

Adriaan J M Mackus

List of Publications by Year in descending order

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172207

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all docs

59
docs citations

59
times ranked

3070
citing authors

#	ARTICLE	IF	CITATIONS
1	The use of atomic layer deposition in advanced nanopatterning. <i>Nanoscale</i> , 2014, 6, 10941-10960.	2.8	304
2	From the Bottom-Up: Toward Area-Selective Atomic Layer Deposition with High Selectivity. <i>Chemistry of Materials</i> , 2019, 31, 2-12.	3.2	248
3	Synthesis of Doped, Ternary, and Quaternary Materials by Atomic Layer Deposition: A Review. <i>Chemistry of Materials</i> , 2019, 31, 1142-1183.	3.2	179
4	Supported Core/Shell Bimetallic Nanoparticles Synthesis by Atomic Layer Deposition. <i>Chemistry of Materials</i> , 2012, 24, 2973-2977.	3.2	142
5	Area-Selective Atomic Layer Deposition of SiO ₂ Using Acetylacetone as a Chemoselective Inhibitor in an ABC-Type Cycle. <i>ACS Nano</i> , 2017, 11, 9303-9311.	7.3	136
6	Influence of Oxygen Exposure on the Nucleation of Platinum Atomic Layer Deposition: Consequences for Film Growth, Nanopatterning, and Nanoparticle Synthesis. <i>Chemistry of Materials</i> , 2013, 25, 1905-1911.	3.2	123
7	Surface reactions during atomic layer deposition of Pt derived from gas phase infrared spectroscopy. <i>Applied Physics Letters</i> , 2009, 95, .	1.5	111
8	Remote Plasma ALD of Platinum and Platinum Oxide Films. <i>Electrochemical and Solid-State Letters</i> , 2009, 12, G34.	2.2	107
9	Catalytic Combustion and Dehydrogenation Reactions during Atomic Layer Deposition of Platinum. <i>Chemistry of Materials</i> , 2012, 24, 1752-1761.	3.2	107
10	Tandem Core-Shell Ta ₃ N ₅ Photoanodes for Photoelectrochemical Water Splitting. <i>Nano Letters</i> , 2016, 16, 7565-7572.	4.5	99
11	Nucleation and growth of Pt atomic layer deposition on Al ₂ O ₃ substrates using (methylcyclopentadienyl)-trimethyl platinum and O ₂ plasma. <i>Journal of Applied Physics</i> , 2011, 109, .	1.1	96
12	Area-Selective Atomic Layer Deposition of Metal Oxides on Noble Metals through Catalytic Oxygen Activation. <i>Chemistry of Materials</i> , 2018, 30, 663-670.	3.2	90
13	Atomic layer deposition of Pd and Pt nanoparticles for catalysis: on the mechanisms of nanoparticle formation. <i>Nanotechnology</i> , 2016, 27, 034001.	1.3	86
14	A Process for Topographically Selective Deposition on 3D Nanostructures by Ion Implantation. <i>ACS Nano</i> , 2016, 10, 4451-4458.	7.3	78
15	Synthesis and characterization of low-resistivity TaNx films by remote plasma atomic layer deposition. <i>Journal of Applied Physics</i> , 2007, 102, 083517.	1.1	75
16	Area-Selective Deposition of Ruthenium by Combining Atomic Layer Deposition and Selective Etching. <i>Chemistry of Materials</i> , 2019, 31, 3878-3882.	3.2	71
17	Local deposition of high-purity Pt nanostructures by combining electron beam induced deposition and atomic layer deposition. <i>Journal of Applied Physics</i> , 2010, 107, 116102.	1.1	70
18	Room-Temperature Atomic Layer Deposition of Platinum. <i>Chemistry of Materials</i> , 2013, 25, 1769-1774.	3.2	70

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19	Incomplete elimination of precursor ligands during atomic layer deposition of zinc-oxide, tin-oxide, and zinc-tin-oxide. <i>Journal of Chemical Physics</i> , 2017, 146, 052802.	1.2	64
20	Nanopatterning by direct-write atomic layer deposition. <i>Nanoscale</i> , 2012, 4, 4477.	2.8	62
21	Atomic Layer Deposition of High-Purity Palladium Films from Pd(hfac) ₂ and H ₂ and O ₂ Plasmas. <i>Journal of Physical Chemistry C</i> , 2014, 118, 8702-8711.	1.5	62
22	Area-Selective Atomic Layer Deposition of ZnO by Area Activation Using Electron Beam-Induced Deposition. <i>Chemistry of Materials</i> , 2019, 31, 1250-1257.	3.2	62
23	Optical emission spectroscopy as a tool for studying, optimizing, and monitoring plasma-assisted atomic layer deposition processes. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2010, 28, 77-87.	0.9	59
24	Area-Selective Atomic Layer Deposition of In ₂ O ₃ :H Using a 1/4-Plasma Printer for Local Area Activation. <i>Chemistry of Materials</i> , 2017, 29, 921-925.	3.2	59
25	Direct-Write Atomic Layer Deposition of High-Quality Pt Nanostructures: Selective Growth Conditions and Seed Layer Requirements. <i>Journal of Physical Chemistry C</i> , 2013, 117, 10788-10798.	1.5	58
26	Area-Selective Atomic Layer Deposition of Two-Dimensional WS ₂ Nanolayers. , 2020, 2, 511-518.		45
27	Area-Selective Atomic Layer Deposition of TiN Using Aromatic Inhibitor Molecules for Metal/Dielectric Selectivity. <i>Chemistry of Materials</i> , 2020, 32, 7788-7795.	3.2	42
28	Mechanism of Precursor Blocking by Acetylacetonone Inhibitor Molecules during Area-Selective Atomic Layer Deposition of SiO ₂ . <i>Chemistry of Materials</i> , 2020, 32, 3335-3345.	3.2	39
29	Atomic Layer Deposition of Cobalt Using H ₂ -, N ₂ -, and NH ₃ -Based Plasmas: On the Role of the Co-reactant. <i>Journal of Physical Chemistry C</i> , 2018, 122, 22519-22529.	1.5	31
30	Nanoscale Encapsulation of Perovskite Nanocrystal Luminescent Films via Plasma-Enhanced SiO ₂ Atomic Layer Deposition. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 53519-53527.	4.0	31
31	Isotropic Atomic Layer Etching of ZnO Using Acetylacetonone and O ₂ Plasma. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 38588-38595.	4.0	30
32	The Role of Aluminum in Promoting Ni-Fe-OOH Electrocatalysts for the Oxygen Evolution Reaction. <i>ACS Applied Energy Materials</i> , 2019, 2, 3488-3499.	2.5	30
33	Dehydrogenation Reactions during Atomic Layer Deposition of Ru Using O ₂ . <i>Chemistry of Materials</i> , 2012, 24, 3696-3700.	3.2	29
34	Synthesis of a Hybrid Nanostructure of ZnO-Decorated MoS ₂ by Atomic Layer Deposition. <i>ACS Nano</i> , 2020, 14, 1757-1769.	7.3	29
35	Atomic Layer Deposition of Highly Transparent Platinum Counter Electrodes for Metal/Polymer Flexible Dye-Sensitized Solar Cells. <i>Advanced Energy Materials</i> , 2014, 4, 1300831.	10.2	28
36	Mass Spectrometry Study of the Temperature Dependence of Pt Film Growth by Atomic Layer Deposition. <i>ECS Journal of Solid State Science and Technology</i> , 2012, 1, P255-P262.	0.9	27

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37	<i>In situ</i> spectroscopic ellipsometry during atomic layer deposition of Pt, Ru and Pd. Journal of Physics D: Applied Physics, 2016, 49, 115504.	1.3	27
38	Precise ion energy control with tailored waveform biasing for atomic scale processing. Journal of Applied Physics, 2020, 128, .	1.1	26
39	Growth, intermixing, and surface phase formation for zinc tin oxide nanolaminates produced by atomic layer deposition. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2016, 34, .	0.9	18
40	Graphene devices with bottom-up contacts by area-selective atomic layer deposition. 2D Materials, 2017, 4, 025046.	2.0	15
41	Atomic layer deposition of aluminum fluoride using Al(CH ₃) ₃ and SF ₆ plasma. Applied Physics Letters, 2017, 111, .	1.5	15
42	Isotropic plasma atomic layer etching of Al ₂ O ₃ using a fluorine containing plasma and Al(CH ₃) ₃ . Applied Physics Letters, 2020, 117, .	1.5	15
43	Insight into the removal and reapplication of small inhibitor molecules during area-selective atomic layer deposition of SiO ₂ . Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2021, 39, .	0.9	15
44	Relation between Reactive Surface Sites and Precursor Choice for Area-Selective Atomic Layer Deposition Using Small Molecule Inhibitors. Journal of Physical Chemistry C, 2022, 126, 4845-4853.	1.5	15
45	(Invited) Area-Selective Atomic Layer Deposition: Role of Surface Chemistry. ECS Transactions, 2017, 80, 39-48.	0.3	13
46	Remote Plasma and Thermal ALD of Platinum and Platinum Oxide Films. ECS Transactions, 2008, 16, 209-218.	0.3	12
47	Catalytic Combustion Reactions During Atomic Layer Deposition of Ru Studied Using ¹⁸ O ₂ Isotope Labeling. Journal of Physical Chemistry C, 2013, 117, 21320-21330.	1.5	11
48	Resist-free fabricated carbon nanotube field-effect transistors with high-quality atomic-layer-deposited platinum contacts. Applied Physics Letters, 2017, 110, .	1.5	11
49	Atomic layer deposition and selective etching of ruthenium for area-selective deposition: Temperature dependence and supercycle design. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2021, 39, .	0.9	9
50	Atomic layer deposition of ruthenium using an ABC-type process: Role of oxygen exposure during nucleation. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2020, 38, .	0.9	8
51	Identification of highly active surface iron sites on Ni(OOH) for the oxygen evolution reaction by atomic layer deposition. Journal of Catalysis, 2021, 394, 476-485.	3.1	8
52	Surface Chemistry during Atomic Layer Deposition of Pt Studied with Vibrational Sum-Frequency Generation. Journal of Physical Chemistry C, 2022, 126, 2463-2474.	1.5	7
53	(Invited) Catalytic Surface Reactions during Nucleation and Growth of Atomic Layer Deposition of Noble Metals: A Case Study for Platinum. ECS Transactions, 2013, 58, 183-193.	0.3	5
54	Reaction Mechanisms during Atomic Layer Deposition of AlF ₃ Using Al(CH ₃) ₃ and SF ₆ Plasma. Journal of Physical Chemistry C, 2021, 125, 3913-3923.	1.5	4

#	ARTICLE	IF	CITATIONS
55	Dependence of inherent selective atomic layer deposition of FeOx on Pt nanoparticles on the coreactant and temperature. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2021, 39, .	0.9	3
56	Approaches and opportunities for area-selective atomic layer deposition. , 2018, , .		2
57	Equivalent electric circuit model of accurate ion energy control with tailored waveform biasing. Plasma Sources Science and Technology, 0, , .	1.3	2
58	Investigating the difference in nucleation during Si-based ALD on different surfaces for future area-selective deposition. , 2018, , .		0