Harm C M Knoops

List of Publications by Year
in descending order

64 papers	3,033 citations	147566 31 h-index	161609 54 g-index
65 all docs	65 docs citations	65 times ranked	3391 citing authors

#	Article	IF	Citations
1	In situspectroscopic ellipsometry as a versatile tool for studying atomic layer deposition. Journal Physics D: Applied Physics, 2009, 42, 073001.	1.3	249
2	Conformality of Plasma-Assisted ALD: Physical Processes and Modeling. Journal of the Electrochemical Society, 2010, 157, G241.	1.3	157
3	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
4	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
5	Surface reactions during atomic layer deposition of Pt derived from gas phase infrared spectroscopy. Applied Physics Letters, 2009, 95, .	1.5	111
6	Atomic layer deposition for nanostructured Li-ion batteries. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2012, 30, .	0.9	111
7	Remote Plasma ALD of Platinum and Platinum Oxide Films. Electrochemical and Solid-State Letters, 2009, 12, G34.	2.2	107
8	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
9	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
10	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
11	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
12	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
13	Synthesis andin situcharacterization of low-resistivity TaNx films by remote plasma atomic layer deposition. Journal of Applied Physics, 2007, 102, 083517.	1.1	75
14	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
15	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
16	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
17	Remote Plasma Atomic Layer Deposition of Co3O4 Thin Films. Journal of the Electrochemical Society, 2011, 158, G92.	1.3	70
18	Room-Temperature Atomic Layer Deposition of Platinum. Chemistry of Materials, 2013, 25, 1769-1774.	3.2	70

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19	Electrical transport and Al doping efficiency in nanoscale ZnO films prepared by atomic layer deposition. Journal of Applied Physics, 2013, 114, .	1.1	67
20	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
21	Plasma rotation and momentum transport studies at JET. Plasma Physics and Controlled Fusion, 2006, 48, 1693-1708.	0.9	64
22	3D negative electrode stacks for integrated all-solid-state lithium-ion microbatteries. Journal of Materials Chemistry, 2010, 20, 3703.	6.7	62
23	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
24	Surface Loss in Ozone-Based Atomic Layer Deposition Processes. Chemistry of Materials, 2011, 23, 2381-2387.	3.2	58
25	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
26	Role of Surface Termination in Atomic Layer Deposition of Silicon Nitride. Journal of Physical Chemistry Letters, 2015, 6, 3610-3614.	2.1	54
27	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
28	Toroidal and poloidal momentum transport studies in JET. Nuclear Fusion, 2007, 47, 1012-1023.	1.6	46
29	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
30	Atomic layer deposition of high-mobility hydrogen-doped zinc oxide. Solar Energy Materials and Solar Cells, 2017, 173, 111-119.	3.0	40
31	Film Conformality and Extracted Recombination Probabilities of O Atoms during Plasma-Assisted Atomic Layer Deposition of SiO₂, TiO₂, Al₂O₃, and HfO₂. Journal of Physical Chemistry C, 2019, 123, 27030-27035.	1.5	33
32	Optical modeling of plasma-deposited ZnO films: Electron scattering at different length scales. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2015, 33, .	0.9	31
33	Sticking probabilities of H2O and Al(CH3)3 during atomic layer deposition of Al2O3 extracted from their impact on film conformality. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2019, 37, .	0.9	30
34	Atomic Layer Deposition for All-Solid-State 3D-Integrated Batteries. ECS Transactions, 2009, 25, 333-344.	0.3	28
35	Comparison of thermal and plasma-enhanced atomic layer deposition of niobium oxide thin films. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2018, 36, .	0.9	28
36	Mass Spectrometry Study of the Temperature Dependence of Pt Film Growth by Atomic Layer Deposition. ECS Journal of Solid State Science and Technology, 2012, 1, P255-P262.	0.9	27

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37	Atomic Layer Deposition of Silicon Nitride from Bis(tertiary-butyl-amino)silane and N₂ Plasma Studied by in Situ Gas Phase and Surface Infrared Spectroscopy. Chemistry of Materials, 2016, 28, 5864-5871.	3.2	27
38	Plasma-enhanced atomic layer deposition of tungsten oxide thin films using (tBuN)2(Me2N)2W and O2 plasma. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2018, 36, .	0.9	26
39	Remote Plasma Atomic Layer Deposition of Thin Films of Electrochemically Active LiCoO₂. ECS Transactions, 2011, 41, 321-330.	0.3	22
40	Reaction mechanisms of atomic layer deposition of TaNx from Ta(NMe2)5 precursor and H2-based plasmas. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2012, 30, 01A101.	0.9	22
41	Opportunities for Plasma-Assisted Atomic Layer Deposition. ECS Transactions, 2007, 3, 183-190.	0.3	21
42	Surface zeta potential and diamond growth on gallium oxide single crystal. Carbon, 2021, 181, 79-86.	5.4	18
43	Plasma-assisted atomic layer deposition of conformal Pt films in high aspect ratio trenches. Journal of Chemical Physics, 2017, 146, 052818.	1.2	17
44	Impact of Ions on Film Conformality and Crystallinity during Plasma-Assisted Atomic Layer Deposition of TiO₂. Chemistry of Materials, 2021, 33, 5002-5009.	3.2	16
45	Atomic layer deposition of aluminum fluoride using Al(CH3)3 and SF6 plasma. Applied Physics Letters, 2017, 111, .	1.5	15
46	Evidence for low-energy ions influencing plasma-assisted atomic layer deposition of SiO2: Impact on the growth per cycle and wet etch rate. Applied Physics Letters, 2020, 117, .	1.5	15
47	Isotropic plasma atomic layer etching of Al2O3 using a fluorine containing plasma and Al(CH3)3. Applied Physics Letters, 2020, 117, .	1.5	15
48	Predictive simulations of toroidal momentum transport at JET. Plasma Physics and Controlled Fusion, 2007, 49, 1931-1943.	0.9	11
49	(Invited) All-Solid-State Batteries: A Challenging Route towards 3D Integration. ECS Transactions, 2010, 33, 213-222.	0.3	11
50	Plasmaâ€Assisted Atomic Layer Deposition of PtO_x from (MeCp)PtMe₃ and O₂ Plasma. Chemical Vapor Deposition, 2014, 20, 258-268.	1.4	11
51	Oxygen Recombination Probability Data for Plasma-Assisted Atomic Layer Deposition of SiO₂ and TiO₂. Journal of Physical Chemistry C, 2021, 125, 8244-8252.	1.5	8
52	Enhancing the Wettability of High Aspect-Ratio Through-Silicon Vias Lined With LPCVD Silicon Nitride or PE-ALD Titanium Nitride for Void-Free Bottom-Up Copper Electroplating. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2011, 1, 1728-1738.	1.4	7
53	Expanding Thermal Plasma Chemical Vapour Deposition of ZnO:Al Layers for CIGS Solar Cells. International Journal of Photoenergy, 2014, 2014, 1-9.	1.4	7
54	Atomic insights into the oxygen incorporation in atomic layer deposited conductive nitrides and its mitigation by energetic ions. Nanoscale, 2021, 13, 10092-10099.	2.8	7

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55	Plasmaâ€Enhanced Atomic Layer Deposition of Al₂O₃ on Graphene Using Monolayer hBN as Interfacial Layer. Advanced Materials Technologies, 2021, 6, 2100489.	3.0	7
56	Remote Plasma Atomic Layer Deposition of Co3O4 Thin Films. ECS Transactions, 2009, 25, 39-47.	0.3	6
57	Deposition of TiN and TaN by Remote Plasma ALD for Diffusion Barrier Applications. ECS Transactions, 2007, 11, 45-54.	0.3	5
58	Expanding Thermal Plasma Deposition of Alâ€Doped ZnO: On the Effect of the Plasma Chemistry on Film Growth Mechanisms. Plasma Processes and Polymers, 2016, 13, 54-69.	1.6	5
59	Atomic layer deposition of cobalt phosphate from cobaltocene, trimethylphosphate, and O2 plasma. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2020, 38, .	0.9	5
60	Innovative remote plasma source for atomic layer deposition for GaN devices. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2021, 39, .	0.9	5
61	Reaction Mechanisms during Atomic Layer Deposition of AlF₃ Using Al(CH₃)₃ and SF₆ Plasma. Journal of Physical Chemistry C, 2021, 125, 3913-3923.	1.5	4
62	Corrigendum to â€œExpanding Thermal Plasma Chemical Vapour Deposition of ZnO:Al Layers for CIGS Solar Cellsâ€• International Journal of Photoenergy, 2015, 2015, 1-1.	1.4	0
63	ALD, ALE and 2D Materials: Atomic Scale Processing for Optoelectronics Applications. , 2017, , .		0
64	Corrigendum #2 to â€œExpanding Thermal Plasma Chemical Vapour Deposition of ZnO:Al Layers for CIGS Solar Cellsâ€• International Journal of Photoenergy, 2020, 2020, 1-1.	1.4	0