Alex B F Martinson

List of Publications by Year
in descending order

113 papers	7,656 citations	50276 46 h-index	51608 86 g-index
118 all docs	118 docs citations	118 times ranked	10915 citing authors

#	Article	IF	Citations
1	Structureâ€"Transport Properties Governing the Interplay in Humidity-Dependent Mixed Ionic and Electronic Conduction of Conjugated Polyelectrolytes. ACS Polymers Au, 2022, 2, 275-286.	4.1	4
2	Selective Hydration of Rutile TiO₂ as a Strategy for Site-Selective Atomic Layer Deposition. ACS Applied Materials & Interfaces, 2022, 14, 21585-21595.	8.0	10
3	Thermal Atomic Layer Deposition of Gold: Mechanistic Insights, Nucleation, and Epitaxy. ACS Applied Materials & Interfaces, 2021, 13, 9091-9100.	8.0	2
4	Advanced Materials for Energy-Water Systems: The Central Role of Water/Solid Interfaces in Adsorption, Reactivity, and Transport. Chemical Reviews, 2021, 121, 9450-9501.	47.7	43
5	Molecularly Functionalized Electrodes for Efficient Electrochemical Water Remediation. ChemSusChem, 2021, 14, 3267-3276.	6.8	0
6	Pyroelectric Heat Detection for Calibrated Measurement of Atomic Layer Deposition Reaction Heat. Chemistry of Materials, 2021, 33, 6176-6185.	6.7	6
7	Electronic Conductivity of Nanoporous Indium Oxide Derived from Sequential Infiltration Synthesis. Journal of Physical Chemistry C, 2021, 125, 21191-21198.	3.1	9
8	Broadband Liquid Crystal Tunable Metasurfaces in the Visible: Liquid Crystal Inhomogeneities Across the Metasurface Parameter Space. ACS Photonics, 2021, 8, 567-575.	6.6	46
9	The Synthesis Science of Targeted Vapor-Phase Metalâ€"Organic Framework Postmodification. Journal of the American Chemical Society, 2020, 142, 242-250.	13.7	32
10	Isomerization and Selective Hydrogenation of Propyne: Screening of Metalâ€"Organic Frameworks Modified by Atomic Layer Deposition. Journal of the American Chemical Society, 2020, 142, 20380-20389.	13.7	15
11	Inverse design of metasurfaces with non-local interactions. Npj Computational Materials, 2020, 6, .	8.7	39
12	Resolving the Atomic Structure of Sequential Infiltration Synthesis Derived Inorganic Clusters. ACS Nano, 2020, 14, 14846-14860.	14.6	25
13	Influence of spin state and electron configuration on the active site and mechanism for catalytic hydrogenation on metal cation catalysts supported on NU-1000: insights from experiments and microkinetic modeling. Catalysis Science and Technology, 2020, 10, 3594-3602.	4.1	14
14	Characterizing electronic and atomic structures for amorphous and molecular metal oxide catalysts at functional interfaces by combining soft X-ray spectroscopy and high-energy X-ray scattering. Nanoscale, 2020, 12, 13276-13296.	5.6	14
15	Water-Assisted Proton Transport in Confined Nanochannels. Journal of Physical Chemistry C, 2020, 124, 16186-16201.	3.1	12
16	Defect Energetics in Pseudo-Cubic Mixed Halide Lead Perovskites from First-Principles. Journal of Physical Chemistry C, 2020, 124, 16729-16738.	3.1	19
17	Effects of Atomic-Layer-Deposition Alumina on Proton Transmission through Single-Layer Graphene in Electrochemical Hydrogen Pump Cells. ACS Applied Energy Materials, 2020, 3, 1364-1372.	5.1	6
18	Direct Observation of Bandgap Oscillations Induced by Optical Phonons in Hybrid Lead Iodide Perovskites. Advanced Functional Materials, 2020, 30, 1907982.	14.9	15

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19	Stabilization of Low Valent Zirconium Nitrides in Titanium Nitride via Plasma-Enhanced Atomic Layer Deposition and Assessment of Electrochemical Properties. ACS Applied Energy Materials, 2020, 3, 5095-5100.	5.1	2
20	Sequential Infiltration Synthesis of Electronic Materials: Group 13 Oxides via Metal Alkyl Precursors. Chemistry of Materials, 2019, 31, 5274-5285.	6.7	48
21	High-Temperature Selective Emitter Design and Materials: Titanium Aluminum Nitride Alloys for Thermophotovoltaics. ACS Applied Materials & Interfaces, 2019, 11, 41347-41355.	8.0	16
22	Atomic Layer Deposition Nucleation on Isolated Self-Assembled Monolayer Functional Groups: A Combined DFT and Experimental Study. ACS Applied Energy Materials, 2019, 2, 4618-4628.	5.1	20
23	Perturbation of Hydrogen-Bonding Networks over Supported Lipid Bilayers by Poly(allylamine)	2.6	17
24	Comprehensive Computational Study of Partial Lead Substitution in Methylammonium Lead Bromide. Chemistry of Materials, 2019, 31, 3599-3612.	6.7	37
25	Ultrathin transmissive metasurfaces for multi-wavelength optics in the visible. Applied Physics Letters, 2019, 114, .	3.3	16
26	Plasma-Enhanced Atomic Layer Deposition of TiAlN: Compositional and Optoelectronic Tunability. ACS Applied Materials & Interfaces, 2019, 11, 11602-11611.	8.0	12
27	Charge Transfer Dynamics of Phase-Segregated Halide Perovskites: CH₃NH₃PbCl₃ and CH₃NH₃PbI₃ or (C₄H₉NH₃)₂(CH₃NH₃)_{<i>n</i>âˆ'1}Pb<i> Mixtures. ACS Applied Materials & Interfaces, 2019, 11, 9583-9593.	8.0	14
28	The chemical physics of sequential infiltration synthesisâ€"A thermodynamic and kinetic perspective. Journal of Chemical Physics, 2019, 151, 190901.	3.0	76
29	Acid-Compatible Halide Perovskite Photocathodes Utilizing Atomic Layer Deposited TiO₂ for Solar-Driven Hydrogen Evolution. ACS Energy Letters, 2019, 4, 293-298.	17.4	75
30	Sequential Infiltration Synthesis of Al2O3 in Polyethersulfone Membranes. Jom, 2019, 71, 212-223.	1.9	25
31	Microfluidic electrochemical cell for <i>in situ</i> structural characterization of amorphous thin-film catalysts using high-energy X-ray scattering. Journal of Synchrotron Radiation, 2019, 26, 1600-1611.	2.4	9
32	Application and Limitations of Nanocasting in Metalâ€"Organic Frameworks. Inorganic Chemistry, 2018, 57, 2782-2790.	4.0	21
33	Water Oxidation Catalysis via Size-Selected Iridium Clusters. Journal of Physical Chemistry C, 2018, 122, 9965-9972.	3.1	20
34	Sinterâ€Resistant Platinum Catalyst Supported by Metalâ€"Organic Framework. Angewandte Chemie - International Edition, 2018, 57, 909-913.	13.8	88
35	A Simple Route Towards Heat Resistant Halide Perovskite-Based Optoelectronics. , 2018, , .		0
36	Digitally Designed Ultrathin Metasurfaces for Multiwavelength Optics in the Visible. , 2018, , .		0

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37	Pareto Optimal Spectrally Selective Emitters for Thermophotovoltaics via Weak Absorber Critical Coupling. Advanced Energy Materials, 2018, 8, 1801035.	19.5	24
38	Resolution of Electronic and Structural Factors Underlying Oxygen-Evolving Performance in Amorphous Cobalt Oxide Catalysts. Journal of the American Chemical Society, 2018, 140, 10710-10720.	13.7	54
39	Sinterâ€Resistant Platinum Catalyst Supported by Metalâ€“Organic Framework. Angewandte Chemie, 2018, 130, 921-925.	2.0	3
40	Atomic Layer Deposition in a Metalâ€“Organic Framework: Synthesis, Characterization, and Performance of a Solid Acid. Chemistry of Materials, 2017, 29, 1058-1068.	6.7	45
41	Low-Temperature Atomic Layer Deposition of CuSbS₂ for Thin-Film Photovoltaics. ACS Applied Materials & Interfaces, 2017, 9, 4667-4673.	8.0	52
42	Transition metal-substituted lead halide perovskite absorbers. Journal of Materials Chemistry A, 2017, 5, 3578-3588.	10.3	62
43	Template-Free Vapor-Phase Growth of PatrÃ³nite by Atomic Layer Deposition. Chemistry of Materials, 2017, 29, 2864-2873.	6.7	37
44	Inhibiting Metal Oxide Atomic Layer Deposition: Beyond Zinc Oxide. ACS Applied Materials & Interfaces, 2017, 9, 33429-33436.	8.0	26
45	Copper Cluster Size Effect in Methanol Synthesis from CO₂. Journal of Physical Chemistry C, 2017, 121, 10406-10412.	3.1	144
46	Oxidation State Discrimination in the Atomic Layer Deposition of Vanadium Oxides. Chemistry of Materials, 2017, 29, 6238-6244.	6.7	16
47	Efficient Nonlinear Metasurface Based on Nonplanar Plasmonic Nanocavities. ACS Photonics, 2017, 4, 1188-1194.	6.6	32
48	Atomic layer deposition of Cu(<scp>i</scp>) oxide films using Cu(<scp>ii</scp>) bis(dimethylamino-2-propoxide) and water. Dalton Transactions, 2017, 46, 5790-5795.	3.3	19
49	Conformal Coating of a Phase Change Material on Ordered Plasmonic Nanorod Arrays for Broadband All-Optical Switching. ACS Nano, 2017, 11, 693-701.	14.6	55
50	Material and Interfaces for Energy-Related Applications: Hupp 60th Birthday Forum. ACS Applied Materials & Interfaces, 2017, 9, 33377-33378.	8.0	0
51	Direct Measurements of Half-Cycle Reaction Heats during Atomic Layer Deposition by Calorimetry. Chemistry of Materials, 2017, 29, 8566-8577.	6.7	33
52	Enhanced generation and anisotropic Coulomb scattering of hot electrons in an ultra-broadband plasmonic nanopatch metasurface. Nature Communications, 2017, 8, 986.	12.8	57
53	Stabilizing perovskite halide solar absorbers through direct atomic layer deposition of pinhole-free oxides. , 2016, , .		0
54	Amorphous TiO₂ Compact Layers via ALD for Planar Halide Perovskite Photovoltaics. ACS Applied Materials & Interfaces, 2016, 8, 24310-24314.	8.0	61

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55	A Precise and Scalable Post-Modification of Mesoporous Metal-Organic Framework NU-1000 Via Atomic Layer Deposition. ECS Transactions, 2016, 75, 93-99.	0.5	5
56	Regioselective Atomic Layer Deposition in Metalâ€“Organic Frameworks Directed by Dispersion Interactions. Journal of the American Chemical Society, 2016, 138, 13513-13516.	13.7	78
57	Installing Heterobimetallic Cobaltâ€“Aluminum Single Sites on a Metal Organic Framework Support. Chemistry of Materials, 2016, 28, 6753-6762.	6.7	56
58	Porphyrins as Templates for Site-Selective Atomic Layer Deposition: Vapor Metalation and in Situ Monitoring of Island Growth. ACS Applied Materials & Interfaces, 2016, 8, 19853-19859.	8.0	19
59	Liquid Water- and Heat-Resistant Hybrid Perovskite Photovoltaics via an Inverted ALD Oxide Electron Extraction Layer Design. Nano Letters, 2016, 16, 7786-7790.	9.1	71
60	Toward Metalâ€“Organic Framework-Based Solar Cells: Enhancing Directional Exciton Transport by Collapsing Three-Dimensional Film Structures. ACS Applied Materials & Interfaces, 2016, 8, 30863-30870.	8.0	88
61	Electronic and nuclear contributions to time-resolved optical and X-ray absorption spectra of hematite and insights into photoelectrochemical performance. Energy and Environmental Science, 2016, 9, 3754-3769.	30.8	97
62	Atomic Layer Deposition of MnS: Phase Control and Electrochemical Applications. ACS Applied Materials & Interfaces, 2016, 8, 2774-2780.	8.0	57
63	V_{<i>x</i>}In_(2â€“<i>x</i>)S₃ Intermediate Band Absorbers Deposited by Atomic Layer Deposition. Chemistry of Materials, 2016, 28, 2033-2040.	6.7	35
64	Scalable synthesis and post-modification of a mesoporous metal-organic framework called NU-1000. Nature Protocols, 2016, 11, 149-162.	12.0	276
65	Epitaxial Atomic Layer Deposition of Sn-Doped Indium Oxide. Crystal Growth and Design, 2016, 16, 640-645.	3.0	12
66	New Insights into Sequential Infiltration Synthesis. ECS Transactions, 2015, 69, 147-157.	0.5	35
67	A modular reactor design for <i>in situ</i> synchrotron x-ray investigation of atomic layer deposition processes. Review of Scientific Instruments, 2015, 86, 113901.	1.3	16
68	Atomic Layer Deposition of Metal Sulfide Materials. Accounts of Chemical Research, 2015, 48, 341-348.	15.6	178
69	Anomalous ultrafast dynamics of hot plasmonic electrons in nanostructures with hot spots. Nature Nanotechnology, 2015, 10, 770-774.	31.5	256
70	Photoexcited Carrier Dynamics of In2S3 Thin Films. Journal of Physical Chemistry Letters, 2015, 6, 2554-2561.	4.6	25
71	Targeted Single-Site MOF Node Modification: Trivalent Metal Loading via Atomic Layer Deposition. Chemistry of Materials, 2015, 27, 4772-4778.	6.7	116
72	Stabilizing hybrid perovskites against moisture and temperature via non-hydrolytic atomic layer deposited overlayers. Journal of Materials Chemistry A, 2015, 3, 20092-20096.	10.3	61

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73	Greenlighting Photoelectrochemical Oxidation of Water by Iron Oxide. ACS Nano, 2014, 8, 12199-12207.	14.6	57
74	Chemical and spatial control of substitutional intermediate band materials: Toward the atomic layer deposition of V<inf>0.25</inf>In<inf>1.75</inf>SP<inf>3</inf>. , 2014, , .		1
75	Atomic Layer Deposition of Metastable Î²-Fe₂O₃ via Isomorphic Epitaxy for Photoassisted Water Oxidation. ACS Applied Materials & Interfaces, 2014, 6, 21894-21900.	8.0	31
76	Photoexcited Carrier Dynamics of Cu₂S Thin Films. Journal of Physical Chemistry Letters, 2014, 5, 4055-4061.	4.6	24
77	Oxygen-Free Atomic Layer Deposition of Indium Sulfide. ACS Applied Materials & Interfaces, 2014, 6, 12137-12145.	8.0	37
78	Fabrication of Transparent-Conducting-Oxide-Coated Inverse Opals as Mesostructured Architectures for Electrocatalysis Applications: A Case Study with NiO. ACS Applied Materials & Interfaces, 2014, 6, 12290-12294.	8.0	28
79	Real-Time Observation of Atomic Layer Deposition Inhibition: Metal Oxide Growth on Self-Assembled Alkanethiols. ACS Applied Materials & Interfaces, 2014, 6, 11891-11898.	8.0	59
80	High-Surface-Area Architectures for Improved Charge Transfer Kinetics at the Dark Electrode in Dye-Sensitized Solar Cells. ACS Applied Materials & Interfaces, 2014, 6, 8646-8650.	8.0	17
81	Hematite-based Photo-oxidation of Water Using Transparent Distributed Current Collectors. ACS Applied Materials & Interfaces, 2013, 5, 360-367.	8.0	66
82	Stabilizing Cu₂S for Photovoltaics One Atomic Layer at a Time. ACS Applied Materials & Interfaces, 2013, 5, 10302-10309.	8.0	51
83	Low temperature atomic layer deposition of highly photoactive hematite using iron(iii) chloride and water. Journal of Materials Chemistry A, 2013, 1, 11607.	10.3	38
84	Interfaces and Composition Profiles in Metalâ€"Sulfide Nanolayers Synthesized by Atomic Layer Deposition. Chemistry of Materials, 2013, 25, 313-319.	6.7	37
85	Atomic Layer Deposition of a Submonolayer Catalyst for the Enhanced Photoelectrochemical Performance of Water Oxidation with Hematite. ACS Nano, 2013, 7, 2396-2405.	14.6	243
86	Second Harmonic Generation Studies of Fe(II) Interactions with Hematite (Î±-Fe₂O₃). Journal of Physical Chemistry C, 2013, 117, 4040-4047.	3.1	20
87	Structural, optical, and electronic stability of copper sulfide thin films grown by atomic layer deposition. Energy and Environmental Science, 2013, 6, 1868.	30.8	91
88	Phase Discrimination through Oxidant Selection in Low-Temperature Atomic Layer Deposition of Crystalline Iron Oxides. Langmuir, 2013, 29, 3439-3445.	3.5	37
89	Design and implementation of an integral wall-mounted quartz crystal microbalance for atomic layer deposition. Review of Scientific Instruments, 2012, 83, 094101.	1.3	28
90	Visualizing charge movement near organic heterojunctions with ultrafast time resolution via an induced Stark shift. Applied Physics Letters, 2012, 100, 113304.	3.3	4

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91	Reduced Heterogeneity of Electron Transfer into Polycrystalline TiO₂ Films: Site Specific Kinetics Revealed by Single-Particle Spectroscopy. Journal of Physical Chemistry C, 2012, 116, 3097-3104.	3.1	11
92	Toward solar fuels: Water splitting with sunlight and â€œrustâ€?. Coordination Chemistry Reviews, 2012, 256, 2521-2529.	18.8	209
93	Energy Levels, Electronic Properties, and Rectification in Ultrathin p-NiO Films Synthesized by Atomic Layer Deposition. Journal of Physical Chemistry C, 2012, 116, 16830-16840.	3.1	88
94	Atomic Layer Deposition of the Quaternary Chalcogenide Cu₂ZnSnS₄. Chemistry of Materials, 2012, 24, 3188-3196.	6.7	75
95	Atomic Layer Deposition of Fe₂O₃ Using Ferrocene and Ozone. Journal of Physical Chemistry C, 2011, 115, 4333-4339.	3.1	118
96	Ion Exchange in Ultrathin Films of Cu₂S and ZnS under Atomic Layer Deposition Conditions. Chemistry of Materials, 2011, 23, 4411-4413.	6.7	49
97	Planar dye-sensitized photovoltaics through cavity mode enhancement. Energy and Environmental Science, 2011, 4, 2980.	30.8	5
98	Photoelectrochemical Investigation of Ultrathin Film Iron Oxide Solar Cells Prepared by Atomic Layer Deposition. Langmuir, 2011, 27, 461-468.	3.5	183
99	Minimizing Lateral Domain Collapse in Etched Poly(3-hexylthiophene)-<i>block</i>-Polylactide Thin Films for Improved Optoelectronic Performance. Langmuir, 2010, 26, 8756-8761.	3.5	43
100	Atomic layer deposition of Cu2S for future application in photovoltaics. Applied Physics Letters, 2009, 94, .	3.3	77
101	Electron Transport in Dye-Sensitized Solar Cells Based on ZnO Nanotubes: Evidence for Highly Efficient Charge Collection and Exceptionally Rapid Dynamics. Journal of Physical Chemistry A, 2009, 113, 4015-4021.	2.5	255
102	New Architectures for Dyeâ€Sensitized Solar Cells. Chemistry - A European Journal, 2008, 14, 4458-4467.	3.3	253
103	Aerogel Templated ZnO Dyeâ€Sensitized Solar Cells. Advanced Materials, 2008, 20, 1560-1564.	21.0	138
104	Atomic Layer Deposition of Indium Tin Oxide Thin Films Using Nonhalogenated Precursors. Journal of Physical Chemistry C, 2008, 112, 1938-1945.	3.1	101
105	Atomic Layer Deposition of TiO₂ on Aerogel Templates: New Photoanodes for Dye-Sensitized Solar Cells. Journal of Physical Chemistry C, 2008, 112, 10303-10307.	3.1	122
106	Advancing beyond current generation dye-sensitized solar cells. Energy and Environmental Science, 2008, 1, 66.	30.8	663
107	Radial Electron Collection in Dye-Sensitized Solar Cells. Nano Letters, 2008, 8, 2862-2866.	9.1	130
108	Atomic layer deposition of tin oxide films using tetrakis(dimethylamino) tin. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2008, 26, 244-252.	2.1	153

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109	ZnO Nanotube Based Dye-Sensitized Solar Cells. Nano Letters, 2007, 7, 2183-2187.	9.1	730
110	Dynamics of charge transport and recombination in ZnO nanorod array dye-sensitized solar cells. Physical Chemistry Chemical Physics, 2006, 8, 4655.	2.8	193
111	Atomic Layer Deposition of In2O3 Using Cyclopentadienyl Indium:â€‰ A New Synthetic Route to Transparent Conducting Oxide Films. Chemistry of Materials, 2006, 18, 3571-3578.	6.7	119
112	Non-vacuum and PLD growth of next generation TCO materials. Thin Solid Films, 2003, 445, 193-198.	1.8	55
113	Selective Hydroxylation of In₂O₃ as A Route to Site-Selective Atomic Layer Deposition. Journal of Physical Chemistry C, 0, , .	3.1	6