W M M Erwin Kessels

List of Publications by Year
in descending order

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457	21,205	9756	15683
papers	citations	73 h-index	125 g-index

469	469	469	13456
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Plasma-Assisted Atomic Layer Deposition: Basics, Opportunities, and Challenges. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2011, 29, .	0.9	678
2	Status and prospects of Al2O3-based surface passivation schemes for silicon solar cells. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2012, 30, .	0.9	659
3	Ultralow surface recombination of c-Si substrates passivated by plasma-assisted atomic layer deposited Al2O3. Applied Physics Letters, 2006, 89, 042112.	1.5	646
4	On the c-Si surface passivation mechanism by the negative-charge-dielectric Al2O3. Journal of Applied Physics, 2008, 104, .	1.1	479
5	Silicon surface passivation by atomic layer deposited Al2O3. Journal of Applied Physics, 2008, 104, .	1.1	415
6	Surface passivation of highâ€efficiency silicon solar cells by atomicâ€layerâ€deposited Al₂O₃. Progress in Photovoltaics: Research and Applications, 2008, 16, 461-466.	4.4	414
7	Excellent passivation of highly doped p-type Si surfaces by the negative-charge-dielectric Al2O3. Applied Physics Letters, 2007, 91, .	1.5	370
8	Determining the material structure of microcrystalline silicon from Raman spectra. Journal of Applied Physics, 2003, 94, 3582-3588.	1.1	325
9	High efficiency n-type Si solar cells on Al2O3-passivated boron emitters. Applied Physics Letters, 2008, 92, .	1.5	316
10	The use of atomic layer deposition in advanced nanopatterning. Nanoscale, 2014, 6, 10941-10960.	2.8	304
11	Passivating Contacts for Crystalline Silicon Solar Cells: From Concepts and Materials to Prospects. IEEE Journal of Photovoltaics, 2018, 8, 373-388.	1.5	285
12	In situspectroscopic ellipsometry as a versatile tool for studying atomic layer deposition. Journal Physics D: Applied Physics, 2009, 42, 073001.	1.3	249
13	From the Bottom-Up: Toward Area-Selective Atomic Layer Deposition with High Selectivity. Chemistry of Materials, 2019, 31, 2-12.	3.2	248
14	Vacancies and voids in hydrogenated amorphous silicon. Applied Physics Letters, 2003, 82, 1547-1549.	1.5	246
15	Plasma-assisted atomic layer deposition of Al2O3 moisture permeation barriers on polymers. Applied Physics Letters, 2006, 89, 081915.	1.5	244
16	Flexible Perovskite Photovoltaic Modules and Solar Cells Based on Atomic Layer Deposited Compact Layers and UVâ€irradiated TiO₂ Scaffolds on Plastic Substrates. Advanced Energy Materials, 2015, 5, 1401808.	10.2	241
17	Plasma and Thermal ALD of Al[sub 2]O[sub 3] in a Commercial 200â€,mm ALD Reactor. Journal of the Electrochemical Society, 2007, 154, G165.	1.3	237
18	Influence of the Deposition Temperature on the c-Si Surface Passivation by Al[sub 2]O[sub 3] Films Synthesized by ALD and PECVD. Electrochemical and Solid-State Letters, 2010, 13, H76.	2.2	198

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19	Silicon surface passivation by ultrathin Al₂O₃ films synthesized by thermal and plasma atomic layer deposition. Physica Status Solidi - Rapid Research Letters, 2010, 4, 10-12.	1.2	185
20	Atomic layer deposition for photovoltaics: applications and prospects for solar cell manufacturing. Semiconductor Science and Technology, 2012, 27, 074002.	1.0	178
21	Hydrogen induced passivation of Si interfaces by Al2O3 films and SiO2/Al2O3 stacks. Applied Physics Letters, 2010, 97, .	1.5	168
22	Conformality of Plasma-Assisted ALD: Physical Processes and Modeling. Journal of the Electrochemical Society, 2010, 157, G241.	1.3	157
23	Low Temperature Plasma-Enhanced Atomic Layer Deposition of Metal Oxide Thin Films. Journal of the Electrochemical Society, 2010, 157, P66.	1.3	151
24	Influence of the Oxidant on the Chemical and Field-Effect Passivation of Si by ALD Al[sub 2]O[sub 3]. Electrochemical and Solid-State Letters, 2011, 14, H1.	2.2	151
25	Controlling the fixed charge and passivation properties of Si(100)/Al2O3 interfaces using ultrathin SiO2 interlayers synthesized by atomic layer deposition. Journal of Applied Physics, 2011, 110, .	1.1	150
26	Atomic layer deposition for perovskite solar cells: research status, opportunities and challenges. Sustainable Energy and Fuels, 2017, 1, 30-55.	2.5	150
27	Status and prospects of plasma-assisted atomic layer deposition. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2019, 37, .	0.9	148
28	Stability of Al2O3 and Al2O3/a-SiNx:H stacks for surface passivation of crystalline silicon. Journal of Applied Physics, 2009, 106, .	1.1	145
29	Supported Core/Shell Bimetallic Nanoparticles Synthesis by Atomic Layer Deposition. Chemistry of Materials, 2012, 24, 2973-2977.	3.2	142
30	Area-Selective Atomic Layer Deposition of SiO₂ Using Acetylacetone as a Chemoselective Inhibitor in an ABC-Type Cycle. ACS Nano, 2017, 11, 9303-9311.	7.3	136
31	Influence of annealing and Al2O3 properties on the hydrogen-induced passivation of the Si/SiO2 interface. Journal of Applied Physics, 2012, 111, .	1.1	133
32	Negative charge and charging dynamics in Al2O3 films on Si characterized by second-harmonic generation. Journal of Applied Physics, 2008, 104, .	1.1	131
33	Plasma-Assisted ALD for the Conformal Deposition of SiO₂: Process, Material and Electronic Properties. Journal of the Electrochemical Society, 2012, 159, H277-H285.	1.3	127
34	Influence of Oxygen Exposure on the Nucleation of Platinum Atomic Layer Deposition: Consequences for Film Growth, Nanopatterning, and Nanoparticle Synthesis. Chemistry of Materials, 2013, 25, 1905-1911.	3.2	123
35	Surface chemistry of plasma-assisted atomic layer deposition of Al2O3 studied by infrared spectroscopy. Applied Physics Letters, 2008, 92, .	1.5	117
36	Role of field-effect on c-Si surface passivation by ultrathin (2â€“20 nm) atomic layer deposited Al2O3. Applied Physics Letters, 2010, 96, .	1.5	117

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37	Atomic Layer Etching: What Can We Learn from Atomic Layer Deposition?. ECS Journal of Solid State Science and Technology, 2015, 4, N5023-N5032.	0.9	115
38	Plasma chemistry aspects of a-Si:H deposition using an expanding thermal plasma. Journal of Applied Physics, 1998, 84, 2426-2435.	1.1	111
39	Surface reactions during atomic layer deposition of Pt derived from gas phase infrared spectroscopy. Applied Physics Letters, 2009, 95, .	1.5	111
40	Atomic layer deposition for nanostructured Li-ion batteries. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2012, 30, .	0.9	111
41	Atomic layer deposition of molybdenum oxide from (NtBu)2(NMe2)2Mo and O2 plasma. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2016, 34, .	0.9	111
42	Deposition of TiN and HfO2 in a commercial 200mm remote plasma atomic layer deposition reactor. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2007, 25, 1357-1366.	0.9	107
43	Remote Plasma ALD of Platinum and Platinum Oxide Films. Electrochemical and Solid-State Letters, 2009, 12, G34.	2.2	107
44	Catalytic Combustion and Dehydrogenation Reactions during Atomic Layer Deposition of Platinum. Chemistry of Materials, 2012, 24, 1752-1761.	3.2	107
45	Reaction mechanisms during plasma-assisted atomic layer deposition of metal oxides: A case study for Al2O3. Journal of Applied Physics, 2008, 103, .	1.1	101
46	Ultra-Thin Aluminium Oxide Films Deposited by Plasma-Enhanced Atomic Layer Deposition for Corrosion Protection. Journal of the Electrochemical Society, 2011, 158, C132.	1.3	100
47	Influence of the high-temperature â€œfiringâ€•step on high-rate plasma deposited silicon nitride films used as bulk passivating antireflection coatings on silicon solar cells. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2003, 21, 2123.	1.6	99
48	In situ reaction mechanism studies of plasma-assisted atomic layer deposition of Al2O3. Applied Physics Letters, 2006, 89, 131505.	1.5	99
49	Atomic Layer Deposition of LiCoO₂Thin-Film Electrodes for All-Solid-State Li-Ion Micro-Batteries. Journal of the Electrochemical Society, 2013, 160, A3066-A3071.	1.3	99
50	Hydrogenated amorphous silicon deposited at very high growth rates by an expanding Arâ€“H2â€“SiH4 plasma. Journal of Applied Physics, 2001, 89, 2404-2413.	1.1	98
51	In situspectroscopic ellipsometry study on the growth of ultrathin TiN films by plasma-assisted atomic layer deposition. Journal of Applied Physics, 2006, 100, 023534.	1.1	96
52	Nucleation and growth of Pt atomic layer deposition on Al2O3 substrates using (methylcyclopentadienyl)-trimethyl platinum and O2 plasma. Journal of Applied Physics, 2011, 109, .	1.1	96
53	Substrate-biasing during plasma-assisted atomic layer deposition to tailor metal-oxide thin film growth. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2013, 31, .	0.9	95
54	Low-Temperature Deposition of TiN by Plasma-Assisted Atomic Layer Deposition. Journal of the Electrochemical Society, 2006, 153, G956.	1.3	93

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55	Lowâ€temperature atomic layer deposition of MoO_x for silicon heterojunction solar cells. Physica Status Solidi - Rapid Research Letters, 2015, 9, 393-396.	1.2	93
56	Low-temperature plasma-enhanced atomic layer deposition of 2-D MoS₂: large area, thickness control and tuneable morphology. Nanoscale, 2018, 10, 8615-8627.	2.8	90
57	Area-Selective Atomic Layer Deposition of Metal Oxides on Noble Metals through Catalytic Oxygen Activation. Chemistry of Materials, 2018, 30, 663-670.	3.2	90
58	On the growth mechanism of a-Si:H. Thin Solid Films, 2001, 383, 154-160.	0.8	89
59	Low-Temperature Plasma-Assisted Atomic-Layer-Deposited SnO₂ as an Electron Transport Layer in Planar Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2018, 10, 30367-30378.	4.0	88
60	Energy-enhanced atomic layer deposition for more process and precursor versatility. Coordination Chemistry Reviews, 2013, 257, 3254-3270.	9.5	87
61	Deposition of TiN and TaN by Remote Plasma ALD for Cu and Li Diffusion Barrier Applications. Journal of the Electrochemical Society, 2008, 155, G287.	1.3	86
62	Atomic Layer Deposition of Silicon Nitride from Bis(tert-butylamino)silane and N₂ Plasma. ACS Applied Materials & Interfaces, 2015, 7, 19857-19862.	4.0	86
63	Atomic layer deposition of Pd and Pt nanoparticles for catalysis: on the mechanisms of nanoparticle formation. Nanotechnology, 2016, 27, 034001.	1.3	86
64	Atomic Layer Deposition for Graphene Device Integration. Advanced Materials Interfaces, 2017, 4, 1700232.	1.9	85
65	Tuning Material Properties of Oxides and Nitrides by Substrate Biasing during Plasma-Enhanced Atomic Layer Deposition on Planar and 3D Substrate Topographies. ACS Applied Materials & Interfaces, 2018, 10, 13158-13180.	4.0	85
66	History of atomic layer deposition and its relationship with the American Vacuum Society. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2013, 31, .	0.9	84
67	Hydrogen passivation of poly-Si/SiOx contacts for Si solar cells using Al2O3 studied with deuterium. Applied Physics Letters, 2018, 112, .	1.5	80
68	Plasma-assisted atomic layer deposition of nickel oxide as hole transport layer for hybrid perovskite solar cells. Journal of Materials Chemistry C, 2019, 7, 12532-12543.	2.7	80
69	Formation of cationic silicon clusters in a remote silane plasma and their contribution to hydrogenated amorphous silicon film growth. Journal of Applied Physics, 1999, 86, 4029-4039.	1.1	78
70	Excellent Si surface passivation by low temperature SiO₂ using an ultrathin Al₂O₃ capping film. Physica Status Solidi - Rapid Research Letters, 2011, 5, 22-24.	1.2	77
71	Identifying parasitic current pathways in CIGS solar cells by modelling dark Jâ€“V response. Progress in Photovoltaics: Research and Applications, 2015, 23, 1516-1525.	4.4	76
72	Synthesis andin situcharacterization of low-resistivity TaNx films by remote plasma atomic layer deposition. Journal of Applied Physics, 2007, 102, 083517.	1.1	75

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73	Enhanced Doping Efficiency of Al-Doped ZnO by Atomic Layer Deposition Using Dimethylaluminum Isopropoxide as an Alternative Aluminum Precursor. Chemistry of Materials, 2013, 25, 4619-4622.	3.2	75
74	Ion and Photon Surface Interaction during Remote Plasma ALD of Metal Oxides. Journal of the Electrochemical Society, 2011, 158, G88.	1.3	73
75	Surface passivation of phosphorusâ€diffused n⁺â€type emitters by plasmaâ€assisted atomicâ€layer deposited Al₂O₃. Physica Status Solidi - Rapid Research Letters, 2012, 6, 4-6.	1.2	73
76	Al2O3/TiO2 nano-pattern antireflection coating with ultralow surface recombination. Applied Physics Letters, 2013, 102, .	1.5	73
77	Electron Scattering and Doping Mechanisms in Solid-Phase-Crystallized In₂O₃:H Prepared by Atomic Layer Deposition. ACS Applied Materials & Interfaces, 2015, 7, 16723-16729.	4.0	72
78	Low-Temperature Plasma-Assisted Atomic Layer Deposition of Silicon Nitride Moisture Permeation Barrier Layers. ACS Applied Materials & Interfaces, 2015, 7, 22525-22532.	4.0	72
79	Highly efficient microcrystalline silicon solar cells deposited from a pure SiH4 flow. Applied Physics Letters, 2005, 87, 263503.	1.5	71
80	Area-Selective Deposition of Ruthenium by Combining Atomic Layer Deposition and Selective Etching. Chemistry of Materials, 2019, 31, 3878-3882.	3.2	71
81	Local deposition of high-purity Pt nanostructures by combining electron beam induced deposition and atomic layer deposition. Journal of Applied Physics, 2010, 107, 116102.	1.1	70
82	Remote Plasma Atomic Layer Deposition of Co3O4 Thin Films. Journal of the Electrochemical Society, 2011, 158, G92.	1.3	70
83	Room-Temperature Atomic Layer Deposition of Platinum. Chemistry of Materials, 2013, 25, 1769-1774.	3.2	70
84	Temperature dependence of the surface roughness evolution during hydrogenated amorphous silicon film growth. Applied Physics Letters, 2003, 82, 865-867.	1.5	68
85	Effective Surface Passivation of InP Nanowires by Atomic-Layer-Deposited Al₂O₃ with PO_x Interlayer. Nano Letters, 2017, 17, 6287-6294.	4.5	68
86	Effective passivation of Si surfaces by plasma deposited SiOx/a-SiNx:H stacks. Applied Physics Letters, 2011, 98, .	1.5	67
87	Electrical transport and Al doping efficiency in nanoscale ZnO films prepared by atomic layer deposition. Journal of Applied Physics, 2013, 114, .	1.1	67
88	Advanced process technologies: Plasma, direct-write, atmospheric pressure, and roll-to-roll ALD. MRS Bulletin, 2011, 36, 907-913.	1.7	66
89	Plasma-enhanced and thermal atomic layer deposition of Al2O3 using dimethylaluminum isopropoxide, [Al(CH3)2(Î¼-OiPr)]2, as an alternative aluminum precursor. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2012, 30, .	0.9	66
90	Dielectric Properties of Thermal and Plasma-Assisted Atomic Layer Deposited Al[sub 2]O[sub 3] Thin Films. Journal of the Electrochemical Society, 2011, 158, G21.	1.3	65

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91	Energetic ions during plasma-enhanced atomic layer deposition and their role in tailoring material properties. Plasma Sources Science and Technology, 2019, 28, 024002.	1.3	65
92	Uniform Atomic Layer Deposition of Al₂O₃ on Graphene by Reversible Hydrogen Plasma Functionalization. Chemistry of Materials, 2017, 29, 2090-2100.	3.2	64
93	Atomic-layer deposited Nb2O5 as transparent passivating electron contact for c-Si solar cells. Solar Energy Materials and Solar Cells, 2018, 184, 98-104.	3.0	64
94	Film growth precursors in a remote SiH[sub 4] plasma used for high-rate deposition of hydrogenated amorphous silicon. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2000, 18, 2153.	0.9	63
95	Roomâ€Temperature ALD of Metal Oxide Thin Films by Energyâ€Enhanced ALD. Chemical Vapor Deposition, 2013, 19, 125-133.	1.4	63
96	3D negative electrode stacks for integrated all-solid-state lithium-ion microbatteries. Journal of Materials Chemistry, 2010, 20, 3703.	6.7	62
97	Nanopatterning by direct-write atomic layer deposition. Nanoscale, 2012, 4, 4477.	2.8	62
98	Atomic Layer Deposition of High-Purity Palladium Films from Pd(hfac)₂ and H₂ and O₂ Plasmas. Journal of Physical Chemistry C, 2014, 118, 8702-8711.	1.5	62
99	Cavity ring down study of the densities and kinetics of Si and SiH in a remote Ar-H2-SiH4 plasma. Journal of Applied Physics, 2001, 89, 2065-2073.	1.1	61
100	Sub-nanometer dimensions control of core/shell nanoparticles prepared by atomic layer deposition. Nanotechnology, 2015, 26, 094002.	1.3	60
101	Material properties of LPCVD processed n-type polysilicon passivating contacts and its application in PERPoly industrial bifacial solar cells. Energy Procedia, 2017, 124, 635-642.	1.8	60
102	Effect of substrate conditions on the plasma beam deposition of amorphous hydrogenated carbon. Journal of Applied Physics, 1997, 82, 2643-2654.	1.1	59
103	Optical emission spectroscopy as a tool for studying, optimizing, and monitoring plasma-assisted atomic layer deposition processes. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2010, 28, 77-87.	0.9	59
104	Area-Selective Atomic Layer Deposition of In₂O₃:H Using a Î¼-Plasma Printer for Local Area Activation. Chemistry of Materials, 2017, 29, 921-925.	3.2	59
105	Surface Loss in Ozone-Based Atomic Layer Deposition Processes. Chemistry of Materials, 2011, 23, 2381-2387.	3.2	58
106	Direct-Write Atomic Layer Deposition of High-Quality Pt Nanostructures: Selective Growth Conditions and Seed Layer Requirements. Journal of Physical Chemistry C, 2013, 117, 10788-10798.	1.5	58
107	Redeposition in plasma-assisted atomic layer deposition: Silicon nitride film quality ruled by the gas residence time. Applied Physics Letters, 2015, 107, .	1.5	58
108	High mobility In₂O₃:H transparent conductive oxides prepared by atomic layer deposition and solid phase crystallization. Physica Status Solidi - Rapid Research Letters, 2014, 8, 987-990.	1.2	57

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109	Explorative studies of novel silicon surface passivation materials: Considerations and lessons learned. Solar Energy Materials and Solar Cells, 2018, 188, 182-189.	3.0	57
110	Edge-Site Nanoengineering of WS₂ by Low-Temperature Plasma-Enhanced Atomic Layer Deposition for Electrocatalytic Hydrogen Evolution. Chemistry of Materials, 2019, 31, 5104-5115.	3.2	57
111	Atomic Layer Deposited Molybdenum Oxide for the Hole-selective Contact of Silicon Solar Cells. Energy Procedia, 2016, 92, 443-449.	1.8	56
112	Ultralow Surface Recombination Velocity in Passivated InGaAs/InP Nanopillars. Nano Letters, 2017, 17, 2627-2633.	4.5	56
113	Atomic Layer Deposition. , 2015, , 1101-1134.		55
114	What is limiting low-temperature atomic layer deposition of Al2O3? A vibrational sum-frequency generation study. Applied Physics Letters, 2016, 108, .	1.5	55
115	Influence of the SiO2 interlayer thickness on the density and polarity of charges in Si/SiO2/Al2O3 stacks as studied by optical second-harmonic generation. Journal of Applied Physics, 2014, 115, .	1.1	54
116	Role of Surface Termination in Atomic Layer Deposition of Silicon Nitride. Journal of Physical Chemistry Letters, 2015, 6, 3610-3614.	2.1	54
117	Composition and bonding structure of plasmaâ€assisted ALD Al₂O₃ films. Physica Status Solidi C: Current Topics in Solid State Physics, 2010, 7, 976-979.	0.8	53
118	Comparative study of ALD SiO_2 thin films for optical applications. Optical Materials Express, 2016, 6, 660.	1.6	53
119	On the hydrogenation of Poly-Si passivating contacts by Al2O3 and SiN thin films. Solar Energy Materials and Solar Cells, 2020, 215, 110592.	3.0	53
120	Atomic layer deposition of Ru from CpRu(CO)2Et using O2 gas and O2 plasma. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2011, 29, .	0.9	51
121	Electrocatalytic activity of atomic layer deposited Ptâ€“Ru catalysts onto N-doped carbon nanotubes. Journal of Catalysis, 2014, 311, 481-486.	3.1	51
122	Surface hydride composition of plasma deposited hydrogenated amorphous silicon: in situ infrared study of ion flux and temperature dependence. Surface Science, 2003, 530, 1-16.	0.8	50
123	Quasi-Ice Monolayer on Atomically Smooth AmorphousSiO2at Room Temperature Observed with a High-Finesse Optical Resonator. Physical Review Letters, 2005, 95, 166104.	2.9	50
124	Cavity ring down detection of SiH3 in a remote SiH4 plasma and comparison with model calculations and mass spectrometry. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2001, 19, 467-476.	0.9	49
125	Plasma-assisted atomic layer deposition of TiN/Al2O3 stacks for metal-oxide-semiconductor capacitor applications. Journal of Applied Physics, 2009, 106, .	1.1	49
126	Co3O4 as anode material for thin film micro-batteries prepared by remote plasma atomic layer deposition. Journal of Power Sources, 2012, 203, 72-77.	4.0	49

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127	Enhancement of the photocurrent and efficiency of CdTe solar cells suppressing the front contact reflection using a highly-resistive ZnO buffer layer. Solar Energy Materials and Solar Cells, 2019, 191, 78-82.	3.0	49
128	Atomic-Layer-Deposited Transparent Electrodes for Silicon Heterojunction Solar Cells. IEEE Journal of Photovoltaics, 2014, 4, 1387-1396.	1.5	48
129	Atomic layer deposition of B-doped ZnO using triisopropyl borate as the boron precursor and comparison with Al-doped ZnO. Journal of Materials Chemistry C, 2015, 3, 3095-3107.	2.7	48
130	Surface reaction probability during fast deposition of hydrogenated amorphous silicon with a remote silane plasma. Journal of Applied Physics, 2000, 87, 3313-3320.	1.1	47
131	Substrate Biasing during Plasma-Assisted ALD for Crystalline Phase-Control of TiO2 Thin Films. Electrochemical and Solid-State Letters, 2011, 15, G1-G3.	2.2	46
132	Cathode encapsulation of organic light emitting diodes by atomic layer deposited Al2O3 films and Al2O3/a-SiNx:H stacks. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2012, 30, .	0.9	46
133	Large area, patterned growth of 2D MoS₂ and lateral MoS₂â€“WS₂ heterostructures for nano- and opto-electronic applications. Nanotechnology, 2020, 31, 255603.	1.3	46
134	High-rate plasma-deposited SiO2 films for surface passivation of crystalline silicon. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2006, 24, 1823-1830.	0.9	45
135	Area-Selective Atomic Layer Deposition of Two-Dimensional WS₂ Nanolayers. , 2020, 2, 511-518.		45
136	High hole drift mobility in a-Si:H deposited at high growth rates for solar cell application. Journal of Non-Crystalline Solids, 2000, 266-269, 380-384.	1.5	44
137	Influence of transparent conductive oxides on passivation of a-Si:H/c-Si heterojunctions as studied by atomic layer deposited Al-doped ZnO. Semiconductor Science and Technology, 2014, 29, 122001.	1.0	44
138	Atomic Layer Deposition of Wet-Etch Resistant Silicon Nitride Using Di(sec-butylamino)silane and N₂Plasma on Planar and 3D Substrate Topographies. ACS Applied Materials & Interfaces, 2017, 9, 1858-1869.	4.0	43
139	Hydrogen poor cationic silicon clusters in an expanding argonâ€“hydrogenâ€“silane plasma. Applied Physics Letters, 1998, 72, 2397-2399.	1.5	42
140	Area-Selective Atomic Layer Deposition of TiN Using Aromatic Inhibitor Molecules for Metal/Dielectric Selectivity. Chemistry of Materials, 2020, 32, 7788-7795.	3.2	42
141	Time-resolved cavity ringdown study of the Si and SiH3 surface reaction probability during plasma deposition of a-Si:H at different substrate temperatures. Journal of Applied Physics, 2004, 96, 4094-4106.	1.1	41
142	Revisiting the growth mechanism of atomic layer deposition of Al2O3: A vibrational sum-frequency generation study. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2017, 35, .	0.9	41
143	Electrochemical Activation of Atomic Layer-Deposited Cobalt Phosphate Electrocatalysts for Water Oxidation. ACS Catalysis, 2021, 11, 2774-2785.	5.5	41
144	Industrial high-rate (â¼45 nm/s) deposited silicon nitride yielding high-quality bulk and surface passivation under optimum anti-reflection coating conditions. Progress in Photovoltaics: Research and Applications, 2005, 13, 705-712.	4.4	40

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145	e study of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>a</mml:mi><mml:mtext>a^</mml:mtext><mml:mi mathvariant="normal">Si</mml:mi><mml:mo>:</mml:mo><mml:mi mathvariant="normal">H</mml:mi><mml:mo>â^•</mml:mo><mml:mi>c</mml:mi><mml:mtext>â^’</mml:mtext><mml:mi mathvariant="normal">Si</mml:mi></mml:mrow></mml:math>heterointerface formation and epitaxial Si growth by spectroscopic ellipsometry, infrared spectroscopy, and second-harmonic generation. Phy	1.1	40
146	Encapsulation method for atom probe tomography analysis of nanoparticles. Ultramicroscopy, 2015, 159, 420-426.	0.8	40
147	Atomic layer deposition of high-mobility hydrogen-doped zinc oxide. Solar Energy Materials and Solar Cells, 2017, 173, 111-119.	3.0	40
148	Passivating electronâ€selective contacts for silicon solar cells based on an aâ€Si:H/TiO_x stack and a low work function metal. Progress in Photovoltaics: Research and Applications, 2018, 26, 835-845.	4.4	40
149	Chemical Analysis of the Interface between Hybrid Organicâ€“Inorganic Perovskite and Atomic Layer Deposited Al₂O₃. ACS Applied Materials & Interfaces, 2019, 11, 5526-5535.	4.0	40
150	Production Mechanisms of NH and NH₂ Radicals in N₂â^H₂ Plasmas. Journal of Physical Chemistry A, 2007, 111, 11460-11472.	1.1	39
151	The atomic hydrogen flux to silicon growth flux ratio during microcrystalline silicon solar cell deposition. Applied Physics Letters, 2008, 93, 111914.	1.5	39
152	Continuous and ultrathin platinum films on graphene using atomic layer deposition: a combined computational and experimental study. Nanoscale, 2016, 8, 19829-19845.	2.8	39
153	Mechanism of Precursor Blocking by Acetylacetone Inhibitor Molecules during Area-Selective Atomic Layer Deposition of SiO₂. Chemistry of Materials, 2020, 32, 3335-3345.	3.2	39
154	Temperature and growth-rate effects on the hydrogen incorporation in a-Si:H. Journal of Non-Crystalline Solids, 1998, 227-230, 133-137.	1.5	38
155	High-rate deposition of a-SiNx:H for photovoltaic applications by the expanding thermal plasma. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2002, 20, 1704-1715.	0.9	38
156	Optical second-harmonic generation in thin film systems. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2008, 26, 1519-1537.	0.9	38
157	Plasma-assisted and thermal atomic layer deposition of electrochemically active Li₂CO₃. RSC Advances, 2017, 7, 41359-41368.	1.7	38
158	Direct and highly sensitive measurement of defect-related absorption in amorphous silicon thin films by cavity ringdown spectroscopy. Applied Physics Letters, 2004, 84, 3079-3081.	1.5	37
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