

# W M M Erwin Kessels

## List of Publications by Citations

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469  
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19,439  
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#	Paper	IF	Citations
434	Plasma-Assisted Atomic Layer Deposition: Basics, Opportunities, and Challenges. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2011</b> , 29, 050801	2.9	565
433	Ultralow surface recombination of c-Si substrates passivated by plasma-assisted atomic layer deposited Al <sub>2</sub> O <sub>3</sub> . <i>Applied Physics Letters</i> , <b>2006</b> , 89, 042112	3.4	562
432	Status and prospects of Al <sub>2</sub> O <sub>3</sub> -based surface passivation schemes for silicon solar cells. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2012</b> , 30, 040802	2.9	535
431	On the c-Si surface passivation mechanism by the negative-charge-dielectric Al <sub>2</sub> O <sub>3</sub> . <i>Journal of Applied Physics</i> , <b>2008</b> , 104, 113703	2.5	414
430	Silicon surface passivation by atomic layer deposited Al <sub>2</sub> O <sub>3</sub> . <i>Journal of Applied Physics</i> , <b>2008</b> , 104, 044903.5	3.5	361
429	Surface passivation of high-efficiency silicon solar cells by atomic-layer-deposited Al <sub>2</sub> O <sub>3</sub> . <i>Progress in Photovoltaics: Research and Applications</i> , <b>2008</b> , 16, 461-466	6.8	361
428	Excellent passivation of highly doped p-type Si surfaces by the negative-charge-dielectric Al <sub>2</sub> O <sub>3</sub> . <i>Applied Physics Letters</i> , <b>2007</b> , 91, 112107	3.4	317
427	Determining the material structure of microcrystalline silicon from Raman spectra. <i>Journal of Applied Physics</i> , <b>2003</b> , 94, 3582-3588	2.5	274
426	High efficiency n-type Si solar cells on Al <sub>2</sub> O <sub>3</sub> -passivated boron emitters. <i>Applied Physics Letters</i> , <b>2008</b> , 92, 253504	3.4	273
425	The use of atomic layer deposition in advanced nanopatterning. <i>Nanoscale</i> , <b>2014</b> , 6, 10941-60	7.7	254
424	In situspectroscopic ellipsometry as a versatile tool for studying atomic layer deposition. <i>Journal of Physics D: Applied Physics</i> , <b>2009</b> , 42, 073001	3	232
423	Plasma-assisted atomic layer deposition of Al <sub>2</sub> O <sub>3</sub> moisture permeation barriers on polymers. <i>Applied Physics Letters</i> , <b>2006</b> , 89, 081915	3.4	231
422	Flexible Perovskite Photovoltaic Modules and Solar Cells Based on Atomic Layer Deposited Compact Layers and UV-Irradiated TiO <sub>2</sub> Scaffolds on Plastic Substrates. <i>Advanced Energy Materials</i> , <b>2015</b> , 5, 1401808	21.8	216
421	Vacancies and voids in hydrogenated amorphous silicon. <i>Applied Physics Letters</i> , <b>2003</b> , 82, 1547-1549	3.4	199
420	Plasma and Thermal ALD of Al <sub>2</sub> O <sub>3</sub> in a Commercial 200 mm ALD Reactor. <i>Journal of the Electrochemical Society</i> , <b>2007</b> , 154, G165	3.9	196
419	Passivating Contacts for Crystalline Silicon Solar Cells: From Concepts and Materials to Prospects. <i>IEEE Journal of Photovoltaics</i> , <b>2018</b> , 8, 373-388	3.7	192
418	Influence of the Deposition Temperature on the c-Si Surface Passivation by Al <sub>2</sub> O <sub>3</sub> Films Synthesized by ALD and PECVD. <i>Electrochemical and Solid-State Letters</i> , <b>2010</b> , 13, H76		171

4 <sup>17</sup>	Silicon surface passivation by ultrathin Al <sub>2</sub> O <sub>3</sub> films synthesized by thermal and plasma atomic layer deposition. <i>Physica Status Solidi - Rapid Research Letters</i> , <b>2010</b> , 4, 10-12	2.5	163
4 <sup>16</sup>	Atomic layer deposition for photovoltaics: applications and prospects for solar cell manufacturing. <i>Semiconductor Science and Technology</i> , <b>2012</b> , 27, 074002	1.8	162
4 <sup>15</sup>	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
4 <sup>14</sup>	Hydrogen induced passivation of Si interfaces by Al <sub>2</sub> O <sub>3</sub> films and SiO <sub>2</sub> /Al <sub>2</sub> O <sub>3</sub> stacks. <i>Applied Physics Letters</i> , <b>2010</b> , 97, 152106	3.4	143
4 <sup>13</sup>	Low Temperature Plasma-Enhanced Atomic Layer Deposition of Metal Oxide Thin Films. <i>Journal of the Electrochemical Society</i> , <b>2010</b> , 157, P66	3.9	135
4 <sup>12</sup>	Conformality of Plasma-Assisted ALD: Physical Processes and Modeling. <i>Journal of the Electrochemical Society</i> , <b>2010</b> , 157, G241	3.9	133
4 <sup>11</sup>	Supported Core/Shell Bimetallic Nanoparticles Synthesis by Atomic Layer Deposition. <i>Chemistry of Materials</i> , <b>2012</b> , 24, 2973-2977	9.6	132
4 <sup>10</sup>	Influence of the Oxidant on the Chemical and Field-Effect Passivation of Si by ALD Al <sub>2</sub> O <sub>3</sub> . <i>Electrochemical and Solid-State Letters</i> , <b>2011</b> , 14, H1		131
4 <sup>09</sup>	Controlling the fixed charge and passivation properties of Si(100)/Al <sub>2</sub> O <sub>3</sub> interfaces using ultrathin SiO <sub>2</sub> interlayers synthesized by atomic layer deposition. <i>Journal of Applied Physics</i> , <b>2011</b> , 110, 093715	2.5	124
4 <sup>08</sup>	Stability of Al <sub>2</sub> O <sub>3</sub> and Al <sub>2</sub> O <sub>3</sub> /a-SiN <sub>x</sub> :H stacks for surface passivation of crystalline silicon. <i>Journal of Applied Physics</i> , <b>2009</b> , 106, 114907	2.5	123
4 <sup>07</sup>	Negative charge and charging dynamics in Al <sub>2</sub> O <sub>3</sub> films on Si characterized by second-harmonic generation. <i>Journal of Applied Physics</i> , <b>2008</b> , 104, 073701	2.5	119
4 <sup>06</sup>	Atomic layer deposition for perovskite solar cells: research status, opportunities and challenges. <i>Sustainable Energy and Fuels</i> , <b>2017</b> , 1, 30-55	5.8	114
4 <sup>05</sup>	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
4 <sup>04</sup>	Influence of annealing and Al <sub>2</sub> O <sub>3</sub> properties on the hydrogen-induced passivation of the Si/SiO <sub>2</sub> interface. <i>Journal of Applied Physics</i> , <b>2012</b> , 111, 093713	2.5	112
4 <sup>03</sup>	Surface chemistry of plasma-assisted atomic layer deposition of Al <sub>2</sub> O <sub>3</sub> studied by infrared spectroscopy. <i>Applied Physics Letters</i> , <b>2008</b> , 92, 231904	3.4	108
4 <sup>02</sup>	Plasma chemistry aspects of a-Si:H deposition using an expanding thermal plasma. <i>Journal of Applied Physics</i> , <b>1998</b> , 84, 2426-2435	2.5	108
4 <sup>01</sup>	Plasma-Assisted ALD for the Conformal Deposition of SiO <sub>2</sub> : Process, Material and Electronic Properties. <i>Journal of the Electrochemical Society</i> , <b>2012</b> , 159, H277-H285	3.9	105
4 <sup>00</sup>	Role of field-effect on c-Si surface passivation by ultrathin (200 nm) atomic layer deposited Al <sub>2</sub> O <sub>3</sub> . <i>Applied Physics Letters</i> , <b>2010</b> , 96, 112101	3.4	103

399	Atomic layer deposition for nanostructured Li-ion batteries. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2012</b> , 30, 010801	2.9	102
398	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
397	Remote Plasma ALD of Platinum and Platinum Oxide Films. <i>Electrochemical and Solid-State Letters</i> , <b>2009</b> , 12, G34		100
396	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
395	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
394	In situ reaction mechanism studies of plasma-assisted atomic layer deposition of Al <sub>2</sub> O <sub>3</sub> . <i>Applied Physics Letters</i> , <b>2006</b> , 89, 131505	3.4	95
393	Reaction mechanisms during plasma-assisted atomic layer deposition of metal oxides: A case study for Al <sub>2</sub> O <sub>3</sub> . <i>Journal of Applied Physics</i> , <b>2008</b> , 103, 103302	2.5	92
392	Deposition of TiN and HfO <sub>2</sub> in a commercial 200mm remote plasma atomic layer deposition reactor. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2007</b> , 25, 1357	2.9	90
391	Low-Temperature Deposition of TiN by Plasma-Assisted Atomic Layer Deposition. <i>Journal of the Electrochemical Society</i> , <b>2006</b> , 153, G956	3.9	89
390	Influence of the high-temperature firing step on high-rate plasma deposited silicon nitride films used as bulk passivating antireflection coatings on silicon solar cells. <i>Journal of Vacuum Science &amp; Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , <b>2003</b> , 21, 2123		89
389	Ultra-Thin Aluminium Oxide Films Deposited by Plasma-Enhanced Atomic Layer Deposition for Corrosion Protection. <i>Journal of the Electrochemical Society</i> , <b>2011</b> , 158, C132	3.9	87
388	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, 084335	2.5	87
387	Hydrogenated amorphous silicon deposited at very high growth rates by an expanding Ar/2SiH <sub>4</sub> plasma. <i>Journal of Applied Physics</i> , <b>2001</b> , 89, 2404-2413	2.5	87
386	Status and prospects of plasma-assisted atomic layer deposition. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2019</b> , 37, 030902	2.9	84
385	On the growth mechanism of a-Si:H. <i>Thin Solid Films</i> , <b>2001</b> , 383, 154-160	2.2	84
384	In situ spectroscopic ellipsometry study on the growth of ultrathin TiN films by plasma-assisted atomic layer deposition. <i>Journal of Applied Physics</i> , <b>2006</b> , 100, 023534	2.5	81
383	Atomic Layer Etching: What Can We Learn from Atomic Layer Deposition?. <i>ECS Journal of Solid State Science and Technology</i> , <b>2015</b> , 4, N5023-N5032	2	80
382	Atomic layer deposition of molybdenum oxide from (NtBu) <sub>2</sub> (NMe <sub>2</sub> ) <sub>2</sub> Mo and O <sub>2</sub> plasma. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2016</b> , 34, 01A103	2.9	78

381	Substrate-biasing during plasma-assisted atomic layer deposition to tailor metal-oxide thin film growth. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2013</b> , 31, 01A106	2.9	77
380	Deposition of TiN and TaN by Remote Plasma ALD for Cu and Li Diffusion Barrier Applications. <i>Journal of the Electrochemical Society</i> , <b>2008</b> , 155, G287	3.9	76
379	Atomic Layer Deposition of LiCoO <sub>2</sub> Thin-Film Electrodes for All-Solid-State Li-Ion Micro-Batteries. <i>Journal of the Electrochemical Society</i> , <b>2013</b> , 160, A3066-A3071	3.9	75
378	History of atomic layer deposition and its relationship with the American Vacuum Society. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2013</b> , 31, 050818	2.9	73
377	Energy-enhanced atomic layer deposition for more process and precursor versatility. <i>Coordination Chemistry Reviews</i> , <b>2013</b> , 257, 3254-3270	23.2	72
376	Low-temperature atomic layer deposition of MoO <sub>x</sub> for silicon heterojunction solar cells. <i>Physica Status Solidi - Rapid Research Letters</i> , <b>2015</b> , 9, 393-396	2.5	72
375	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
374	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
373	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
372	Formation of cationic silicon clusters in a remote silane plasma and their contribution to hydrogenated amorphous silicon film growth. <i>Journal of Applied Physics</i> , <b>1999</b> , 86, 4029-4039	2.5	69
371	Enhanced Doping Efficiency of Al-Doped ZnO by Atomic Layer Deposition Using Dimethylaluminum Isopropoxide as an Alternative Aluminum Precursor. <i>Chemistry of Materials</i> , <b>2013</b> , 25, 4619-4622	9.6	67
370	Surface passivation of phosphorus-diffused n <sup>+</sup> -type emitters by plasma-assisted atomic-layer deposited Al <sub>2</sub> O <sub>3</sub> . <i>Physica Status Solidi - Rapid Research Letters</i> , <b>2012</b> , 6, 4-6	2.5	67
369	Atomic Layer Deposition of Silicon Nitride from Bis(tert-butylamino)silane and N <sub>2</sub> Plasma. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2015</b> , 7, 19857-62	9.5	66
368	Ion and Photon Surface Interaction during Remote Plasma ALD of Metal Oxides. <i>Journal of the Electrochemical Society</i> , <b>2011</b> , 158, G88	3.9	66
367	Remote Plasma Atomic Layer Deposition of Co <sub>3</sub> O <sub>4</sub> Thin Films. <i>Journal of the Electrochemical Society</i> , <b>2011</b> , 158, G92	3.9	65
366	Temperature dependence of the surface roughness evolution during hydrogenated amorphous silicon film growth. <i>Applied Physics Letters</i> , <b>2003</b> , 82, 865-867	3.4	65
365	Electrical transport and Al doping efficiency in nanoscale ZnO films prepared by atomic layer deposition. <i>Journal of Applied Physics</i> , <b>2013</b> , 114, 024308	2.5	64
364	Room-Temperature Atomic Layer Deposition of Platinum. <i>Chemistry of Materials</i> , <b>2013</b> , 25, 1769-1774	9.6	64

- 363 Atomic Layer Deposition for Graphene Device Integration. *Advanced Materials Interfaces*, **2017**, 4, 170023-26 63
- 362 Low-temperature plasma-enhanced atomic layer deposition of 2-D MoS<sub>2</sub>: large area, thickness control and tuneable morphology. *Nanoscale*, **2018**, 10, 8615-8627 7.7 63
- 361 Excellent Si surface passivation by low temperature SiO<sub>2</sub> using an ultrathin Al<sub>2</sub>O<sub>3</sub> capping film. *Physica Status Solidi - Rapid Research Letters*, **2011**, 5, 22-24 2.5 63
- 360 Hydrogen passivation of poly-Si/SiO<sub>x</sub> contacts for Si solar cells using Al<sub>2</sub>O<sub>3</sub> studied with deuterium. *Applied Physics Letters*, **2018**, 112, 203901 3.4 63
- 359 Al<sub>2</sub>O<sub>3</sub>/TiO<sub>2</sub> nano-pattern antireflection coating with ultralow surface recombination. *Applied Physics Letters*, **2013**, 102, 233902 3.4 61
- 358 Low-Temperature Plasma-Assisted Atomic Layer Deposition of Silicon Nitride Moisture Permeation Barrier Layers. *ACS Applied Materials & Interfaces*, **2015**, 7, 22525-32 9.5 60
- 357 Advanced process technologies: Plasma, direct-write, atmospheric pressure, and roll-to-roll ALD. *MRS Bulletin*, **2011**, 36, 907-913 3.2 60
- 356 Highly efficient microcrystalline silicon solar cells deposited from a pure SiH<sub>4</sub> flow. *Applied Physics Letters*, **2005**, 87, 263503 3.4 60
- 355 Film growth precursors in a remote SiH<sub>4</sub> plasma used for high-rate deposition of hydrogenated amorphous silicon. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2000**, 18, 2153 2.9 60
- 354 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 9.5 59
- 353 Low-Temperature Plasma-Assisted Atomic-Layer-Deposited SnO as an Electron Transport Layer in Planar Perovskite Solar Cells. *ACS Applied Materials & Interfaces*, **2018**, 10, 30367-30378 9.5 59
- 352 3D negative electrode stacks for integrated all-solid-state lithium-ion microbatteries. *Journal of Materials Chemistry*, **2010**, 20, 3703 59
- 351 Plasma-enhanced and thermal atomic layer deposition of Al<sub>2</sub>O<sub>3</sub> using dimethylaluminum isopropoxide, [Al(CH<sub>3</sub>)<sub>2</sub>(EDiPr)]<sub>2</sub>, as an alternative aluminum precursor. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2012**, 30, 021505 2.9 59
- 350 Effect of substrate conditions on the plasma beam deposition of amorphous hydrogenated carbon. *Journal of Applied Physics*, **1997**, 82, 2643-2654 2.5 59
- 349 Nanopatterning by direct-write atomic layer deposition. *Nanoscale*, **2012**, 4, 4477-80 7.7 58
- 348 Room-Temperature ALD of Metal Oxide Thin Films by Energy-Enhanced ALD. *Chemical Vapor Deposition*, **2013**, 19, 125-133 58
- 347 Surface Loss in Ozone-Based Atomic Layer Deposition Processes. *Chemistry of Materials*, **2011**, 23, 2381-2387 58
- 346 Electron Scattering and Doping Mechanisms in Solid-Phase-Crystallized In<sub>2</sub>O<sub>3</sub>:H Prepared by Atomic Layer Deposition. *ACS Applied Materials & Interfaces*, **2015**, 7, 16723-9 9.5 56



345	Sub-nanometer dimensions control of core/shell nanoparticles prepared by atomic layer deposition. <i>Nanotechnology</i> , <b>2015</b> , 26, 094002	3.4	55
344	Identifying parasitic current pathways in CIGS solar cells by modelling dark J-V response. <i>Progress in Photovoltaics: Research and Applications</i> , <b>2015</b> , 23, 1516-1525	6.8	55
343	Cavity ring down study of the densities and kinetics of Si and SiH in a remote Ar-H <sub>2</sub> -SiH <sub>4</sub> plasma. <i>Journal of Applied Physics</i> , <b>2001</b> , 89, 2065-2073	2.5	55
342	Effective passivation of Si surfaces by plasma deposited SiO <sub>x</sub> /a-SiN <sub>x</sub> :H stacks. <i>Applied Physics Letters</i> , <b>2011</b> , 98, 222102	3.4	54
341	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
340	Dielectric Properties of Thermal and Plasma-Assisted Atomic Layer Deposited Al <sub>2</sub> O <sub>3</sub> Thin Films. <i>Journal of the Electrochemical Society</i> , <b>2011</b> , 158, G21	3.9	53
339	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
338	Effective Surface Passivation of InP Nanowires by Atomic-Layer-Deposited AlO with PO Interlayer. <i>Nano Letters</i> , <b>2017</b> , 17, 6287-6294	11.5	52
337	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
336	Electrocatalytic activity of atomic layer deposited PtRu catalysts onto N-doped carbon nanotubes. <i>Journal of Catalysis</i> , <b>2014</b> , 311, 481-486	7.3	49
335	Atomic Layer Deposited Molybdenum Oxide for the Hole-selective Contact of Silicon Solar Cells. <i>Energy Procedia</i> , <b>2016</b> , 92, 443-449	2.3	49
334	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
333	Material properties of LPCVD processed n-type polysilicon passivating contacts and its application in PERPoly industrial bifacial solar cells. <i>Energy Procedia</i> , <b>2017</b> , 124, 635-642	2.3	48
332	Redeposition in plasma-assisted atomic layer deposition: Silicon nitride film quality ruled by the gas residence time. <i>Applied Physics Letters</i> , <b>2015</b> , 107, 014102	3.4	48
331	High mobility In <sub>2</sub> O <sub>3</sub> :H transparent conductive oxides prepared by atomic layer deposition and solid phase crystallization. <i>Physica Status Solidi - Rapid Research Letters</i> , <b>2014</b> , 8, 987-990	2.5	48
330	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
329	Atomic layer deposition of Ru from CpRu(CO) <sub>2</sub> Et using O <sub>2</sub> gas and O <sub>2</sub> plasma. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2011</b> , 29, 021016	2.9	46
328	Quasi-ice monolayer on atomically smooth amorphous SiO <sub>2</sub> at room temperature observed with a high-finesse optical resonator. <i>Physical Review Letters</i> , <b>2005</b> , 95, 166104	7.4	46

327	Surface hydride composition of plasma deposited hydrogenated amorphous silicon: in situ infrared study of ion flux and temperature dependence. <i>Surface Science</i> , <b>2003</b> , 530, 1-16	1.8	46
326	Co <sub>3</sub> O <sub>4</sub> as anode material for thin film micro-batteries prepared by remote plasma atomic layer deposition. <i>Journal of Power Sources</i> , <b>2012</b> , 203, 72-77	8.9	45
325	Cathode encapsulation of organic light emitting diodes by atomic layer deposited Al <sub>2</sub> O <sub>3</sub> films and Al <sub>2</sub> O <sub>3</sub> /a-SiN <sub>x</sub> :H stacks. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2012</b> , 30, 01A131	2.9	45
324	Atomic-Layer-Deposited Transparent Electrodes for Silicon Heterojunction Solar Cells. <i>IEEE Journal of Photovoltaics</i> , <b>2014</b> , 4, 1387-1396	3.7	44
323	Influence of the SiO <sub>2</sub> interlayer thickness on the density and polarity of charges in Si/SiO <sub>2</sub> /Al <sub>2</sub> O <sub>3</sub> stacks as studied by optical second-harmonic generation. <i>Journal of Applied Physics</i> , <b>2014</b> , 115, 033708	2.5	44
322	Cavity ring down detection of SiH <sub>3</sub> in a remote SiH <sub>4</sub> plasma and comparison with model calculations and mass spectrometry. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2001</b> , 19, 467-476	2.9	44
321	What is limiting low-temperature atomic layer deposition of Al <sub>2</sub> O <sub>3</sub> ? A vibrational sum-frequency generation study. <i>Applied Physics Letters</i> , <b>2016</b> , 108, 011607	3.4	44
320	Comparative study of ALD SiO <sub>2</sub> thin films for optical applications. <i>Optical Materials Express</i> , <b>2016</b> , 6, 660	2.6	43
319	Plasma-assisted atomic layer deposition of TiN/Al <sub>2</sub> O <sub>3</sub> stacks for metal-oxide-semiconductor capacitor applications. <i>Journal of Applied Physics</i> , <b>2009</b> , 106, 114107	2.5	43
318	Energetic ions during plasma-enhanced atomic layer deposition and their role in tailoring material properties. <i>Plasma Sources Science and Technology</i> , <b>2019</b> , 28, 024002	3.5	43
317	Uniform Atomic Layer Deposition of AlO on Graphene by Reversible Hydrogen Plasma Functionalization. <i>Chemistry of Materials</i> , <b>2017</b> , 29, 2090-2100	9.6	42
316	Atomic Layer Deposition <b>2015</b> , 1101-1134		41
315	Substrate Biasing during Plasma-Assisted ALD for Crystalline Phase-Control of TiO <sub>2</sub> Thin Films. <i>Electrochemical and Solid-State Letters</i> , <b>2011</b> , 15, G1-G3		41
314	High-rate plasma-deposited SiO <sub>2</sub> films for surface passivation of crystalline silicon. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2006</b> , 24, 1823-1830	2.9	41
313	Surface reaction probability during fast deposition of hydrogenated amorphous silicon with a remote silane plasma. <i>Journal of Applied Physics</i> , <b>2000</b> , 87, 3313-3320	2.5	41
312	High hole drift mobility in a-Si:H deposited at high growth rates for solar cell application. <i>Journal of Non-Crystalline Solids</i> , <b>2000</b> , 266-269, 380-384	3.9	41
311	Atomic-layer deposited Nb <sub>2</sub> O <sub>5</sub> as transparent passivating electron contact for c-Si solar cells. <i>Solar Energy Materials and Solar Cells</i> , <b>2018</b> , 184, 98-104	6.4	41
310	Role of Surface Termination in Atomic Layer Deposition of Silicon Nitride. <i>Journal of Physical Chemistry Letters</i> , <b>2015</b> , 6, 3610-4	6.4	40



309	Atomic layer deposition of B-doped ZnO using triisopropyl borate as the boron precursor and comparison with Al-doped ZnO. <i>Journal of Materials Chemistry C</i> , <b>2015</b> , 3, 3095-3107	7.1	40
308	Hydrogen poor cationic silicon clusters in an expanding argon/hydrogen/silane plasma. <i>Applied Physics Letters</i> , <b>1998</b> , 72, 2397-2399	3.4	40
307	Plasma-assisted atomic layer deposition of nickel oxide as hole transport layer for hybrid perovskite solar cells. <i>Journal of Materials Chemistry C</i> , <b>2019</b> , 7, 12532-12543	7.1	40
306	Ultralow Surface Recombination Velocity in Passivated InGaAs/InP Nanopillars. <i>Nano Letters</i> , <b>2017</b> , 17, 2627-2633	11.5	39
305	Real-time study of aSi:H/cSi heterointerface formation and epitaxial Si growth by spectroscopic ellipsometry, infrared spectroscopy, and second-harmonic generation. <i>Physical Review B</i> , <b>2008</b> , 77,	3.3	39
304	The atomic hydrogen flux to silicon growth flux ratio during microcrystalline silicon solar cell deposition. <i>Applied Physics Letters</i> , <b>2008</b> , 93, 111914	3.4	39
303	Temperature and growth-rate effects on the hydrogen incorporation in a-Si:H. <i>Journal of Non-Crystalline Solids</i> , <b>1998</b> , 227-230, 133-137	3.9	37
302	On the hydrogenation of Poly-Si passivating contacts by Al <sub>2</sub> O <sub>3</sub> and SiN thin films. <i>Solar Energy Materials and Solar Cells</i> , <b>2020</b> , 215, 110592	6.4	36
301	Explorative studies of novel silicon surface passivation materials: Considerations and lessons learned. <i>Solar Energy Materials and Solar Cells</i> , <b>2018</b> , 188, 182-189	6.4	36
300	Atomic Layer Deposition of Wet-Etch Resistant Silicon Nitride Using Di(sec-butylamino)silane and N Plasma on Planar and 3D Substrate Topographies. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 1858-1869	9.5	35
299	Edge-Site Nanoengineering of WS by Low-Temperature Plasma-Enhanced Atomic Layer Deposition for Electrocatalytic Hydrogen Evolution. <i>Chemistry of Materials</i> , <b>2019</b> , 31, 5104-5115	9.6	35
298	Influence of transparent conductive oxides on passivation of a-Si:H/c-Si heterojunctions as studied by atomic layer deposited Al-doped ZnO. <i>Semiconductor Science and Technology</i> , <b>2014</b> , 29, 122001	1.8	35
297	Time-resolved cavity ringdown study of the Si and SiH <sub>3</sub> surface reaction probability during plasma deposition of a-Si:H at different substrate temperatures. <i>Journal of Applied Physics</i> , <b>2004</b> , 96, 4094-4106	2.5	35
296	Enhancement of the photocurrent and efficiency of CdTe solar cells suppressing the front contact reflection using a highly-resistive ZnO buffer layer. <i>Solar Energy Materials and Solar Cells</i> , <b>2019</b> , 191, 78-82	6.4	35
295	Plasma-assisted atomic layer deposition of TiO <sub>2</sub> compact layers for flexible mesostructured perovskite solar cells. <i>Solar Energy</i> , <b>2017</b> , 150, 447-453	6.8	34
294	Atomic layer deposition of high-mobility hydrogen-doped zinc oxide. <i>Solar Energy Materials and Solar Cells</i> , <b>2017</b> , 173, 111-119	6.4	34
293	The effect of ion-surface and ion-bulk interactions during hydrogenated amorphous silicon deposition. <i>Journal of Applied Physics</i> , <b>2007</b> , 102, 073523	2.5	34
292	Encapsulation method for atom probe tomography analysis of nanoparticles. <i>Ultramicroscopy</i> , <b>2015</b> , 159 Pt 2, 420-6	3.1	33

291	Direct and highly sensitive measurement of defect-related absorption in amorphous silicon thin films by cavity ringdown spectroscopy. <i>Applied Physics Letters</i> , <b>2004</b> , 84, 3079-3081	3.4	33
290	Time-resolved cavity ring-down spectroscopic study of the gas phase and surface loss rates of Si and SiH <sub>3</sub> plasma radicals. <i>Chemical Physics Letters</i> , <b>2002</b> , 360, 189-193	2.5	33
289	Industrial high-rate (~5 nm/s) deposited silicon nitride yielding high-quality bulk and surface passivation under optimum anti-reflection coating conditions. <i>Progress in Photovoltaics: Research and Applications</i> , <b>2005</b> , 13, 705-712	6.8	33
288	High-rate deposition of a-SiN <sub>x</sub> :H for photovoltaic applications by the expanding thermal plasma. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2002</b> , 20, 1704-1715	2.9	33
287	Metal-oxide-based hole-selective tunneling contacts for crystalline silicon solar cells. <i>Solar Energy Materials and Solar Cells</i> , <b>2014</b> , 120, 376-382	6.4	32
286	Composition and bonding structure of plasma-assisted ALD Al <sub>2</sub> O <sub>3</sub> films. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2010</b> , 7, NA-NA		32
285	Production mechanisms of NH and NH <sub>2</sub> radicals in N <sub>2</sub> -H <sub>2</sub> plasmas. <i>Journal of Physical Chemistry A</i> , <b>2007</b> , 111, 11460-72	2.8	32
284	Plasma diagnostic study of silicon nitride film growth in a remote Ar/H <sub>2</sub> /N <sub>2</sub> /SiH <sub>4</sub> plasma: Role of N and SiH <sub>n</sub> radicals. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2004</b> , 22, 96-106	2.9	32
283	(Invited) Aluminum Oxide and Other ALD Materials for Si Surface Passivation. <i>ECS Transactions</i> , <b>2011</b> , 41, 293-301	1	31
282	Transient depletion of source gases during materials processing: a case study on the plasma deposition of microcrystalline silicon. <i>New Journal of Physics</i> , <b>2007</b> , 9, 280-280	2.9	31
281	Temperature dependence of the surface reactivity of SiH <sub>3</sub> radicals and the surface silicon hydride composition during amorphous silicon growth. <i>Surface Science</i> , <b>2003</b> , 547, L865-L870	1.8	31
280	Improvement of hydrogenated amorphous silicon properties with increasing contribution of SiH <sub>3</sub> to film growth. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2001</b> , 19, 1027-1029	2.9	31
279	Continuous and ultrathin platinum films on graphene using atomic layer deposition: a combined computational and experimental study. <i>Nanoscale</i> , <b>2016</b> , 8, 19829-19845	7.7	30
278	Silicon passivation and tunneling contact formation by atomic layer deposited Al <sub>2</sub> O <sub>3</sub> /ZnO stacks. <i>Semiconductor Science and Technology</i> , <b>2013</b> , 28, 082002	1.8	30
277	Optical second-harmonic generation in thin film systems. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2008</b> , 26, 1519-1537	2.9	30
276	Microcrystalline silicon deposition: Process stability and process control. <i>Thin Solid Films</i> , <b>2007</b> , 515, 7455-7459		30
275	High surface passivation quality and thermal stability of ALD Al <sub>2</sub> O <sub>3</sub> on wet chemical grown ultra-thin SiO <sub>2</sub> on silicon. <i>Energy Procedia</i> , <b>2011</b> , 8, 654-659	2.3	29
274	Microcrystalline silicon solar cells with an open-circuit voltage above 600mV. <i>Applied Physics Letters</i> , <b>2007</b> , 90, 183504	3.4	29

273	Density and production of NH and NH <sub>2</sub> in an Ar/NH <sub>3</sub> expanding plasma jet. <i>Journal of Applied Physics</i> , <b>2005</b> , 98, 093301	2.5	29
272	The role of plasma induced substrate heating during high rate deposition of microcrystalline silicon solar cells. <i>Thin Solid Films</i> , <b>2006</b> , 511-512, 562-566	2.2	29
271	Large area, patterned growth of 2D MoS and lateral MoS-WS heterostructures for nano- and opto-electronic applications. <i>Nanotechnology</i> , <b>2020</b> , 31, 255603	3.4	28
270	Plasma-assisted atomic layer deposition of TiN monitored by in situ spectroscopic ellipsometry. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2005</b> , 23, L5-L8	2.9	28
269	In situ probing of surface hydrides on hydrogenated amorphous silicon using attenuated total reflection infrared spectroscopy. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2002</b> , 20, 781-789	2.9	28
268	Chemical Analysis of the Interface between Hybrid Organic-Inorganic Perovskite and Atomic Layer Deposited AlO. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2019</b> , 11, 5526-5535	9.5	28
267	Revisiting the growth mechanism of atomic layer deposition of Al <sub>2</sub> O <sub>3</sub> : A vibrational sum-frequency generation study. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2017</b> , 35, 05C313	2.9	27
266	Correlating the silicon surface passivation to the nanostructure of low-temperature a-Si:H after rapid thermal annealing. <i>Journal of Applied Physics</i> , <b>2017</b> , 122, 035302	2.5	27
265	Area-selective atomic layer deposition of platinum using photosensitive polyimide. <i>Nanotechnology</i> , <b>2016</b> , 27, 405302	3.4	27
264	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
263	Optical modeling of plasma-deposited ZnO films: Electron scattering at different length scales. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2015</b> , 33, 021509	2.9	26
262	Plasma-assisted atomic layer deposition of Ta <sub>2</sub> O <sub>5</sub> from alkylamide precursor and remote O <sub>2</sub> plasma. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2008</b> , 26, 472-480	2.9	26
261	Deposition of highly efficient microcrystalline silicon solar cells under conditions of low H <sub>2</sub> dilution: the role of the transient depletion induced incubation layer. <i>Progress in Photovoltaics: Research and Applications</i> , <b>2007</b> , 15, 291-301	6.8	26
260	Passivating electron-selective contacts for silicon solar cells based on an a-Si:H/TiO <sub>x</sub> stack and a low work function metal. <i>Progress in Photovoltaics: Research and Applications</i> , <b>2018</b> , 26, 835-845	6.8	26
259	Low resistivity HfN <sub>x</sub> grown by plasma-assisted ALD with external rf substrate biasing. <i>Journal of Materials Chemistry C</i> , <b>2018</b> , 6, 3917-3926	7.1	25
258	Remote Plasma ALD of SrTiO <sub>3</sub> Using Cyclopentadienyl-Based Ti and Sr Precursors. <i>Journal of the Electrochemical Society</i> , <b>2011</b> , 158, G34	3.9	25
257	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
256	Surface Reactivity and Plasma Energetics of SiH Radicals during Plasma Deposition of Silicon-Based Materials. <i>Journal of Physical Chemistry B</i> , <b>2002</b> , 106, 2680-2689	3.4	25

255	Mechanism of Precursor Blocking by Acetylacetonone 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
254	Area-Selective Atomic Layer Deposition of Two-Dimensional WS Nanolayers <b>2020</b> , 2, 511-518		24
253	In situspectroscopic ellipsometry during atomic layer deposition of Pt, Ru and Pd. <i>Journal Physics D: Applied Physics</i> , <b>2016</b> , 49, 115504	3	24
252	Film Conformality and Extracted Recombination Probabilities of O Atoms during Plasma-Assisted Atomic Layer Deposition of SiO <sub>2</sub> , TiO <sub>2</sub> , Al <sub>2</sub> O <sub>3</sub> , and HfO <sub>2</sub> . <i>Journal of Physical Chemistry C</i> , <b>2019</b> , 123, 27030-27033	3.8	23
251	Hydrogen-Argon plasma pre-treatment for improving the anti-corrosion properties of thin Al <sub>2</sub> O <sub>3</sub> films deposited using atomic layer deposition on steel. <i>Thin Solid Films</i> , <b>2013</b> , 534, 384-393	2.2	23
250	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
249	Expanding thermal plasma for low-k dielectrics: engineering the film chemistry by means of specific dissociation paths in the plasma. <i>Materials Science in Semiconductor Processing</i> , <b>2004</b> , 7, 283-288	4.3	23
248	Surface-diffusion-controlled incorporation of nanosized voids during hydrogenated amorphous silicon film growth. <i>Applied Physics Letters</i> , <b>2005</b> , 86, 041909	3.4	23
247	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
246	Towards the implementation of atomic layer deposited In <sub>2</sub> O <sub>3</sub> :H in silicon heterojunction solar cells. <i>Solar Energy Materials and Solar Cells</i> , <b>2017</b> , 163, 43-50	6.4	22
245	Atomic Layer Deposition of Silicon Nitride from Bis(tertiary-butyl-amino)silane and N <sub>2</sub> Plasma Studied by in Situ Gas Phase and Surface Infrared Spectroscopy. <i>Chemistry of Materials</i> , <b>2016</b> , 28, 5864-5871	8.6	22
244	Plasma-assisted and thermal atomic layer deposition of electrochemically active Li <sub>2</sub> CO <sub>3</sub> . <i>RSC Advances</i> , <b>2017</b> , 7, 41359-41368	3.7	22
243	Plasma-Assisted Atomic Layer Deposition of SrTiO <sub>3</sub> : Stoichiometry and Crystallinity Studied by Spectroscopic Ellipsometry. <i>ECS Journal of Solid State Science and Technology</i> , <b>2013</b> , 2, N15-N22	2	22
242	Silicon surface passivation by aluminium oxide studied with electron energy loss spectroscopy. <i>Physica Status Solidi - Rapid Research Letters</i> , <b>2013</b> , 7, 937-941	2.5	22
241	Cavity ring down detection of SiH <sub>3</sub> on the broadband $\sigma$ - $\pi$ 2A <sub>1</sub> transition in a remote Ar <sup>+</sup> BiH <sub>4</sub> plasma. <i>Chemical Physics Letters</i> , <b>2000</b> , 326, 400-406	2.5	22
240	Metal-Insulator-Semiconductor Nanowire Network Solar Cells. <i>Nano Letters</i> , <b>2016</b> , 16, 3689-95	11.5	22
239	Effect of reactor pressure on the conformal coating inside porous substrates by atomic layer deposition. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2017</b> , 35, 021502	2.9	21
238	Progress and prospects in nanoscale dry processes: How can we control atomic layer reactions?. <i>Japanese Journal of Applied Physics</i> , <b>2017</b> , 56, 06HA02	1.4	21

237	Zero-charge SiO <sub>2</sub> /Al <sub>2</sub> O <sub>3</sub> stacks for the simultaneous passivation of n+ and p+ doped silicon surfaces by atomic layer deposition. <i>Solar Energy Materials and Solar Cells</i> , <b>2015</b> , 143, 450-456	6.4	21
236	Plasma-enhanced atomic layer deposition of tungsten oxide thin films using (tBuN) <sub>2</sub> (Me <sub>2</sub> N) <sub>2</sub> W and O <sub>2</sub> plasma. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2018</b> , 36, 01B103	2.9	21
235	First-Principles Investigation of C-H Bond Scission and Formation Reactions in Ethane, Ethene, and Ethyne Adsorbed on Ru(0001). <i>Journal of Physical Chemistry C</i> , <b>2014</b> , 118, 26683-26694	3.8	21
234	Reaction mechanisms of atomic layer deposition of TaN <sub>x</sub> from Ta(NMe <sub>2</sub> ) <sub>5</sub> precursor and H <sub>2</sub> -based plasmas. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2012</b> , 30, 01A101	2.9	21
233	Er <sup>3+</sup> and Si luminescence of atomic layer deposited Er-doped Al <sub>2</sub> O <sub>3</sub> thin films on Si(100). <i>Journal of Applied Physics</i> , <b>2011</b> , 109, 113107	2.5	21
232	Optical properties of Y <sub>2</sub> O <sub>3</sub> thin films doped with spatially controlled Er <sup>3+</sup> by atomic layer deposition. <i>Journal of Applied Physics</i> , <b>2007</b> , 101, 123116	2.5	21
231	N, NH, and NH <sub>2</sub> radical densities in a remote Ar/H <sub>3</sub> SiH <sub>4</sub> plasma and their role in silicon nitride deposition. <i>Journal of Applied Physics</i> , <b>2006</b> , 100, 093303	2.5	21
230	Hydrogen in a-Si:H Deposited by an Expanding Thermal Plasma: A Temperature, Growth Rate and Isotope Study. <i>Materials Research Society Symposia Proceedings</i> , <b>1998</b> , 507, 529		21
229	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
228	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
227	Comparison of thermal and plasma-enhanced atomic layer deposition of niobium oxide thin films. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2018</b> , 36, 041503	2.9	21
226	Surface Fluorination of ALD TiO <sub>2</sub> Electron Transport Layer for Efficient Planar Perovskite Solar Cells. <i>Advanced Materials Interfaces</i> , <b>2018</b> , 5, 1701456	4.6	20
225	Bulk passivation of multicrystalline silicon solar cells induced by high-rate-deposited (> 1 nm/s) silicon nitride films. <i>Progress in Photovoltaics: Research and Applications</i> , <b>2003</b> , 11, 125-130	6.8	20
224	Formation of large positive silicon-cluster ions in a remote silane plasma. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>1999</b> , 17, 1531-1535	2.9	20
223	On the solid phase crystallization of In <sub>2</sub> O <sub>3</sub> :H transparent conductive oxide films prepared by atomic layer deposition. <i>Journal of Applied Physics</i> , <b>2016</b> , 120, 085314	2.5	20
222	Atomic layer deposition of HfO <sub>2</sub> using HfCp(NMe <sub>2</sub> ) <sub>3</sub> and O <sub>2</sub> plasma. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2017</b> , 35, 01B130	2.9	19
221	Sticking probabilities of H <sub>2</sub> O and Al(CH <sub>3</sub> ) <sub>3</sub> during atomic layer deposition of Al <sub>2</sub> O <sub>3</sub> extracted from their impact on film conformality. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2019</b> , 37, 030908	2.9	19
220	Opportunities for Plasma-Assisted Atomic Layer Deposition. <i>ECS Transactions</i> , <b>2006</b> , 3, 183-190	1	19



219	Dopant Distribution in Atomic Layer Deposited ZnO:Al Films Visualized by Transmission Electron Microscopy and Atom Probe Tomography. <i>Chemistry of Materials</i> , <b>2018</b> , 30, 1209-1217	9.6	18
218	Remote Plasma Atomic Layer Deposition of Thin Films of Electrochemically Active LiCoO <sub>2</sub> . <i>ECS Transactions</i> , <b>2011</b> , 41, 321-330	1	18
217	Ammonia adsorption and decomposition on silica supported Rh nanoparticles observed by in situ attenuated total reflection infrared spectroscopy. <i>Applied Surface Science</i> , <b>2006</b> , 253, 572-580	6.7	18
216	Spectroscopic second harmonic generation measured on plasma-deposited hydrogenated amorphous silicon thin films. <i>Applied Physics Letters</i> , <b>2004</b> , 85, 4049-4051	3.4	18
215	Atomic layer deposition of cobalt phosphate thin films for the oxygen evolution reaction. <i>Electrochemistry Communications</i> , <b>2019</b> , 98, 73-77	5.1	18
214	Silicon surface passivation by transparent conductive zinc oxide. <i>Journal of Applied Physics</i> , <b>2019</b> , 125, 105305	2.5	17
213	On the role of micro-porosity in affecting the environmental stability of atomic/molecular layer deposited (ZnO)(Zn-O-CH-O) films. <i>Dalton Transactions</i> , <b>2019</b> , 48, 3496-3505	4.3	17
212	Effective passivation of silicon surfaces by ultrathin atomic-layer deposited niobium oxide. <i>Applied Physics Letters</i> , <b>2018</b> , 112, 242105	3.4	17
211	Thermal and Plasma Enhanced Atomic Layer Deposition of Al <sub>2</sub> O <sub>3</sub> on GaAs Substrates. <i>Journal of the Electrochemical Society</i> , <b>2009</b> , 156, H255	3.9	17
210	Silicon surface passivation by hot-wire CVD Si thin films studied by in situ surface spectroscopy. <i>Thin Solid Films</i> , <b>2009</b> , 517, 3456-3460	2.2	17
209	Probing the phase composition of silicon films in situ by etch product detection. <i>Applied Physics Letters</i> , <b>2007</b> , 91, 161902	3.4	17
208	P-111: A Thin Film Encapsulation Stack for PLED and OLED Displays. <i>Digest of Technical Papers SID International Symposium</i> , <b>2004</b> , 35, 695	0.5	17
207	Time-of-flight photocurrents in expanding-thermal-plasma-deposited a-Si:H. <i>Journal of Non-Crystalline Solids</i> , <b>2002</b> , 299-302, 420-424	3.9	17
206	In Situ Probing and Atomistic Simulation of a-Si:H Plasma Deposition. <i>Materials Research Society Symposia Proceedings</i> , <b>2001</b> , 664, 111		17
205	Performance and Thermal Stability of an a-Si:H/TiO <sub>x</sub> /Yb Stack as an Electron-Selective Contact in Silicon Heterojunction Solar Cells. <i>ACS Applied Energy Materials</i> , <b>2019</b> , 2, 1393-1404	6.1	16
204	Rear-emitter silicon heterojunction solar cells with atomic layer deposited ZnO:Al serving as an alternative transparent conducting oxide to In <sub>2</sub> O <sub>3</sub> :Sn. <i>Solar Energy Materials and Solar Cells</i> , <b>2019</b> , 200, 109953	6.4	16
203	Surface Infrared Spectroscopy during Low Temperature Growth of Supported Pt Nanoparticles by Atomic Layer Deposition. <i>Journal of Physical Chemistry C</i> , <b>2016</b> , 120, 750-755	3.8	16
202	[Zr(NEtMe) <sub>2</sub> (guan-NEtMe) <sub>2</sub> ] as a Novel Atomic Layer Deposition Precursor: ZrO <sub>2</sub> Film Growth and Mechanistic Studies. <i>Chemistry of Materials</i> , <b>2013</b> , 25, 3088-3095	9.6	16



201	a-Si:H $\bar{\text{H}}$ -Si heterointerface formation and epitaxial growth studied by real time optical probes. <i>Applied Physics Letters</i> , <b>2007</b> , 90, 202108	3.4	16
200	Absence of the enhanced intra-4f transition cross section at 1.5 $\mu\text{m}$ of Er <sup>3+</sup> in Si-rich SiO <sub>2</sub> . <i>Applied Physics Letters</i> , <b>2005</b> , 86, 241109	3.4	16
199	Remote Silane Plasma Chemistry Effects and their Correlation with a-Si:H Film Properties. <i>Materials Research Society Symposia Proceedings</i> , <b>1999</b> , 557, 25		16
198	Plasma-assisted atomic layer deposition of conformal Pt films in high aspect ratio trenches. <i>Journal of Chemical Physics</i> , <b>2017</b> , 146, 052818	3.9	15
197	The competing roles of i-ZnO in Cu(In,Ga)Se <sub>2</sub> solar cells. <i>Solar Energy Materials and Solar Cells</i> , <b>2016</b> , 157, 798-807	6.4	15
196	Low-Temperature Phase-Controlled Synthesis of Titanium Di- and Tri-sulfide by Atomic Layer Deposition. <i>Chemistry of Materials</i> , <b>2019</b> , 31, 9354-9362	9.6	15
195	Ion Bombardment during Plasma-Assisted Atomic Layer Deposition. <i>ECS Transactions</i> , <b>2013</b> , 50, 23-34	1	15
194	Probing hydrogenated amorphous silicon surface states by spectroscopic and real-time second-harmonic generation. <i>Physical Review B</i> , <b>2006</b> , 73,	3.3	15
193	Absolute in situ measurement of surface dangling bonds during a-Si:H growth. <i>Applied Physics Letters</i> , <b>2007</b> , 90, 161918	3.4	15
192	High rate (~3 nm/s) deposition of dense silicon nitride films at low substrate temperatures (. <i>Thin Solid Films</i> , <b>2005</b> , 484, 46-53	2.2	15
191	Plasma and surface chemistry effects during high rate deposition of hydrogenated amorphous silicon. <i>Plasma Physics and Controlled Fusion</i> , <b>1999</b> , 41, A365-A378	2	15
190	Graphene devices with bottom-up contacts by area-selective atomic layer deposition. <i>2D Materials</i> , <b>2017</b> , 4, 025046	5.9	14
189	Atomic layer deposition of highly dispersed Pt nanoparticles on a high surface area electrode backbone for electrochemical promotion of catalysis. <i>Electrochemistry Communications</i> , <b>2017</b> , 84, 40-44	5.1	14
188	The effect of low frequency pulse-shaped substrate bias on the remote plasma deposition of a-Si : H thin films. <i>Plasma Sources Science and Technology</i> , <b>2010</b> , 19, 015012	3.5	14
187	A model for the deposition of a-C:H using an expanding thermal arc. <i>Surface and Coatings Technology</i> , <b>1998</b> , 98, 1584-1589	4.4	14
186	Probing the Origin and Suppression of Vertically Oriented Nanostructures of 2D WS Layers. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 3873-3885	9.5	14
185	Synergy Between Plasma-Assisted ALD and Roll-to-Roll Atmospheric Pressure PE-CVD Processing of Moisture Barrier Films on Polymers. <i>Plasma Processes and Polymers</i> , <b>2016</b> , 13, 311-315	3.4	13
184	. <i>IEEE Journal of Photovoltaics</i> , <b>2015</b> , 5, 1462-1469	3.7	13

183	Plasma-enhanced Chemical Vapor Deposition of Aluminum Oxide Using Ultrashort Precursor Injection Pulses. <i>Plasma Processes and Polymers</i> , <b>2012</b> , 9, 761-771	3.4	13
182	Bis(cyclopentadienyl) zirconium(IV) amides as possible precursors for low pressure CVD and plasma-enhanced ALD. <i>Inorganica Chimica Acta</i> , <b>2010</b> , 363, 1077-1083	2.7	13
181	Molecular dynamics simulations of Ar+ bombardment of Si with comparison to experiment. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2007</b> , 25, 1529-1533	2.9	13
180	Substrate temperature dependence of the roughness evolution of HWCVD a-Si:H studied by real-time spectroscopic ellipsometry. <i>Thin Solid Films</i> , <b>2006</b> , 501, 88-91	2.2	13
179	Electrochemical Activation of Atomic Layer-Deposited Cobalt Phosphate Electrocatalysts for Water Oxidation. <i>ACS Catalysis</i> , <b>2021</b> , 11, 2774-2785	13.1	13
178	Atomic Layer Deposition of InO:H from InCp and HO/O: Microstructure and Isotope Labeling Studies. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 592-601	9.5	12
177	Synthesis of single-walled carbon nanotubes from atomic-layer-deposited Co <sub>3</sub> O <sub>4</sub> and Co <sub>3</sub> O <sub>4</sub> /Fe <sub>2</sub> O <sub>3</sub> catalyst films. <i>Carbon</i> , <b>2017</b> , 121, 389-398	10.4	12
176	Cyclic Etch/Passivation-Deposition as an All-Spatial Concept toward High-Rate Room Temperature Atomic Layer Etching. <i>ECS Journal of Solid State Science and Technology</i> , <b>2015</b> , 4, N5067-N5076	2	12
175	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
174	Surface passivation of n-type doped black silicon by atomic-layer-deposited SiO <sub>2</sub> /Al <sub>2</sub> O <sub>3</sub> stacks. <i>Applied Physics Letters</i> , <b>2017</b> , 110, 263106	3.4	12
173	Quantification of pn-Junction Recombination in Interdigitated Back-Contact Crystalline Silicon Solar Cells. <i>IEEE Journal of Photovoltaics</i> , <b>2017</b> , 7, 1176-1183	3.7	12
172	The effect of residual gas scattering on Ga ion beam patterning of graphene. <i>Applied Physics Letters</i> , <b>2015</b> , 107, 213101	3.4	12
171	. <i>IEEE Journal of Photovoltaics</i> , <b>2013</b> , 3, 925-929	3.7	12
170	Hydrogen Incorporation During Deposition of a-Si:H From an Intense Source of SiH <sub>3</sub> . <i>Materials Research Society Symposia Proceedings</i> , <b>1997</b> , 467, 621		12
169	Downstream ion and radical densities in an Ar/NH <sub>3</sub> plasma generated by the expanding thermal plasma technique. <i>Plasma Sources Science and Technology</i> , <b>2006</b> , 15, 546-555	3.5	12
168	Amorphous silicon layer characteristics during 70000eV Ar+ ion bombardment of Si(100)a). <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2006</b> , 24, 1933-1940	2.9	12
167	Effect of an electric field during the deposition of silicon dioxide thin films by plasma enhanced atomic layer deposition: an experimental and computational study. <i>Nanoscale</i> , <b>2020</b> , 12, 2089-2102	7.7	12
166	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

165	Initial stage of atomic layer deposition of 2D-MoS on a SiO surface: a DFT study. <i>Physical Chemistry Chemical Physics</i> , <b>2018</b> , 20, 16861-16875	3.6	12
164	POx/Al <sub>2</sub> O <sub>3</sub> stacks: Highly effective surface passivation of crystalline silicon with a large positive fixed charge. <i>Applied Physics Letters</i> , <b>2018</b> , 112, 201603	3.4	12
163	Investigation of crystalline silicon surface passivation by positively charged POx/Al <sub>2</sub> O <sub>3</sub> stacks. <i>Solar Energy Materials and Solar Cells</i> , <b>2018</b> , 185, 385-391	6.4	12
162	Plasma-Assisted Atomic Layer Deposition of PtOx from (MeCp)PtMe <sub>3</sub> and O <sub>2</sub> Plasma. <i>Chemical Vapor Deposition</i> , <b>2014</b> , 20, 258-268		11
161	Analysis of blister formation in spatial ALD Al <sub>2</sub> O <sub>3</sub> for silicon surface passivation <b>2012</b> ,		11
160	Plasma-enhanced atomic layer deposition of titania on alumina for its potential use as a hydrogen-selective membrane. <i>Journal of Membrane Science</i> , <b>2011</b> , 378, 438-443	9.6	11
159	Real time spectroscopic ellipsometry on ultrathin (. <i>Journal of Applied Physics</i> , <b>2007</b> , 101, 123529	2.5	11
158	The growth kinetics of silicon nitride deposited from the SiH <sub>4</sub> N <sub>2</sub> reactant mixture in a remote plasma. <i>Journal of Non-Crystalline Solids</i> , <b>2004</b> , 338-340, 37-41	3.9	11
157	Initial Growth Study of Atomic-Layer Deposition of AlO by Vibrational Sum-Frequency Generation. <i>Langmuir</i> , <b>2019</b> , 35, 10374-10382	4	10
156	TiO <sub>2</sub> thin film patterns prepared by chemical vapor deposition and atomic layer deposition using an atmospheric pressure microplasma printer. <i>Plasma Processes and Polymers</i> , <b>2019</b> , 16, 1900127	3.4	10
155	Influence of stoichiometry on the performance of MIM capacitors from plasma-assisted ALD Sr <sub>x</sub> Ti <sub>y</sub> O <sub>z</sub> films. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2014</b> , 211, 389-396	1.6	10
154	Impact of composition and crystallization behavior of atomic layer deposited strontium titanate films on the resistive switching of Pt/STO/TiN devices. <i>Journal of Applied Physics</i> , <b>2014</b> , 116, 064503	2.5	10
153	Catalytic Combustion Reactions During Atomic Layer Deposition of Ru Studied Using <sup>18</sup> O <sub>2</sub> Isotope Labeling. <i>Journal of Physical Chemistry C</i> , <b>2013</b> , 117, 21320-21330	3.8	10
152	Concepts and prospects of passivating contacts for crystalline silicon solar cells <b>2015</b> ,		10
151	Surface Decoration of $\gamma$ -Fe <sub>2</sub> O <sub>3</sub> Nanorods by CuO Via a Two-Step CVD/Sputtering Approach**. <i>Chemical Vapor Deposition</i> , <b>2014</b> , 20, 313-319		10
150	Crystallization Study by Transmission Electron Microscopy of SrTiO <sub>3</sub> Thin Films Prepared by Plasma-Assisted ALD. <i>ECS Journal of Solid State Science and Technology</i> , <b>2013</b> , 2, N120-N124	2	10
149	Atomic-layer-deposited aluminum oxide for the surface passivation of high-efficiency silicon solar cells. <i>Conference Record of the IEEE Photovoltaic Specialists Conference</i> , <b>2008</b> ,		10
148	Spectroscopic second-harmonic generation during Ar <sup>+</sup> -ion bombardment of Si(100). <i>Physical Review B</i> , <b>2006</b> , 74,	3.3	10

147	Hidden parameters in the plasma deposition of microcrystalline silicon solar cells. <i>Journal of Materials Research</i> , <b>2007</b> , 22, 1767-1774	2.5	10
146	Initial growth and properties of atomic layer deposited TiN films studied by in situ spectroscopic ellipsometry. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2005</b> , 2, 3958-3962		10
145	Characterization of nano-porosity in molecular layer deposited films. <i>Dalton Transactions</i> , <b>2018</b> , 47, 7649-7655	4.7	10
144	Optical and electrical properties of H <sub>2</sub> plasma-treated ZnO films prepared by atomic layer deposition using supercycles. <i>Materials Science in Semiconductor Processing</i> , <b>2018</b> , 84, 91-100	4.3	10
143	Atomic-layer-deposited Al-doped zinc oxide as a passivating conductive contacting layer for n <sup>+</sup> -doped surfaces in silicon solar cells. <i>Solar Energy Materials and Solar Cells</i> , <b>2021</b> , 233, 111386	6.4	10
142	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
141	(Invited) Area-Selective Atomic Layer Deposition: Role of Surface Chemistry. <i>ECS Transactions</i> , <b>2017</b> , 80, 39-48	1	9
140	Improved Passivation of n-Type Poly-Si Based Passivating Contacts by the Application of Hydrogen-Rich Transparent Conductive Oxides. <i>IEEE Journal of Photovoltaics</i> , <b>2020</b> , 10, 986-991	3.7	9
139	Transition in layer structure of atomic/molecular layer deposited ZnO-zinc oxide multilayers. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2019</b> , 37, 040602	2.9	9
138	Surface Passivation and Simulated Performance of Solar Cells With Al <sub>2</sub> O <sub>3</sub> /SiN <sub>x</sub> Rear Dielectric Stacks. <i>IEEE Journal of Photovoltaics</i> , <b>2013</b> , 3, 970-975	3.7	9
137	(Invited) All-Solid-State Batteries: A Challenging Route towards 3D Integration. <i>ECS Transactions</i> , <b>2010</b> , 33, 213-222	1	9
136	Hydrogenated amorphous silicon based surface passivation of c-Si at high deposition temperature and rate. <i>Physica Status Solidi - Rapid Research Letters</i> , <b>2010</b> , 4, 206-208	2.5	9
135	Attenuated total reflection infrared spectroscopy for studying adsorbates on planar model catalysts: CO adsorption on silica supported Rh nanoparticles. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2006</b> , 24, 296-304	2.9	9
134	Optical spectroscopy of the density of gap states in ETP-deposited a-Si:H. <i>Journal of Non-Crystalline Solids</i> , <b>2004</b> , 338-340, 244-248	3.9	9
133	The Role of H in the Growth Mechanism of PECVD a-Si:H. <i>Materials Research Society Symposia Proceedings</i> , <b>1999</b> , 557, 13		9
132	Silicon heterojunction solar cell passivation in combination with nanocrystalline silicon oxide emitters. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2016</b> , 213, 1932-1936	1.6	9
131	Plasma-assisted atomic layer deposition of HfNx: Tailoring the film properties by the plasma gas composition. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2017</b> , 35, 01B129	2.9	8
130	Plasma-surface interaction during low pressure microcrystalline silicon thin film growth. <i>Journal of Applied Physics</i> , <b>2014</b> , 47, 224003	3	8

129	Plasma-Enhanced ALD of TiO <sub>2</sub> Using a Novel Cyclopentadienyl Alkylamido Precursor [Ti(CpMe)(NMe <sub>2</sub> ) <sub>3</sub> ] and O <sub>2</sub> Plasma. <i>ECS Transactions</i> , <b>2010</b> , 33, 385-393	1	8
128	High-rate deposition of nanocrystalline silicon using the expanding thermal plasma technique. <i>Journal of Non-Crystalline Solids</i> , <b>2006</b> , 352, 915-918	3.9	8
127	On the effect of atomic layer deposited Al <sub>2</sub> O <sub>3</sub> on the environmental degradation of hybrid perovskite probed by positron annihilation spectroscopy. <i>Journal of Materials Chemistry C</i> , <b>2019</b> , 7, 5275-5284	7.1	8
126	Enhancing the Electrocatalytic Activity of Redox Stable Perovskite Fuel Electrodes in Solid Oxide Cells by Atomic Layer-Deposited Pt Nanoparticles. <i>ACS Sustainable Chemistry and Engineering</i> , <b>2020</b> , 8, 12646-12654	8.3	8
125	The influence of non-stoichiometry on the switching kinetics of strontium-titanate ReRAM devices. <i>Journal of Applied Physics</i> , <b>2016</b> , 120, 244502	2.5	8
124	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
123	Surface passivation of germanium by atomic layer deposited Al <sub>2</sub> O <sub>3</sub> nanolayers. <i>Journal of Materials Research</i> , <b>2021</b> , 36, 571-581	2.5	8
122	Strategies to facilitate the formation of free standing MoS <sub>2</sub> nanolayers on SiO <sub>2</sub> surface by atomic layer deposition: A DFT study. <i>APL Materials</i> , <b>2018</b> , 6, 111107	5.7	8
121	Atomic Layer Deposition for High-Efficiency Crystalline Silicon Solar Cells <b>2017</b> , 41-99		7
120	Variational method for the minimization of entropy generation in solar cells. <i>Journal of Applied Physics</i> , <b>2015</b> , 117, 134504	2.5	7
119	. <i>IEEE Journal of Photovoltaics</i> , <b>2015</b> , 5, 1310-1318	3.7	7
118	Deposition temperature dependence of material and Si surface passivation properties of O <sub>3</sub> -based atomic layer deposited Al <sub>2</sub> O <sub>3</sub> -based films and stacks. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2014</b> , 32, 01A128	2.9	7
117	Simultaneous scanning tunneling microscopy and synchrotron X-ray measurements in a gas environment. <i>Ultramicroscopy</i> , <b>2017</b> , 182, 233-242	3.1	7
116	Interaction between O <sub>2</sub> and ZnO films probed by time-dependent second-harmonic generation. <i>Applied Physics Letters</i> , <b>2014</b> , 104, 051602	3.4	7
115	High-Rate Anisotropic Silicon Etching with the Expanding Thermal Plasma Technique. <i>Electrochemical and Solid-State Letters</i> , <b>2007</b> , 10, H309		7
114	Material properties and growth process of microcrystalline silicon with growth rates in excess of 1 nm/s. <i>Materials Research Society Symposia Proceedings</i> , <b>2001</b> , 664, 421		7
113	Evidence for low-energy ions influencing plasma-assisted atomic layer deposition of SiO <sub>2</sub> : Impact on the growth per cycle and wet etch rate. <i>Applied Physics Letters</i> , <b>2020</b> , 117, 031602	3.4	7
112	Atomic Layer Deposition of Al-Doped MoS: Synthesizing a p-type 2D Semiconductor with Tunable Carrier Density. <i>ACS Applied Nano Materials</i> , <b>2020</b> , 3, 10200-10208	5.6	7

111	Atomic Layer Deposited ZnO: B As Transparent Conductive Oxide for Increased Short Circuit Current Density in Silicon Heterojunction Solar Cells. <i>Energy Procedia</i> , <b>2016</b> , 92, 624-632	2.3	7
110	Pt Graphene Contacts Fabricated by Plasma Functionalization and Atomic Layer Deposition. <i>Advanced Materials Interfaces</i> , <b>2018</b> , 5, 1800268	4.6	7
109	Infrared and optical emission spectroscopy study of atmospheric pressure plasma-enhanced spatial ALD of Al <sub>2</sub> O <sub>3</sub> . <i>Applied Physics Letters</i> , <b>2019</b> , 115, 083101	3.4	6
108	Atomic Layer Deposition of Aluminum Phosphate Using AlMe <sub>3</sub> , PO(OMe) <sub>3</sub> , and O <sub>2</sub> Plasma: Film Growth and Surface Reactions. <i>Journal of Physical Chemistry C</i> , <b>2020</b> , 124, 5495-5505	3.8	6
107	Metastable Refractive Index Manipulation in Hydrogenated Amorphous Silicon for Reconfigurable Photonics. <i>Advanced Optical Materials</i> , <b>2020</b> , 8, 1901680	8.1	6
106	Expanding Thermal Plasma Chemical Vapour Deposition of ZnO:Al Layers for CIGS Solar Cells. <i>International Journal of Photoenergy</i> , <b>2014</b> , 2014, 1-9	2.1	6
105	Comparison between aluminum oxide surface passivation films deposited with thermal ALD, plasma ALD and PECVD <b>2010</b> ,		6
104	Plasma-Assisted Atomic Layer Deposition of SrTiO <sub>3</sub> : Stoichiometry and Crystallinity Study by Spectroscopic Ellipsometry. <i>ECS Transactions</i> , <b>2011</b> , 41, 63-72	1	6
103	A new concept for spatially divided Deep Reactive Ion Etching with ALD-based passivation. <i>IOP Conference Series: Materials Science and Engineering</i> , <b>2012</b> , 41, 012001	0.4	6
102	Firing stability of atomic layer deposited Al <sub>2</sub> O <sub>3</sub> for c-Si surface passivation <b>2009</b> ,		6
101	Crystalline silicon surface passivation by the negative-charge-dielectric Al <sub>2</sub> O <sub>3</sub> . <i>Conference Record of the IEEE Photovoltaic Specialists Conference</i> , <b>2008</b> ,		6
100	Hot-wire deposition of a-Si:H thin films on wafer substrates studied by real-time spectroscopic ellipsometry and infrared spectroscopy. <i>Thin Solid Films</i> , <b>2008</b> , 516, 511-516	2.2	6
99	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
98	Plasma-Assisted ALD of Highly Conductive HfN <sub>x</sub> : On the Effect of Energetic Ions on Film Microstructure. <i>Plasma Chemistry and Plasma Processing</i> , <b>2020</b> , 40, 697-712	3.6	6
97	Mass Spectrometry Study of Li <sub>2</sub> CO <sub>3</sub> Film Growth by Thermal and Plasma-Assisted Atomic Layer Deposition. <i>Journal of Physical Chemistry C</i> , <b>2019</b> , 123, 4109-4115	3.8	5
96	Atomic layer deposition of Nb-doped TiO <sub>2</sub> : Dopant incorporation and effect of annealing. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2020</b> , 38, 022408	2.9	5
95	Dynamic Ellipsometric Porosimetry Investigation of Permeation Pathways in Moisture Barrier Layers on Polymers. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 25005-9	9.5	5
94	Atomic hydrogen induced defect kinetics in amorphous silicon. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2017</b> , 35, 05C307	2.9	5



93	Dielectric Material Options for Integrated Capacitors. <i>ECS Journal of Solid State Science and Technology</i> , <b>2014</b> , 3, N120-N125	2	5
92	Plasma Atomic Layer Deposition <b>2012</b> , 131-157		5
91	Amorphization of Si(100) by Ar <sup>+</sup> -ion bombardment studied with spectroscopic and time-resolved second-harmonic generation. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2010</b> , 28, 293-301	2.9	5
90	Remote Plasma Atomic Layer Deposition of Co <sub>3</sub> O <sub>4</sub> Thin Films. <i>ECS Transactions</i> , <b>2009</b> , 25, 39-47	1	5
89	Ion-radical synergy in HfO <sub>2</sub> etching studied with a XeF <sub>2</sub> /Ar <sup>+</sup> beam setup. <i>Journal of Applied Physics</i> , <b>2008</b> , 103, 083304	2.5	5
88	On the H-exchange of ammonia and silica hydroxyls in the presence of Rh nanoparticles. <i>Applied Surface Science</i> , <b>2007</b> , 253, 3600-3607	6.7	5
87	External rf substrate biasing during a-Si:H film growth using the expanding thermal plasma technique. <i>Materials Research Society Symposia Proceedings</i> , <b>2004</b> , 808, 479		5
86	The a-Si:H growth mechanism and the role of H abstraction from the surface by SiH <sub>3</sub> radicals via an Eley-Rideal mechanism. <i>Journal of Non-Crystalline Solids</i> , <b>2004</b> , 338-340, 27-31	3.9	5
85	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
84	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
83	Impact of Ions on Film Conformality and Crystallinity during Plasma-Assisted Atomic Layer Deposition of TiO. <i>Chemistry of Materials</i> , <b>2021</b> , 33, 5002-5009	9.6	5
82	High Resolution Sheet Resistance Mapping to Unveil Edge Effects in Industrial IBC Solar Cells. <i>Energy Procedia</i> , <b>2016</b> , 92, 218-224	2.3	5
81	On the Growth, Percolation and Wetting of Silver Thin Films Grown by Atmospheric-Plasma Enhanced Spatial Atomic Layer Deposition. <i>ECS Transactions</i> , <b>2016</b> , 75, 129-142	1	5
80	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
79	Atomic layer deposition of cobalt phosphate from cobaltocene, trimethylphosphate, and O <sub>2</sub> plasma. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2020</b> , 38, 022416	2.9	4
78	Impact of the Deposition and Annealing Temperature on the Silicon Surface Passivation of ALD Al <sub>2</sub> O <sub>3</sub> Films. <i>Energy Procedia</i> , <b>2012</b> , 27, 396-401	2.3	4
77	(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
76	Corona charging and optical second-harmonic generation studies of the field-effect passivation of c-Si by Al <sub>2</sub> O <sub>3</sub> films <b>2010</b> ,		4

75	Surface Passivation by Al <sub>2</sub> O <sub>3</sub> and a-Si:H Films Deposited on Wet-Chemically Conditioned Si Surfaces. <i>ECS Journal of Solid State Science and Technology</i> , <b>2012</b> , 1, P320-P325	2	4
74	New ultrahigh vacuum setup and advanced diagnostic techniques for studying a-Si:H film growth by radical beams. <i>Materials Research Society Symposia Proceedings</i> , <b>2004</b> , 808, 491		4
73	Plasma-surface interaction and surface diffusion during silicon-based thin-film growth. <i>IEEE Transactions on Plasma Science</i> , <b>2005</b> , 33, 234-235	1.3	4
72	Excellent surface passivation of germanium by a-Si:H/Al <sub>2</sub> O <sub>3</sub> stacks. <i>Journal of Applied Physics</i> , <b>2021</b> , 130, 135303	2.5	4
71	Self-aligned local contact opening and n+ diffusion by single-step laser doping from PO <sub>x</sub> /Al <sub>2</sub> O <sub>3</sub> passivation stacks. <i>Solar Energy Materials and Solar Cells</i> , <b>2020</b> , 217, 110717	6.4	4
70	Excellent Passivation of n-Type Silicon Surfaces Enabled by Pulsed-Flow Plasma-Enhanced Chemical Vapor Deposition of Phosphorus Oxide Capped by Aluminum Oxide. <i>Physica Status Solidi - Rapid Research Letters</i> , <b>2021</b> , 15, 2000399	2.5	4
69	Opportunities of Atomic Layer Deposition for Perovskite Solar Cells. <i>ECS Transactions</i> , <b>2015</b> , 69, 15-22	1	3
68	Light-Induced Reversible Optical Properties of Hydrogenated Amorphous Silicon: A Promising Optically Programmable Photonic Material. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2018</b> , 215, 1700754	1.6	3
67	Dependence of coil sensitivity on sample thickness in inductively coupled photoconductance measurements <b>2019</b> ,		3
66	Second-harmonic intensity and phase spectroscopy as a sensitive method to probe the space-charge field in Si(100) covered with charged dielectrics. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2014</b> , 32, 021103	2.9	3
65	Room Temperature Sensing of O <sub>2</sub> and CO by Atomic Layer Deposition Prepared ZnO Films Coated with Pt Nanoparticles. <i>ECS Transactions</i> , <b>2013</b> , 58, 203-214	1	3
64	A New Concept for Spatially-Divided Reactive Ion Etching with ALD-Based Passivation. <i>ECS Transactions</i> , <b>2013</b> , 50, 73-82	1	3
63	ALD of SrTiO <sub>3</sub> and Pt for Pt/SrTiO <sub>3</sub> /Pt MIM Structures: Growth and Crystallization Study. <i>ECS Transactions</i> , <b>2013</b> , 58, 153-162	1	3
62	The ALU+ concept: N-type silicon solar cells with surface-passivated screen-printed aluminum-alloyed rear emitter <b>2009</b> ,		3
61	The a-Si:H Growth Mechanism: Temperature Study of the SiH <sub>3</sub> Surface Reactivity and the Surface Silicon Hydride Composition During Film Growth. <i>Materials Research Society Symposia Proceedings</i> , <b>2003</b> , 762, 931		3
60	Analysis of a-Si:H subgap absorption spectra obtained from absolute cavity ringdown absorption spectroscopy using an empirical DOS model. <i>Journal of Non-Crystalline Solids</i> , <b>2004</b> , 338-340, 408-411	3.9	3
59	Plasma-assisted Atomic Layer Deposition of TiN Films at low Deposition Temperature for High-aspect Ratio Applications. <i>Materials Research Society Symposia Proceedings</i> , <b>2005</b> , 863, B6.4-1		3
58	Modeling of the formation of cationic silicon clusters in a remote Ar/H <sub>2</sub> /SiH <sub>4</sub> plasma. <i>Journal of Applied Physics</i> , <b>2000</b> , 88, 537-543	2.5	3

57	High-rate deposition of a-SiN <sub>x</sub> :H films for photovoltaic applications. <i>Materials Research Society Symposia Proceedings</i> , <b>2001</b> , 664, 861		3
56	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
55	HIGH-RATE SILICON NITRIDE DEPOSITION FOR PHOTOVOLTAICS: FROM FUNDAMENTALS TO INDUSTRIAL APPLICATION. <i>High Temperature Material Processes</i> , <b>2005</b> , 9, 141-157	1.8	3
54	The chemistry and energetics of the interface between metal halide perovskite and atomic layer deposited metal oxides. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2020</b> , 38, 063206	2.9	3
53	Plasma-Enhanced Atomic Layer Deposition of Cobalt and Cobalt Nitride: What Controls the Incorporation of Nitrogen?. <i>Journal of Physical Chemistry C</i> , <b>2020</b> , 124, 22046-22054	3.8	3
52	Reaction Mechanisms during Atomic Layer Deposition of AlF Using Al(CH <sub>3</sub> ) and SF Plasma. <i>Journal of Physical Chemistry C</i> , <b>2021</b> , 125, 3913-3923	3.8	3
51	Conformal Growth of Nanometer-Thick Transition Metal Dichalcogenide TiS <sub>2</sub> -NbS <sub>2</sub> Heterostructures over 3D Substrates by Atomic Layer Deposition: Implications for Device Fabrication. <i>ACS Applied Nano Materials</i> , <b>2021</b> , 4, 514-521	5.6	3
50	Atomic-layer deposited passivation schemes for c-Si solar cells <b>2017</b> ,		2
49	Identifying parasitic current pathways in CIGS solar cells by modelling dark JV response <b>2014</b> ,		2
48	Compositional and Structural Analysis of Al-doped ZnO Multilayers by LEAP. <i>Microscopy and Microanalysis</i> , <b>2014</b> , 20, 526-527	0.5	2
47	On the synergistic effect of inorganic/inorganic barrier layers: An ellipsometric porosimetry investigation. <i>Plasma Processes and Polymers</i> , <b>2017</b> , 14, 1700012	3.4	2
46	Crystallization Study by Transmission Electron Microscopy of SrTiO <sub>3</sub> Thin Films Prepared by Plasma-Assisted ALD. <i>ECS Transactions</i> , <b>2013</b> , 50, 69-77	1	2
45	Good Surface Passivation of C-Si by High Rate Plasma Deposited Silicon Oxide <b>2006</b> ,		2
44	Roughness evolution of high-rate deposited a-SiN <sub>x</sub> :H films studied by atomic force microscopy and real time spectroscopic ellipsometry. <i>Materials Research Society Symposia Proceedings</i> , <b>2004</b> , 808, 532		2
43	Spectroscopic second harmonic generation as a diagnostic tool in silicon materials processing. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2005</b> , 2, 3968-3972		2
42	Wall-association processes in expanding thermal hydrogen plasmas. <i>IEEE Transactions on Plasma Science</i> , <b>2002</b> , 30, 146-147	1.3	2
41	Relation between Growth Precursors and Film Properties for Plasma Deposition of a-Si:H at Rates up to 100 Å/s. <i>Materials Research Society Symposia Proceedings</i> , <b>2000</b> , 609, 421		2
40	Thin Film Cavity Ringdown Spectroscopy and Second Harmonic Generation on Thin a-Si:H Films. <i>Materials Research Society Symposia Proceedings</i> , <b>2003</b> , 762, 1981		2

39	Atmospheric-Pressure Plasma-Enhanced Spatial ALD of SiO Studied by Gas-Phase Infrared and Optical Emission Spectroscopy. <i>Journal of Physical Chemistry C</i> , <b>2021</b> , 125, 24945-24957	3.8	2
38	Passivation Enhancement of Poly-Si Carrier-Selective Contacts by Applying ALD Al <sub>2</sub> O <sub>3</sub> Capping Layers. <i>IEEE Journal of Photovoltaics</i> , <b>2021</b> , 1-8	3.7	2
37	Synthesis of edge-enriched WS <sub>2</sub> on high surface area WS <sub>2</sub> framework by atomic layer deposition for electrocatalytic hydrogen evolution reaction. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2020</b> , 38, 062201	2.9	2
36	Oxygen Recombination Probability Data for Plasma-Assisted Atomic Layer Deposition of SiO and TiO. <i>Journal of Physical Chemistry C</i> , <b>2021</b> , 125, 8244-8252	3.8	2
35	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
34	On the Contact Optimization of ALD-Based MoS FETs: Correlation of Processing Conditions and Interface Chemistry with Device Electrical Performance. <i>ACS Applied Electronic Materials</i> , <b>2021</b> , 3, 3185-3199	4.1	2
33	Atomic-layer deposited passivation schemes for c-Si solar cells <b>2016</b> ,		2
32	Data on dopant characteristics and band alignment of CdTe cells with and without a ZnO highly-resistive-transparent buffer layer. <i>Data in Brief</i> , <b>2019</b> , 22, 218-221	1.2	2
31	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
30	Atomic layer deposition of LiF using LiN(SiMe) and SF plasma. <i>Physical Chemistry Chemical Physics</i> , <b>2021</b> , 23, 9304-9314	3.6	2
29	Innovative remote plasma source for atomic layer deposition for GaN devices. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2021</b> , 39, 062403	2.9	2
28	Nucleation of microcrystalline silicon: on the effect of the substrate surface nature and nano-imprint topography. <i>Journal Physics D: Applied Physics</i> , <b>2016</b> , 49, 055205	3	1
27	p-type nc-SiOx:H emitter layer for silicon heterojunction solar cells grown by rf-PECVD. <i>Materials Research Society Symposia Proceedings</i> , <b>2015</b> , 1770, 7-12		1
26	Expanding Thermal Plasma deposited a-Si:H thin films for surface passivation of c-Si wafers <b>2010</b> ,		1
25	Roughening during XeF <sub>2</sub> etching of Si(100) through interface layers: H:Si(100) and a-SiSi(100). <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2009</b> , 27, 367-375	2.9	1
24	Highly Efficient Microcrystalline Silicon Solar Cells Deposited from a Pure SiH <sub>4</sub> Flow. <i>Materials Research Society Symposia Proceedings</i> , <b>2006</b> , 910, 1		1
23	Plasma properties of a novel commercial plasma source for high-throughput processing of c-Si solar cells		1
22	Hard Amorphous Hydrogenated Carbon Films Deposited from an Expanding Thermal Plasma. <i>Materials Research Society Symposia Proceedings</i> , <b>1996</b> , 436, 287		1

21	On the Role of Surface Diffusion and Its Relation to the Hydrogen Incorporation During Hydrogenated Amorphous Silicon Growth. <i>Materials Research Society Symposia Proceedings</i> , <b>2003</b> , 762, 1031		1
20	Expanding thermal plasma for low-k dielectrics deposition. <i>Materials Research Society Symposia Proceedings</i> , <b>2003</b> , 766, 691		1
19	On the Surface Roughness Evolution During a-Si:H Growth. <i>Materials Research Society Symposia Proceedings</i> , <b>2002</b> , 715, 1511		1
18	Influence of the spatial extent of the space-charge region in c-Si on the electric-field-induced second-harmonic-generation effect. <i>Journal of the Optical Society of America B: Optical Physics</i> , <b>2021</b> , 38, 1840	1.7	1
17	Status and prospects for atomic layer deposited metal oxide thin films in passivating contacts for c-Si photovoltaics <b>2016</b> ,		1
16	Deep Reactive Ion Etching of Through Silicon Vias <b>2008</b> , 45-91		1
15	PO /AlO Stacks for c-Si Surface Passivation: Material and Interface Properties. <i>ACS Applied Electronic Materials</i> , <b>2021</b> , 3, 4337-4347	4	0
14	Preface for the AVS Peter Mark award 40th anniversary collection. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2021</b> , 39, 031601	2.9	0
13	Atomic insights into the oxygen incorporation in atomic layer deposited conductive nitrides and its mitigation by energetic ions. <i>Nanoscale</i> , <b>2021</b> , 13, 10092-10099	7.7	0
12	Controlling transition metal atomic ordering in two-dimensional Mo <sub>1-x</sub> W <sub>x</sub> S <sub>2</sub> alloys. <i>2D Materials</i> , <b>2022</b> , 9, 025016	5.9	0
11	Thickness and Morphology Dependent Electrical Properties of ALD-Synthesized MoS <sub>2</sub> FETs. <i>Advanced Electronic Materials</i> , <b>2022</b> , 8, 2100781	6.4	0
10	Extracting surface recombination parameters of germanium/dielectric interfaces by corona-lifetime experiments. <i>Journal of Applied Physics</i> , <b>2022</b> , 131, 195301	2.5	0
9	Corrigendum to Expanding Thermal Plasma Chemical Vapour Deposition of ZnO:Al Layers for CIGS Solar Cells <i>International Journal of Photoenergy</i> , <b>2015</b> , 2015, 1-1	2.1	
8	Studies into the Growth Mechanism of a-Si:H Using in situ Cavity Ring-Down Techniques 237-271		
7	Real-time study of HWCVD a-Si:H film growth using optical second harmonic generation spectroscopy. <i>Thin Solid Films</i> , <b>2006</b> , 501, 70-74	2.2	
6	Advanced Plasma Diagnostics for Thin-Film Deposition 117-136		
5	High-rate a-Si:H and $\mu$ -Si:H Film Growth Studied by Advanced Plasma and in situ Film Diagnostics. <i>Materials Research Society Symposia Proceedings</i> , <b>2002</b> , 715, 2561		
4	Novel in situ and real-time optical probes to detect (surface) defect states of a-Si:H. <i>Materials Research Society Symposia Proceedings</i> , <b>2005</b> , 862, 1431		

- 3 High-rate (> 1nm/s) and low-temperature (Materials Research Society Symposia Proceedings, **2003**, 762, 1861
- 2 Corrigendum #2 to Expanding Thermal Plasma Chemical Vapour Deposition of ZnO:Al Layers for CIGS Solar Cells *International Journal of Photoenergy*, **2020**, 2020, 1-1 2.1
- 1 Factors limiting the doping efficiency in atomic layer deposited ZnO:Al thin films: a dopant distribution study by transmission electron microscopy and atom probe tomography **2016**, 888-889