# Alex B F Martinson

List of Publications by Year
in descending order



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|---|---|---|---|
| 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 | ZnO Nanotube Based Dye-Sensitized Solar Cells. Nano Letters, 2007, 7, 2183-2187. | 9.1 | 730 |
| 2 | Advancing beyond current generation dye-sensitized solar cells. Energy and Environmental Science, 2008, 1, 66. | 30.8 | 663 |
| 3 | Scalable synthesis and post-modification of a mesoporous metal-organic framework called NU-1000. Nature Protocols, 2016, 11, 149-162. | 12.0 | 276 |
| 4 | Anomalous ultrafast dynamics of hot plasmonic electrons in nanostructures with hot spots. Nature Nanotechnology, 2015, 10, 770-774. | 31.5 | 256 |
| 5 | 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 |
| 6 | New Architectures for Dyeâ€Sensitized Solar Cells. Chemistry - A European Journal, 2008, 14, 4458-4467. | 3.3 | 253 |
| 7 | 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 |
| 8 | Toward solar fuels: Water splitting with sunlight and â€œrustâ€?. Coordination Chemistry Reviews, 2012, 256, 2521-2529. | 18.8 | 209 |
| 9 | Dynamics of charge transport and recombination in ZnO nanorod array dye-sensitized solar cells. Physical Chemistry Chemical Physics, 2006, 8, 4655. | 2.8 | 193 |
| 10 | Photoelectrochemical Investigation of Ultrathin Film Iron Oxide Solar Cells Prepared by Atomic Layer Deposition. Langmuir, 2011, 27, 461-468. | 3.5 | 183 |
| 11 | Atomic Layer Deposition of Metal Sulfide Materials. Accounts of Chemical Research, 2015, 48, 341-348. | 15.6 | 178 |
| 12 | 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 |
| 13 | Copper Cluster Size Effect in Methanol Synthesis from CO<sub>2</sub>. Journal of Physical Chemistry C, 2017, 121, 10406-10412. | 3.1 | 144 |
| 14 | Aerogel Templated ZnO Dyeâ€Sensitized Solar Cells. Advanced Materials, 2008, 20, 1560-1564. | 21.0 | 138 |
| 15 | Radial Electron Collection in Dye-Sensitized Solar Cells. Nano Letters, 2008, 8, 2862-2866. | 9.1 | 130 |
| 16 | Atomic Layer Deposition of TiO<sub>2</sub> on Aerogel Templates: New Photoanodes for Dye-Sensitized Solar Cells. Journal of Physical Chemistry C, 2008, 112, 10303-10307. | 3.1 | 122 |
| 17 | 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 |
| 18 | Atomic Layer Deposition of Fe<sub>2</sub>O<sub>3</sub> Using Ferrocene and Ozone. Journal of Physical Chemistry C, 2011, 115, 4333-4339. | 3.1 | 118 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Targeted Single-Site MOF Node Modification: Trivalent Metal Loading via Atomic Layer Deposition. Chemistry of Materials, 2015, 27, 4772-4778. | 6.7 | 116 |
| 20 | Atomic Layer Deposition of Indium Tin Oxide Thin Films Using Nonhalogenated Precursors. Journal of Physical Chemistry C, 2008, 112, 1938-1945. | 3.1 | 101 |
| 21 | 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 |
| 22 | 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 |
| 23 | 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 |
| 24 | 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 |
| 25 | Sinterâ€Resistant Platinum Catalyst Supported by Metalâ€“Organic Framework. Angewandte Chemie - International Edition, 2018, 57, 909-913. | 13.8 | 88 |
| 26 | 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 |
| 27 | Atomic layer deposition of Cu2S for future application in photovoltaics. Applied Physics Letters, 2009, 94, . | 3.3 | 77 |
| 28 | The chemical physics of sequential infiltration synthesisâ€”A thermodynamic and kinetic perspective. Journal of Chemical Physics, 2019, 151, 190901. | 3.0 | 76 |
| 29 | Atomic Layer Deposition of the Quaternary Chalcogenide Cu<sub>2</sub>ZnSnS<sub>4</sub>. Chemistry of Materials, 2012, 24, 3188-3196. | 6.7 | 75 |
| 30 | Acid-Compatible Halide Perovskite Photocathodes Utilizing Atomic Layer Deposited TiO<sub>2</sub> for Solar-Driven Hydrogen Evolution. ACS Energy Letters, 2019, 4, 293-298. | 17.4 | 75 |
| 31 | 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 |
| 32 | Hematite-based Photo-oxidation of Water Using Transparent Distributed Current Collectors. ACS Applied Materials & Interfaces, 2013, 5, 360-367. | 8.0 | 66 |
| 33 | Transition metal-substituted lead halide perovskite absorbers. Journal of Materials Chemistry A, 2017, 5, 3578-3588. | 10.3 | 62 |
| 34 | 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 |
| 35 | Amorphous TiO<sub>2</sub> Compact Layers via ALD for Planar Halide Perovskite Photovoltaics. ACS Applied Materials & Interfaces, 2016, 8, 24310-24314. | 8.0 | 61 |
| 36 | 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 |

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|---|---|---|---|
| 37 | Greenlighting Photoelectrochemical Oxidation of Water by Iron Oxide. ACS Nano, 2014, 8, 12199-12207. | 14.6 | 57 |
| 38 | Atomic Layer Deposition of MnS: Phase Control and Electrochemical Applications. ACS Applied Materials & Interfaces, 2016, 8, 2774-2780. | 8.0 | 57 |
| 39 | Enhanced generation and anisotropic Coulomb scattering of hot electrons in an ultra-broadband plasmonic nanopatch metasurface. Nature Communications, 2017, 8, 986. | 12.8 | 57 |
| 40 | Installing Heterobimetallic Cobaltâ€“Aluminum Single Sites on a Metal Organic Framework Support. Chemistry of Materials, 2016, 28, 6753-6762. | 6.7 | 56 |
| 41 | Non-vacuum and PLD growth of next generation TCO materials. Thin Solid Films, 2003, 445, 193-198. | 1.8 | 55 |
| 42 | 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 |
| 43 | 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 |
| 44 | Low-Temperature Atomic Layer Deposition of CuSbS<sub>2</sub> for Thin-Film Photovoltaics. ACS Applied Materials & Interfaces, 2017, 9, 4667-4673. | 8.0 | 52 |
| 45 | Stabilizing Cu<sub>2</sub>S for Photovoltaics One Atomic Layer at a Time. ACS Applied Materials & Interfaces, 2013, 5, 10302-10309. | 8.0 | 51 |
| 46 | Ion Exchange in Ultrathin Films of Cu<sub>2</sub>S and ZnS under Atomic Layer Deposition Conditions. Chemistry of Materials, 2011, 23, 4411-4413. | 6.7 | 49 |
| 47 | Sequential Infiltration Synthesis of Electronic Materials: Group 13 Oxides via Metal Alkyl Precursors. Chemistry of Materials, 2019, 31, 5274-5285. | 6.7 | 48 |
| 48 | 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 |
| 49 | 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 |
| 50 | Minimizing Lateral Domain Collapse in Etched Poly(3-hexylthiophene)-block-Polylactide Thin Films for Improved Optoelectronic Performance. Langmuir, 2010, 26, 8756-8761. | 3.5 | 43 |
| 51 | 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 |
| 52 | Inverse design of metasurfaces with non-local interactions. Npj Computational Materials, 2020, 6, . | 8.7 | 39 |
| 53 | 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 |
| 54 | Interfaces and Composition Profiles in Metalâ€“Sulfide Nanolayers Synthesized by Atomic Layer Deposition. Chemistry of Materials, 2013, 25, 313-319. | 6.7 | 37 |

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|---|---|---|---|
| 55 | Phase Discrimination through Oxidant Selection in Low-Temperature Atomic Layer Deposition of Crystalline Iron Oxides. Langmuir, 2013, 29, 3439-3445. | 3.5 | 37 |
| 56 | Oxygen-Free Atomic Layer Deposition of Indium Sulfide. ACS Applied Materials & Interfaces, 2014, 6, 12137-12145. | 8.0 | 37 |
| 57 | Template-Free Vapor-Phase Growth of PatrÃ³nite by Atomic Layer Deposition. Chemistry of Materials, 2017, 29, 2864-2873. | 6.7 | 37 |
| 58 | Comprehensive Computational Study of Partial Lead Substitution in Methylammonium Lead Bromide. Chemistry of Materials, 2019, 31, 3599-3612. | 6.7 | 37 |
| 59 | New Insights into Sequential Infiltration Synthesis. ECS Transactions, 2015, 69, 147-157. | 0.5 | 35 |
| 60 | V<sub>x</sub>In<sub>(2â€“x)</sub>S<sub>3</sub> Intermediate Band Absorbers Deposited by Atomic Layer Deposition. Chemistry of Materials, 2016, 28, 2033-2040. | 6.7 | 35 |
| 61 | Direct Measurements of Half-Cycle Reaction Heats during Atomic Layer Deposition by Calorimetry. Chemistry of Materials, 2017, 29, 8566-8577. | 6.7 | 33 |
| 62 | Efficient Nonlinear Metasurface Based on Nonplanar Plasmonic Nanocavities. ACS Photonics, 2017, 4, 1188-1194. | 6.6 | 32 |
| 63 | The Synthesis Science of Targeted Vapor-Phase Metalâ€“Organic Framework Postmodification. Journal of the American Chemical Society, 2020, 142, 242-250. | 13.7 | 32 |
| 64 | Atomic Layer Deposition of Metastable Î²-Fe<sub>2</sub>O<sub>3</sub> via Isomorphic Epitaxy for Photoassisted Water Oxidation. ACS Applied Materials & Interfaces, 2014, 6, 21894-21900. | 8.0 | 31 |
| 65 | 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 |
| 66 | 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 |
| 67 | Inhibiting Metal Oxide Atomic Layer Deposition: Beyond Zinc Oxide. ACS Applied Materials & Interfaces, 2017, 9, 33429-33436. | 8.0 | 26 |
| 68 | Photoexcited Carrier Dynamics of In2S3 Thin Films. Journal of Physical Chemistry Letters, 2015, 6, 2554-2561. | 4.6 | 25 |
| 69 | Sequential Infiltration Synthesis of Al2O3 in Polyethersulfone Membranes. Jom, 2019, 71, 212-223. | 1.9 | 25 |
| 70 | Resolving the Atomic Structure of Sequential Infiltration Synthesis Derived Inorganic Clusters. ACS Nano, 2020, 14, 14846-14860. | 14.6 | 25 |
| 71 | Photoexcited Carrier Dynamics of Cu<sub>2</sub>S Thin Films. Journal of Physical Chemistry Letters, 2014, 5, 4055-4061. | 4.6 | 24 |
| 72 | Pareto Optimal Spectrally Selective Emitters for Thermophotovoltaics via Weak Absorber Critical Coupling. Advanced Energy Materials, 2018, 8, 1801035. | 19.5 | 24 |

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|---|---|---|---|
| 73 | Application and Limitations of Nanocasting in Metalâ€“Organic Frameworks. Inorganic Chemistry, 2018, 57, 2782-2790. | 4.0 | 21 |
| 74 | Second Harmonic Generation Studies of Fe(II) Interactions with Hematite (Î±-Fe<sub>2</sub>O<sub>3</sub>). Journal of Physical Chemistry C, 2013, 117, 4040-4047. | 3.1 | 20 |
| 75 | Water Oxidation Catalysis via Size-Selected Iridium Clusters. Journal of Physical Chemistry C, 2018, 122, 9965-9972. | 3.1 | 20 |
| 76 | 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 |
| 77 | 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 |
| 78 | 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 |
| 79 | Defect Energetics in Pseudo-Cubic Mixed Halide Lead Perovskites from First-Principles. Journal of Physical Chemistry C, 2020, 124, 16729-16738. | 3.1 | 19 |
| 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 | Perturbation of Hydrogen-Bonding Networks over Supported Lipid Bilayers by Poly(allylamine) Tj ETQq1 1 0.784314 rgBT /Overlock 10 | 2.6 | 17 |
| 82 | A modular reactor design for in situ synchrotron x-ray investigation of atomic layer deposition processes. Review of Scientific Instruments, 2015, 86, 113901. | 1.3 | 16 |
| 83 | Oxidation State Discrimination in the Atomic Layer Deposition of Vanadium Oxides. Chemistry of Materials, 2017, 29, 6238-6244. | 6.7 | 16 |
| 84 | High-Temperature Selective Emitter Design and Materials: Titanium Aluminum Nitride Alloys for Thermophotovoltaics. ACS Applied Materials & Interfaces, 2019, 11, 41347-41355. | 8.0 | 16 |
| 85 | Ultrathin transmissive metasurfaces for multi-wavelength optics in the visible. Applied Physics Letters, 2019, 114, . | 3.3 | 16 |
| 86 | 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 |
| 87 | Direct Observation of Bandgap Oscillations Induced by Optical Phonons in Hybrid Lead Iodide Perovskites. Advanced Functional Materials, 2020, 30, 1907982. | 14.9 | 15 |
| 88 | Charge Transfer Dynamics of Phase-Segregated Halide Perovskites: CH<sub>3</sub>NH<sub>3</sub>PbCl<sub>3</sub> and CH<sub>3</sub>NH<sub>3</sub>PbI<sub>3</sub> or (C<sub>4</sub>H<sub>9</sub>NH<sub>3</sub>)<sub>2</sub>(CH<sub>3</sub>NH<sub>3</sub>)<sub>nâ^'1</sub>Pb<s Mixtures. ACS Applied Materials & Interfaces, 2019, 11, 9583-9593. | 8.0 | 14 |
| 89 | 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 |
| 90 | 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 |

| # | Article | IF | Citations |
|---|---|---|---|
| 91 | Epitaxial Atomic Layer Deposition of Sn-Doped Indium Oxide. Crystal Growth and Design, 2016, 16, 640-645. | 3.0 | 12 |
| 92 | Plasma-Enhanced Atomic Layer Deposition of TiAlN: Compositional and Optoelectronic Tunability. ACS Applied Materials & Interfaces, 2019, 11, 11602-11611. | 8.0 | 12 |
| 93 | Water-Assisted Proton Transport in Confined Nanochannels. Journal of Physical Chemistry C, 2020, 124, 16186-16201. | 3.1 | 12 |
| 94 | Reduced Heterogeneity of Electron Transfer into Polycrystalline TiO<sub>2</sub> Films: Site Specific Kinetics Revealed by Single-Particle Spectroscopy. Journal of Physical Chemistry C, 2012, 116, 3097-3104. | 3.1 | 11 |
| 95 | Selective Hydration of Rutile TiO<sub>2</sub> as a Strategy for Site-Selective Atomic Layer Deposition. ACS Applied Materials & Interfaces, 2022, 14, 21585-21595. | 8.0 | 10 |
| 96 | Electronic Conductivity of Nanoporous Indium Oxide Derived from Sequential Infiltration Synthesis. Journal of Physical Chemistry C, 2021, 125, 21191-21198. | 3.1 | 9 |
| 97 | Microfluidic electrochemical cell for in situ structural characterization of amorphous thin-film catalysts using high-energy X-ray scattering. Journal of Synchrotron Radiation, 2019, 26, 1600-1611. | 2.4 | 9 |
| 98 | 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 |
| 99 | Pyroelectric Heat Detection for Calibrated Measurement of Atomic Layer Deposition Reaction Heat. Chemistry of Materials, 2021, 33, 6176-6185. | 6.7 | 6 |
| 100 | Selective Hydroxylation of In<sub>2</sub>O<sub>3</sub> as A Route to Site-Selective Atomic Layer Deposition. Journal of Physical Chemistry C, 0, , . | 3.1 | 6 |
| 101 | Planar dye-sensitized photovoltaics through cavity mode enhancement. Energy and Environmental Science, 2011, 4, 2980. | 30.8 | 5 |
| 102 | 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 |
| 103 | Visualizing charge movement near organic heterojunctions with ultrafast time resolution via an induced Stark shift. Applied Physics Letters, 2012, 100, 113304. | 3.3 | 4 |
| 104 | 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 |
| 105 | Sinterâ€Resistant Platinum Catalyst Supported by Metalâ€“Organic Framework. Angewandte Chemie, 2018, 130, 921-925. | 2.0 | 3 |
| 106 | Thermal Atomic Layer Deposition of Gold: Mechanistic Insights, Nucleation, and Epitaxy. ACS Applied Materials & Interfaces, 2021, 13, 9091-9100. | 8.0 | 2 |
| 107 | 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 |
| 108 | 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 |

| # | Article | IF | Citations |
|---|---|---|---|
| 109 | Stabilizing perovskite halide solar absorbers through direct atomic layer deposition of pinhole-free oxides. , 2016, , . | | 0 |
| 110 | Material and Interfaces for Energy-Related Applications: Hupp 60th Birthday Forum. ACS Applied Materials & Interfaces, 2017, 9, 33377-33378. | 8.0 | 0 |
| 111 | A Simple Route Towards Heat Resistant Halide Perovskite-Based Optoelectronics. , 2018, , . | | 0 |
| 112 | Digitally Designed Ultrathin Metasurfaces for Multiwavelength Optics in the Visible. , 2018, , . | | 0 |
| 113 | Molecularly Functionalized Electrodes for Efficient Electrochemical Water Remediation. ChemSusChem, 2021, 14, 3267-3276. | 6.8 | 0 |