible Liquid Adhesion Switching of Superamphiphobic Pd-Decorated Ag Dendrites via Gas-Induced Structural Changes. Chemistry of Materials, 2015, 27, 4964-4971.	3.2	27
56	Formation of Continuous Pt Films on the Graphite Surface by Atomic Layer Deposition with Reactive O ₃ . Chemistry of Materials, 2015, 27, 6802-6809.	3.2	27
57	Plasma-enhanced atomic layer deposition of SnO2 thin films using SnCl4 and O2 plasma. Materials Letters, 2016, 166, 163-166.	1.3	26
58	?The Degradation of Deposition Blocking Layer during Area Selective Plasma Enhanced Atomic Layer Deposition of Cobalt. Journal of the Korean Physical Society, 2010, 56, 104-107.	0.3	26
59	Nitride mediated epitaxy of CoSi2 through self-interlayer-formation of plasma-enhanced atomic layer deposition Co. Applied Physics Letters, 2007, 90, 213509.	1.5	25
60	Area Selective Atomic Layer Deposition by Microcontact Printing with a Water-Soluble Polymer. Journal of the Electrochemical Society, 2010, 157, D600.	1.3	24
61	Plasma-enhanced atomic layer deposition of Co using Co(MeCp)2 precursor. Journal of Energy Chemistry, 2013, 22, 403-407.	7.1	23
62	Contact resistance reduction using Fermi level de-pinning layer for MoS <inf>2</inf> FETs. , 2014, , .		21
63	In situ surface cleaning on a Ge substrate using TMA and MgCp ₂ for HfO ₂ -based gate oxides. Journal of Materials Chemistry C, 2015, 3, 4852-4858.	2.7	20
64	Initial Stage Growth during Plasmaâ€Enhanced Atomic Layer Deposition of Cobalt. Chemical Vapor Deposition, 2012, 18, 41-45.	1.4	19
65	Analysis of Defect Recovery in Reduced Graphene Oxide and Its Application as a Heater for Self-Healing Polymers. ACS Applied Materials & Interfaces, 2019, 11, 16804-16814.	4.0	19
66	A Selective Toolbox for Nanofabrication. Chemistry of Materials, 2020, 32, 3323-3324.	3.2	19
67	Effects of Cl-Based Ligand Structures on Atomic Layer Deposited HfO ₂ . Journal of Physical Chemistry C, 2016, 120, 5958-5967.	1.5	18
68	Effect of h-BN coating on nucleate boiling heat transfer performance in pool boiling. Experimental Thermal and Fluid Science, 2018, 98, 12-19.	1.5	18
69	Thermal atomic layer deposition of metallic Ru using H2O as a reactant. Applied Surface Science, 2019, 488, 896-902.	3.1	17
70	Tunable Color Coating of E-Textiles by Atomic Layer Deposition of Multilayer TiO ₂ /Al ₂ O ₃ Films. Langmuir, 2020, 36, 2794-2801.	1.6	17
71	Self-formation of dielectric layer containing CoSi2 nanocrystals by plasma-enhanced atomic layer deposition. Journal of Crystal Growth, 2010, 312, 2215-2219.	0.7	16
72	The Era of Atomic Crafting. Chemistry of Materials, 2019, 31, 1471-1472.	3.2	16

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73	Highly Sensitive, Patternable Organic Films at the Nanoscale Made by Bottom-Up Assembly. ACS Applied Materials & Interfaces, 2013, 5, 3691-3696.	4.0	15
74	Comparison of hydrogen sulfide gas and sulfur powder for synthesis of molybdenum disulfide nanosheets. Current Applied Physics, 2016, 16, 691-695.	1.1	15
75	A facile method for the selective decoration of graphene defects based on a galvanic displacement reaction. NPG Asia Materials, 2016, 8, e262-e262.	3.8	15
76	Water-Erasable Memory Device for Security Applications Prepared by the Atomic Layer Deposition of GeO ₂ . Chemistry of Materials, 2018, 30, 830-840.	3.2	15
77	High efficiency n-Si/p-Cu2O core-shell nanowires photodiode prepared by atomic layer deposition of Cu2O on well-ordered Si nanowires array. Electronic Materials Letters, 2016, 12, 404-410.	1.0	14
78	Growth mechanism of Co thin films formed by plasma-enhanced atomic layer deposition using NH3 as plasma reactant. Current Applied Physics, 2017, 17, 333-338.	1.1	14
79	Very high frequency plasma reactant for atomic layer deposition. Applied Surface Science, 2016, 387, 109-117.	3.1	13
80	Dual Role of Sb-Incorporated Buffer Layers for High Efficiency Cuprous Oxide Photocathodic Performance: Remarkably Enhanced Crystallinity and Effective Hole Transport. ACS Sustainable Chemistry and Engineering, 2017, 5, 8213-8221.	3.2	13
81	Reaction Mechanism of Pt Atomic Layer Deposition on Various Textile Surfaces. Chemistry of Materials, 2019, 31, 8995-9002.	3.2	13
82	Evaluation of silicon tetrahalide precursors for low-temperature thermal atomic layer deposition of silicon nitride. Applied Surface Science, 2021, 565, 150603.	3.1	13
83	Supercritical Fluid Deposition of Conformal SrTiO[sub 3] Films with Composition Uniformity in Nanocontact Holes. Electrochemical and Solid-State Letters, 2009, 12, D45.	2.2	12
84	Fabrication of 50 nm scale Pt nanostructures by block copolymer (BCP) and its characteristics of surface-enhanced Raman scattering (SERS). RSC Advances, 2016, 6, 70756-70762.	1.7	11
85	Copper indium selenide water splitting photoanodes with artificially designed heterophasic blended structure and their high photoelectrochemical performances. Nano Energy, 2018, 46, 1-10.	8.2	11
86	Moisture barrier properties of low-temperature atomic layer deposited Al2O3 using various oxidants. Ceramics International, 2019, 45, 19105-19112.	2.3	11
87	Self-Formation of Superhydrophobic Surfaces through Interfacial Energy Engineering between Liquids and Particles. Langmuir, 2021, 37, 5356-5363.	1.6	11
88	Surface Energy Change of Atomic-Scale Metal Oxide Thin Films by Phase Transformation. ACS Nano, 2020, 14, 676-687.	7.3	10
89	Real-time detection of chlorine gas using Ni/Si shell/core nanowires. Nanoscale Research Letters, 2015, 10, 18.	3.1	9
90	Area-selective chemical vapor deposition of Co for Cu capping layer. Current Applied Physics, 2016, 16, 88-92.	1.1	9

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91	Atomic layer deposition of 1D and 2D nickel nanostructures on graphite. Nanotechnology, 2017, 28, 115301.	1.3	9
92	Promoting lithium electrodeposition towards the bottom of 3-D copper meshes in lithium-based batteries. Journal of Power Sources, 2020, 472, 228495.	4.0	9
93	Atomic Layer Modulation of Multicomponent Thin Films through Combination of Experimental and Theoretical Approaches. Chemistry of Materials, 2021, 33, 4435-4444.	3.2	9
94	Plasma-enhanced atomic layer deposition of Co on metal surfaces. Surface and Coatings Technology, 2015, 264, 60-65.	2.2	8
95	Circular Doubleâ€Patterning Lithography Using a Block Copolymer Template and Atomic Layer Deposition. Advanced Materials Interfaces, 2018, 5, 1800054.	1.9	8
96	Elucidating the Reaction Mechanism of Atomic Layer Deposition of Al ₂ O ₃ with a Series of Al(CH ₃) _{<i>x</i>} Cl _{3–<i>x</i>} and Al(C _{<i>y</i>} H _{2<i>y</i>+1}) ₃ Precursors. Journal of the American Chemical Society, 2022, 144, 11757-11766.	6.6	8
97	Interlayer-assisted atomic layer deposition of MgO as a magnetic tunneling junction insulators. Journal of Alloys and Compounds, 2018, 747, 505-510.	2.8	7
98	Silicidation of Co/Si Core Shell Nanowires. Journal of the Electrochemical Society, 2012, 159, K146-K151.	1.3	6
99	Toward Enhanced Humidity Stability of Triboelectric Mechanical Sensors via Atomic Layer Deposition. Nanomaterials, 2021, 11, 1795.	1.9	6
100	Supercritical Fluid Deposition of SiO2Thin Films: Growth Characteristics and Film Properties. Journal of the Electrochemical Society, 2011, 159, D46-D49.	1.3	5
101	<i>In-Situ</i> Synchrotron X-Ray Scattering Study of Thin Film Growth by Atomic Layer Deposition. Journal of Nanoscience and Nanotechnology, 2011, 11, 1577-1580.	0.9	5
102	Ru nanodot synthesis using CO2 supercritical fluid deposition. Journal of Physics and Chemistry of Solids, 2013, 74, 664-667.	1.9	5
103	Cobalt titanium nitride amorphous metal alloys by atomic layer deposition. Journal of Alloys and Compounds, 2018, 737, 684-692.	2.8	5
104	Preparation of a hydrophobic cerium oxide nanoparticle coating with polymer binder via a facile solution route. Ceramics International, 2020, 46, 12209-12215.	2.3	5
105	The Structure of BC3N Tubular Nanofiber Synthesized by Using PECVD. Journal of the Korean Physical Society, 2007, 51, 125.	0.3	5
106	Growth modulation of atomic layer deposition of HfO ₂ by combinations of H ₂ O and O ₃ reactants. Dalton Transactions, 2021, 50, 17935-17944.	1.6	5
107	Stress dependence of growth mode change of epitaxial layered cobaltite Î ³ -Na0.7CoO2. Applied Surface Science, 2007, 254, 436-440.	3.1	4
108	Effects of TaN Diffusion Barrier on Cu-Gate ZnO:N Thin-Film Transistors. IEEE Electron Device Letters, 2016, 37, 599-602.	2.2	4

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109	Formation of Ni silicide from atomic layer deposited Ni. Current Applied Physics, 2016, 16, 720-725.	1.1	4
110	Conduction mechanism change with transport oxide layer thickness in oxide hetero-interface diode. Applied Physics Letters, 2017, 111, 053506.	1.5	4
111	Uniform color coating of multilayered TiO2/Al2O3 films by atomic layer deposition. Journal of Coatings Technology Research, 2017, 14, 177-183.	1.2	4
112	Effect of molecular backbone structure on vapor phase coupling reaction between diiso(thio)cyanates with diamines, diols, and dithiols. Progress in Organic Coatings, 2020, 140, 105509.	1.9	4
113	Interfacial reactions and mechanical properties of transient liquid-phase bonding joints in Cu/Sn/Ni(P) and Ni/Sn/(OSP)Cu structures for power modules. Journal of Materials Science: Materials in Electronics, 2021, 32, 3324-3333.	1.1	4
114	Photocatalytic Effect of Ag/TiO ₂ Nanotubes Fabricated Using 40 nm-Scale BCP Lithography. Nanoscience and Nanotechnology Letters, 2017, 9, 50-55.	0.4	4
115	High quality epitaxial CoSi2 using plasma nitridation-mediated epitaxy: The effects of the capping layer. Journal of Applied Physics, 2007, 102, 094509.	1.1	3
116	Vapor phase synthesis of TaS ₂ nanocrystals with iodine as transport agent. Japanese Journal of Applied Physics, 2017, 56, 045501.	0.8	3
117	Cobalt and nickel atomic layer depositions for contact applications. , 2009, , .		2
118	Dataset for TiN Thin Films Prepared by Plasma-Enhanced Atomic Layer Deposition Using Tetrakis(dimethylamino)titanium (TDMAT) and Titanium Tetrachloride (TiCl4) Precursor. Data in Brief, 2020, 31, 105777.	0.5	2
119	Amorphous TiO2/p-Si Heterojunction Photodiode Prepared by Low-Temperature Atomic Layer Deposition. Nanoscience and Nanotechnology Letters, 2018, 10, 800-804.	0.4	2
120	The Benefits of Atomic Layer Deposition in Non-semiconductor Applications; Producing Metallic Nanomaterials and Fabrication of Flexible Display. ECS Transactions, 2009, 25, 101-111.	0.3	1
121	Atomic layer deposition for nanoscale contact applications. , 2011, , .		1
122	In Honor of Professor Markku LeskeläChemistry of Materials, 2018, 30, 4469-4474.	3.2	1
123	Science against Pseudoscience. Chemistry of Materials, 2019, 31, 7113-7115.	3.2	1
124	Surface Wettability of Nitrogen-Doped TiO2 Films Prepared by Atomic Layer Deposition Using NH4OH as the Doping Source. Nanoscience and Nanotechnology Letters, 2018, 10, 779-783.	0.4	1
125	Formation of Silicide Nanowires by Annealing of Atomic Layer Deposition Cobalt/Silicon Core-Shell Nanowires. ECS Transactions, 2009, 25, 157-161.	0.3	0
126	Nanomaterials fabrication using advanced thin film deposition and nanohybrid process. , 2009, , .		0

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127	Atomic Layer Deposition: Circular Double-Patterning Lithography Using a Block Copolymer Template and Atomic Layer Deposition (Adv. Mater. Interfaces 16/2018). Advanced Materials Interfaces, 2018, 5, 1870078.	1.9	0
128	Surface Functionalization for Conductivity Improvement by Metal Atomic Layer Deposition. , 2018, , .		0
129	Growth of Atomic Layer Deposition Platinum on TiO ₂ . Journal of the Korean Institute of Surface Engineering, 2015, 48, 38-42.	0.1	0
130	PEALD-TiN based Thin Films for High Performance Metallic Bipolar Plates of PEMFCs. , 0, , .		0