

# Adriaan J M Mackus

## List of Publications by Citations

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55  
papers

2,526  
citations

26  
h-index

50  
g-index

59  
ext. papers

2,848  
ext. citations

6.3  
avg, IF

5.41  
L-index

#	Paper	IF	Citations
55	The use of atomic layer deposition in advanced nanopatterning. <i>Nanoscale</i> , <b>2014</b> , 6, 10941-60	7.7	254
54	From the Bottom-Up: Toward Area-Selective Atomic Layer Deposition with High Selectivity. <i>Chemistry of Materials</i> , <b>2019</b> , 31, 2-12	9.6	149
53	Supported Core/Shell Bimetallic Nanoparticles Synthesis by Atomic Layer Deposition. <i>Chemistry of Materials</i> , <b>2012</b> , 24, 2973-2977	9.6	132
52	Synthesis of Doped, Ternary, and Quaternary Materials by Atomic Layer Deposition: A Review. <i>Chemistry of Materials</i> , <b>2019</b> , 31, 1142-1183	9.6	117
51	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> , <b>2013</b> , 25, 1905-1911	9.6	112
50	Surface reactions during atomic layer deposition of Pt derived from gas phase infrared spectroscopy. <i>Applied Physics Letters</i> , <b>2009</b> , 95, 013114	3.4	102
49	Remote Plasma ALD of Platinum and Platinum Oxide Films. <i>Electrochemical and Solid-State Letters</i> , <b>2009</b> , 12, G34		100
48	Catalytic Combustion and Dehydrogenation Reactions during Atomic Layer Deposition of Platinum. <i>Chemistry of Materials</i> , <b>2012</b> , 24, 1752-1761	9.6	99
47	Area-Selective Atomic Layer Deposition of SiO Using Acetylacetone as a Chemoselective Inhibitor in an ABC-Type Cycle. <i>ACS Nano</i> , <b>2017</b> , 11, 9303-9311	16.7	95
46	Nucleation and growth of Pt atomic layer deposition on Al <sub>2</sub> O <sub>3</sub> substrates using (methylcyclopentadienyl)-trimethyl platinum and O <sub>2</sub> plasma. <i>Journal of Applied Physics</i> , <b>2011</b> , 109, 084333	3.5	87
45	Tandem Core-Shell Si-TaN Photoanodes for Photoelectrochemical Water Splitting. <i>Nano Letters</i> , <b>2016</b> , 16, 7565-7572	11.5	86
44	Area-Selective Atomic Layer Deposition of Metal Oxides on Noble Metals through Catalytic Oxygen Activation. <i>Chemistry of Materials</i> , <b>2018</b> , 30, 663-670	9.6	72
43	Atomic layer deposition of Pd and Pt nanoparticles for catalysis: on the mechanisms of nanoparticle formation. <i>Nanotechnology</i> , <b>2016</b> , 27, 034001	3.4	70
42	Synthesis and in situ characterization of low-resistivity TaN <sub>x</sub> films by remote plasma atomic layer deposition. <i>Journal of Applied Physics</i> , <b>2007</b> , 102, 083517	2.5	70
41	A Process for Topographically Selective Deposition on 3D Nanostructures by Ion Implantation. <i>ACS Nano</i> , <b>2016</b> , 10, 4451-8	16.7	67
40	Room-Temperature Atomic Layer Deposition of Platinum. <i>Chemistry of Materials</i> , <b>2013</b> , 25, 1769-1774	9.6	64
39	Nanopatterning by direct-write atomic layer deposition. <i>Nanoscale</i> , <b>2012</b> , 4, 4477-80	7.7	58

38	Direct-Write Atomic Layer Deposition of High-Quality Pt Nanostructures: Selective Growth Conditions and Seed Layer Requirements. <i>Journal of Physical Chemistry C</i> , <b>2013</b> , 117, 10788-10798	3.8	53
37	Atomic Layer Deposition of High-Purity Palladium Films from Pd(hfac) <sub>2</sub> and H <sub>2</sub> and O <sub>2</sub> Plasmas. <i>Journal of Physical Chemistry C</i> , <b>2014</b> , 118, 8702-8711	3.8	52
36	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> , <b>2010</b> , 28, 77-87	2.9	51
35	Incomplete elimination of precursor ligands during atomic layer deposition of zinc-oxide, tin-oxide, and zinc-tin-oxide. <i>Journal of Chemical Physics</i> , <b>2017</b> , 146, 052802	3.9	49
34	Area-Selective Atomic Layer Deposition of InO:H Using a Plasma Printer for Local Area Activation. <i>Chemistry of Materials</i> , <b>2017</b> , 29, 921-925	9.6	48
33	Area-Selective Deposition of Ruthenium by Combining Atomic Layer Deposition and Selective Etching. <i>Chemistry of Materials</i> , <b>2019</b> , 31, 3878-3882	9.6	46
32	Area-Selective Atomic Layer Deposition of ZnO by Area Activation Using Electron Beam-Induced Deposition. <i>Chemistry of Materials</i> , <b>2019</b> , 31, 1250-1257	9.6	43
31	Atomic Layer Deposition of Highly Transparent Platinum Counter Electrodes for Metal/Polymer Flexible Dye-Sensitized Solar Cells. <i>Advanced Energy Materials</i> , <b>2014</b> , 4, 1300831	21.8	26
30	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> , <b>2012</b> , 1, P255-P262	2	25
29	Mechanism of Precursor Blocking by Acetylacetone Inhibitor Molecules during Area-Selective Atomic Layer Deposition of SiO <sub>2</sub> . <i>Chemistry of Materials</i> , <b>2020</b> , 32, 3335-3345	9.6	24
28	Area-Selective Atomic Layer Deposition of Two-Dimensional WS Nanolayers <b>2020</b> , 2, 511-518		24
27	In situ spectroscopic ellipsometry during atomic layer deposition of Pt, Ru and Pd. <i>Journal Physics D: Applied Physics</i> , <b>2016</b> , 49, 115504	3	24
26	Dehydrogenation Reactions during Atomic Layer Deposition of Ru Using O <sub>2</sub> . <i>Chemistry of Materials</i> , <b>2012</b> , 24, 3696-3700	9.6	23
25	Atomic Layer Deposition of Cobalt Using H-, N-, and NH-Based Plasmas: On the Role of the Co-reactant. <i>Journal of Physical Chemistry C</i> , <b>2018</b> , 122, 22519-22529	3.8	23
24	Area-Selective Atomic Layer Deposition of TiN Using Aromatic Inhibitor Molecules for Metal/Dielectric Selectivity. <i>Chemistry of Materials</i> , <b>2020</b> , 32, 7788-7795	9.6	21
23	Isotropic Atomic Layer Etching of ZnO Using Acetylacetone and O Plasma. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2018</b> , 10, 38588-38595	9.5	21
22	Growth, intermixing, and surface phase formation for zinc tin oxide nanolaminates produced by atomic layer deposition. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2016</b> , 34, 021516	2.9	17
21	Synthesis of a Hybrid Nanostructure of ZnO-Decorated MoS by Atomic Layer Deposition. <i>ACS Nano</i> , <b>2020</b> , 14, 1757-1769	16.7	16

20	The Role of Aluminum in Promoting NiFe-EDOH Electrocatalysts for the Oxygen Evolution Reaction. <i>ACS Applied Energy Materials</i> , <b>2019</b> , 2, 3488-3499	6.1	15
19	Graphene devices with bottom-up contacts by area-selective atomic layer deposition. <i>2D Materials</i> , <b>2017</b> , 4, 025046	5.9	14
18	Atomic layer deposition of aluminum fluoride using Al(CH <sub>3</sub> ) <sub>3</sub> and SF <sub>6</sub> plasma. <i>Applied Physics Letters</i> , <b>2017</b> , 111, 113105	3.4	12
17	Remote Plasma and Thermal ALD of Platinum and Platinum Oxide Films. <i>ECS Transactions</i> , <b>2009</b> , 16, 209-218	1	12
16	Nanoscale Encapsulation of Perovskite Nanocrystal Luminescent Films via Plasma-Enhanced SiO Atomic Layer Deposition. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 53519-53527	9.5	12
15	Catalytic Combustion Reactions During Atomic Layer Deposition of Ru Studied Using 18O <sub>2</sub> Isotope Labeling. <i>Journal of Physical Chemistry C</i> , <b>2013</b> , 117, 21320-21330	3.8	10
14	Resist-free fabricated carbon nanotube field-effect transistors with high-quality atomic-layer-deposited platinum contacts. <i>Applied Physics Letters</i> , <b>2017</b> , 110, 013101	3.4	9
13	(Invited) Area-Selective Atomic Layer Deposition: Role of Surface Chemistry. <i>ECS Transactions</i> , <b>2017</b> , 80, 39-48	1	9
12	Insight into the removal and reapplication of small inhibitor molecules during area-selective atomic layer deposition of SiO <sub>2</sub> . <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2021</b> , 39, 012402	2.9	8
11	Atomic layer deposition of ruthenium using an ABC-type process: Role of oxygen exposure during nucleation. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2020</b> , 38, 062402	2.9	6
10	Precise ion energy control with tailored waveform biasing for atomic scale processing. <i>Journal of Applied Physics</i> , <b>2020</b> , 128, 213301	2.5	5
9	Isotropic plasma atomic layer etching of Al <sub>2</sub> O <sub>3</sub> using a fluorine containing plasma and Al(CH <sub>3</sub> ) <sub>3</sub> . <i>Applied Physics Letters</i> , <b>2020</b> , 117, 162107	3.4	5
8	Relation between Reactive Surface Sites and Precursor Choice for Area-Selective Atomic Layer Deposition Using Small Molecule Inhibitors.. <i>Journal of Physical Chemistry C</i> , <b>2022</b> , 126, 4845-4853	3.8	5
7	(Invited) Catalytic Surface Reactions during Nucleation and Growth of Atomic Layer Deposition of Noble Metals: A Case Study for Platinum. <i>ECS Transactions</i> , <b>2013</b> , 58, 183-193	1	4
6	Surface Chemistry during Atomic Layer Deposition of Pt Studied with Vibrational Sum-Frequency Generation.. <i>Journal of Physical Chemistry C</i> , <b>2022</b> , 126, 2463-2474	3.8	3
5	Reaction Mechanisms during Atomic Layer Deposition of AlF Using Al(CH <sub>3</sub> ) <sub>3</sub> and SF <sub>6</sub> Plasma. <i>Journal of Physical Chemistry C</i> , <b>2021</b> , 125, 3913-3923	3.8	3
4	Approaches and opportunities for area-selective atomic layer deposition <b>2018</b> ,		2
3	Atomic layer deposition and selective etching of ruthenium for area-selective deposition: Temperature dependence and supercycle design. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2021</b> , 39, 032412	2.9	2

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| 2 | Dependence of inherent selective atomic layer deposition of FeOx on Pt nanoparticles on the coreactant and temperature. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2021</b> , 39, 012404 | 2.9 | 2 |
| 1 | Identification of highly active surface iron sites on Ni(OOH) for the oxygen evolution reaction by atomic layer deposition. <i>Journal of Catalysis</i> , <b>2021</b> , 394, 476-485   | 7.3 | 1 |