

Eray S Aydil

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h-index

114
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214
ext. papers

14,725
ext. citations

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L-index

#	Paper	IF	Citations
205	Growth of oriented single-crystalline rutile TiO ₂ nanorods on transparent conducting substrates for dye-sensitized solar cells. <i>Journal of the American Chemical Society</i> , 2009 , 131, 3985-90	16.4	2070
204	Nanowire-based dye-sensitized solar cells. <i>Applied Physics Letters</i> , 2005 , 86, 053114	3.4	905
203	Photosensitization of ZnO nanowires with CdSe quantum dots for photovoltaic devices. <i>Nano Letters</i> , 2007 , 7, 1793-8	11.5	880
202	Hot-electron transfer from semiconductor nanocrystals. <i>Science</i> , 2010 , 328, 1543-7	33.3	703
201	Polyethylene glycol-coated biocompatible surfaces. <i>Journal of Biomedical Materials Research Part B</i> , 2000 , 51, 343-51		460
200	Synthesis and characterization of ZnO nanowires and their integration into dye-sensitized solar cells. <i>Nanotechnology</i> , 2006 , 17, S304-S312	3.4	373
199	Mechanism of hydrogen-induced crystallization of amorphous silicon. <i>Nature</i> , 2002 , 418, 62-5	50.4	340
198	Dye-sensitized solar cells based on semiconductor morphologies with ZnO nanowires. <i>Solar Energy Materials and Solar Cells</i> , 2006 , 90, 607-622	6.4	317
197	Solar cells based on junctions between colloidal PbSe nanocrystals and thin ZnO films. <i>ACS Nano</i> , 2009 , 3, 3638-48	16.7	235
196	Nonthermal Plasma Synthesis of Nanocrystals: Fundamental Principles, Materials, and Applications. <i>Chemical Reviews</i> , 2016 , 116, 11061-127	68.1	233
195	Doping high-surface-area mesoporous TiO ₂ microspheres with carbonate for visible light hydrogen production. <i>Energy and Environmental Science</i> , 2014 , 7, 2592	35.4	232
194	Imaging and phase identification of Cu ₂ ZnSnS ₄ thin films using confocal Raman spectroscopy. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2011 , 29, 051203	2.9	208
193	Size control and quantum confinement in Cu ₂ ZnSnS ₄ nanocrystals. <i>Chemical Communications</i> , 2011 , 47, 11721-3	5.8	193
192	Photovoltaic manufacturing: Present status, future prospects, and research needs. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2011 , 29, 030801	2.9	192
191	Stable ordering in Langmuir-Blodgett films. <i>Science</i> , 2001 , 293, 1292-5	33.3	191
190	Calculation of the lattice dynamics and Raman spectra of copper zinc tin chalcogenides and comparison to experiments. <i>Journal of Applied Physics</i> , 2012 , 111, 083707	2.5	190
189	TiO ₂ -B/anatase core-shell heterojunction nanowires for photocatalysis. <i>ACS Applied Materials & Interfaces</i> , 2011 , 3, 4444-50	9.5	149

188	Oriented single crystalline titanium dioxide nanowires. <i>Nanotechnology</i> , 2008 , 19, 505604	3.4	129
187	Silicon hydride composition of plasma-deposited hydrogenated amorphous and nanocrystalline silicon films and surfaces. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1998 , 16, 3199-3210	2.9	119
186	Modeling of the sheath and the energy distribution of ions bombarding rf-biased substrates in high density plasma reactors and comparison to experimental measurements. <i>Journal of Applied Physics</i> , 1999 , 86, 4799-4812	2.5	119
185	Alkali-metal-enhanced grain growth in Cu ₂ ZnSnS ₄ thin films. <i>Energy and Environmental Science</i> , 2014 , 7, 1931-1938	35.4	111
184	Electron transport and recombination in polycrystalline TiO ₂ nanowire dye-sensitized solar cells. <i>Applied Physics Letters</i> , 2007 , 91, 123116	3.4	110
183	Investigation of SiO ₂ plasma enhanced chemical vapor deposition through tetraethoxysilane using attenuated total reflection Fourier transform infrared spectroscopy. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1995 , 13, 2355-2367	2.9	107
182	Growth mechanism and characterization of zinc oxide hexagonal columns. <i>Applied Physics Letters</i> , 2003 , 83, 3797-3799	3.4	106
181	Strong electronic coupling in two-dimensional assemblies of colloidal PbSe quantum dots. <i>ACS Nano</i> , 2009 , 3, 1532-8	16.7	104
180	Effect of chamber wall conditions on Cl and Cl ₂ concentrations in an inductively coupled plasma reactor. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2002 , 20, 43-52	2.9	99
179	Valence Band Alignment at Cadmium Selenide Quantum Dot and Zinc Oxide (101 0) Interfaces. <i>Journal of Physical Chemistry C</i> , 2008 , 112, 8419-8423	3.8	95
178	Electron transport and recombination in dye-sensitized solar cells made from single-crystal rutile TiO ₂ nanowires. <i>Physical Chemistry Chemical Physics</i> , 2009 , 11, 9648-52	3.6	88
177	Growth mechanism of titanium dioxide nanowires for dye-sensitized solar cells. <i>Nanotechnology</i> , 2008 , 19, 095604	3.4	88
176	Study of surface reactions during plasma enhanced chemical vapor deposition of SiO ₂ from SiH ₄ , O ₂ , and Ar plasma. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1996 , 14, 2062-2070	2.9	88
175	Nanowire-quantum-dot solar cells and the influence of nanowire length on the charge collection efficiency. <i>Applied Physics Letters</i> , 2009 , 95, 193103	3.4	85
174	On the growth mechanism of a-Si:H. <i>Thin Solid Films</i> , 2001 , 383, 154-160	2.2	84
173	Heteroepitaxial growth of Cu ₂ O thin film on ZnO by metal organic chemical vapor deposition. <i>Journal of Crystal Growth</i> , 2009 , 311, 4188-4192	1.6	83
172	Epitaxial growth of ZnO nanowires on a- and c-plane sapphire. <i>Journal of Crystal Growth</i> , 2005 , 274, 407-411	4.1	83
171	Modeling of SiO ₂ deposition in high density plasma reactors and comparisons of model predictions with experimental measurements. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1998 , 16, 544-563	2.9	83

170	Luminescence from plasma deposited silicon films. <i>Journal of Applied Physics</i> , 1997 , 81, 2410-2417	2.5	78
169	Energy distribution of ions bombarding biased electrodes in high density plasma reactors. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1999 , 17, 506-516	2.9	73
168	Etching of high aspect ratio structures in Si using SF ₆ /O ₂ plasma. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2004 , 22, 606	2.9	72
167	Influence of Atmospheric Gases on the Electrical Properties of PbSe Quantum-Dot Films. <i>Journal of Physical Chemistry C</i> , 2010 , 114, 9988-9996	3.8	69
166	Maintaining reproducible plasma reactor wall conditions: SF ₆ plasma cleaning of films deposited on chamber walls during Cl ₂ /O ₂ plasma etching of Si. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2002 , 20, 1195-1201	2.9	69
165	Plasma-induced crystallization of silicon nanoparticles. <i>Journal Physics D: Applied Physics</i> , 2014 , 47, 075202		68
164	Low-temperature plasma enhanced chemical vapor deposition of SiO ₂ . <i>Applied Physics Letters</i> , 1994 , 65, 3185-3187	3.4	68
163	High electron mobility in thin films formed via supersonic impact deposition of nanocrystals synthesized in nonthermal plasmas. <i>Nature Communications</i> , 2014 , 5, 5822	17.4	67
162	First principles calculation of the electronic properties and lattice dynamics of Cu ₂ ZnSn(S _{1-x} Se _x) ₄ . <i>Journal of Applied Physics</i> , 2012 , 111, 123704	2.5	64
161	Reasons for lower dielectric constant of fluorinated SiO ₂ films. <i>Journal of Applied Physics</i> , 1998 , 83, 2172-2178	2.5	63
160	Absolute densities of N and excited N ₂ in a N ₂ plasma. <i>Applied Physics Letters</i> , 2003 , 83, 4918-4920	3.4	63
159	Anatase TiO ₂ films with reactive {001} facets on transparent conductive substrate. <i>Chemical Communications</i> , 2011 , 47, 9507-9	5.8	62
158	Effect of H ₂ addition on surface reactions during CF ₄ /H ₂ plasma etching of silicon and silicon dioxide films. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1997 , 15, 2508-2517	2.9	62
157	Atomistic simulation study of the interactions of SiH ₃ radicals with silicon surfaces. <i>Journal of Applied Physics</i> , 1999 , 86, 2872-2888	2.5	62
156	Microstructure Evolution and Crystal Growth in Cu ₂ ZnSnS ₄ Thin Films Formed By Annealing Colloidal Nanocrystal Coatings. <i>Chemistry of Materials</i> , 2014 , 26, 3191-3201	9.6	61
155	Abstraction of hydrogen by SiH ₃ from hydrogen-terminated Si(001)-(2 \times 1) surfaces. <i>Surface Science</i> , 1998 , 418, L8-L13	1.8	61
154	Effect of hydrogen on catalyst nanoparticles in carbon nanotube growth. <i>Journal of Applied Physics</i> , 2010 , 108, 053303	2.5	60
153	Structure and chemical composition of fluorinated SiO ₂ films deposited using SiF ₄ /O ₂ plasmas. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1997 , 15, 2893-2904	2.9	60

152	Low temperature plasma deposition of silicon nitride from silane and nitrogen plasmas. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1998 , 16, 2794-2803	2.9	58
151	Interactions of SiH radicals with silicon surfaces: An atomic-scale simulation study. <i>Journal of Applied Physics</i> , 1998 , 84, 3895-3911	2.5	57
150	Compact floating ion energy analyzer for measuring energy distributions of ions bombarding radio-frequency biased electrode surfaces. <i>Review of Scientific Instruments</i> , 1999 , 70, 2689-2698	1.7	57
149	Investigation of low temperature SiO ₂ plasma enhanced chemical vapor deposition. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 1996 , 14, 738		54
148	Crossover from nanoscopic intergranular hopping to conventional charge transport in pyrite thin films. <i>ACS Nano</i> , 2013 , 7, 2781-9	16.7	52
147	Measurement of absolute radical densities in a plasma using modulated-beam line-of-sight threshold ionization mass spectrometry. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2004 , 22, 71-81	2.9	52
146	Transport Limited Growth of Zinc Oxide Nanowires. <i>Crystal Growth and Design</i> , 2009 , 9, 2783-2789	3.5	51
145	Nonequilibrium-Plasma-Synthesized ZnO Nanocrystals with Plasmon Resonance Tunable via Al Doping and Quantum Confinement. <i>Nano Letters</i> , 2015 , 15, 8162-9	11.5	50
144	Orientation and morphological evolution of catalyst nanoparticles during carbon nanotube growth. <i>ACS Nano</i> , 2010 , 4, 5087-94	16.7	47
143	Surface hydride composition of plasma deposited hydrogenated amorphous silicon: in situ infrared study of ion flux and temperature dependence. <i>Surface Science</i> , 2003 , 530, 1-16	1.8	46
142	Computational Study of Structural and Electronic Properties of Lead-Free CsMI ₃ Perovskites (M = Ge, Sn, Pb, Mg, Ca, Sr, and Ba). <i>Journal of Physical Chemistry C</i> , 2018 , 122, 7838-7848	3.8	45
141	Rapid facile synthesis of Cu ₂ ZnSnS ₄ nanocrystals. <i>Journal of Materials Chemistry A</i> , 2014 , 2, 10389-10395	3	45
140	Infrared detection of hydrogen-generated free carriers in polycrystalline ZnO thin films. <i>Journal of Applied Physics</i> , 2005 , 97, 043522	2.5	44
139	New diagnostic method for monitoring plasma reactor walls: Multiple total internal reflection Fourier transform infrared surface probe. <i>Review of Scientific Instruments</i> , 2001 , 72, 3260-3269	1.7	44
138	Abstraction of atomic hydrogen by atomic deuterium from an amorphous hydrogenated silicon surface. <i>Journal of Chemical Physics</i> , 2002 , 117, 10805-10816	3.9	44
137	Evolution of structure, morphology, and reactivity of hydrogenated amorphous silicon film surfaces grown by molecular-dynamics simulation. <i>Applied Physics Letters</i> , 2001 , 78, 2685-2687	3.4	43
136	Deposition of silicon oxychloride films on chamber walls during Cl ₂ /O ₂ plasma etching of Si. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2002 , 20, 499-506	2.9	43
135	Self-Regulation of Cu/Sn Ratio in the Synthesis of Cu ₂ ZnSnS ₄ Films. <i>Chemistry of Materials</i> , 2015 , 27, 2507-2514	9.6	42

134	Visible luminescence from nanocrystalline silicon films produced by plasma enhanced chemical vapor deposition. <i>Applied Physics Letters</i> , 1996 , 68, 1415-1417	3.4	42
133	Multiple steady states in electron cyclotron resonance plasma reactors. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1993 , 11, 2883-2892	2.9	41
132	Real-Time, In Situ Monitoring of Room-Temperature Silicon Surface Cleaning Using Hydrogen and Ammonia Plasmas. <i>Journal of the Electrochemical Society</i> , 1993 , 140, 3316-3321	3.9	40
131	Ammonia plasma passivation of GaAs in downstream microwave and radio-frequency parallel plate plasma reactors. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 1993 , 11, 195		39
130	Synthesis of single-crystalline anatase nanorods and nanoflakes on transparent conducting substrates. <i>Chemical Communications</i> , 2012 , 48, 8565-7	5.8	38
129	Feature-scale model of Si etching in SF6 plasma and comparison with experiments. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2005 , 23, 99-113	2.9	36
128	Langmuir probe measurements of electron energy probability functions in dusty plasmas. <i>Journal Physics D: Applied Physics</i> , 2015 , 48, 105204	3	35
127	An analysis of temperature dependent current-voltage characteristics of Cu ₂ O/ZnO heterojunction solar cells. <i>Thin Solid Films</i> , 2011 , 519, 6613-6619	2.2	35
126	Hydrogen-induced crystallization of amorphous silicon thin films. I. Simulation and analysis of film postgrowth treatment with H ₂ plasmas. <i>Journal of Applied Physics</i> , 2006 , 100, 053514	2.5	35
125	Phase Stability and Stoichiometry in Thin Film Iron Pyrite: Impact on Electronic Transport Properties. <i>ACS Applied Materials & Interfaces</i> , 2015 , 7, 14130-9	9.5	34
124	Electron Dynamics at the ZnO (101 0) Surface. <i>Journal of Physical Chemistry C</i> , 2008 , 112, 14682-14692	3.8	34
123	Effects of Chamber Wall Conditions on Cl Concentration and Si Etch Rate Uniformity in Plasma Etching Reactors. <i>Journal of the Electrochemical Society</i> , 2003 , 150, G418	3.9	33
122	Mechanism and energetics of dissociative adsorption of SiH ₃ on the hydrogen-terminated Si(001)-(2 \times 1) surface. <i>Chemical Physics Letters</i> , 2000 , 329, 304-310	2.5	33
121	Theoretical and Experimental Investigations of Chlorine RF Glow Discharges: I. Theoretical. <i>Journal of the Electrochemical Society</i> , 1992 , 139, 1396-1406	3.9	33
120	Relation between the ion flux, gas phase composition, and wall conditions in chlorine plasma etching of silicon. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2003 , 21, 589-595	2.9	31
119	Sputter deposition of semicrystalline tin dioxide films. <i>Thin Solid Films</i> , 2012 , 520, 2554-2561	2.2	30
118	Oriented single-crystalline TiO ₂ nanowires on titanium foil for lithium ion batteries. <i>Journal of Materials Research</i> , 2010 , 25, 1588-1594	2.5	30
117	Theoretical study of the interactions of SiH ₂ radicals with silicon surfaces. <i>Journal of Applied Physics</i> , 1999 , 86, 5497-5508	2.5	30

116	Microstructure Evolution During Selenization of Cu ₂ ZnSnS ₄ Colloidal Nanocrystal Coatings. <i>Chemistry of Materials</i> , 2016 , 28, 1266-1276	9.6	29
115	Requirements for plasma synthesis of nanocrystals at atmospheric pressures. <i>Journal Physics D: Applied Physics</i> , 2015 , 48, 035205	3	29
114	Hydrogen-induced crystallization of amorphous Si thin films. II. Mechanisms and energetics of hydrogen insertion into Si _i Si bonds. <i>Journal of Applied Physics</i> , 2006 , 100, 053515	2.5	29
113	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> , 2002 , 20, 781-789	2.9	28
112	Modeling of Plasma Etching Reactors Including Wafer Heating Effects. <i>Journal of the Electrochemical Society</i> , 1993 , 140, 1471-1481	3.9	28
111	Structure and composition of Zn(x)Cd(1-xS) films synthesized through chemical bath deposition. <i>ACS Applied Materials & Interfaces</i> , 2012 , 4, 3676-84	9.5	27
110	Detection of combinative infrared absorption bands in thin silicon dioxide films. <i>Applied Physics Letters</i> , 1997 , 70, 3269-3271	3.4	27
109	Mechanism and activation energy barrier for H abstraction by H(D) from a-Si:H surfaces. <i>Surface Science</i> , 2002 , 515, L469-L474	1.8	27
108	Effect of Nanocrystal Size and Carbon on Grain Growth during Annealing of Copper Zinc Tin Sulfide Nanocrystal Coatings. <i>Chemistry of Materials</i> , 2017 , 29, 1676-1683	9.6	26
107	Materials science. Getting Moore from solar cells. <i>Science</i> , 2012 , 338, 625-6	33.3	26
106	Feature-scale model of Si etching in SF ₆ /D ₂ plasma and comparison with experiments. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2005 , 23, 1430-1439	2.9	26
105	ZnO Nanocrystal Networks Near the Insulator-Metal Transition: Tuning Contact Radius and Electron Density with Intense Pulsed Light. <i>Nano Letters</i> , 2017 , 17, 4634-4642	11.5	25
104	Formation of Copper Zinc Tin Sulfide Thin Films from Colloidal Nanocrystal Dispersions via Aerosol-Jet Printing and Compaction. <i>ACS Applied Materials & Interfaces</i> , 2015 , 7, 11526-35	9.5	25
103	Cu ₂ (ZnSnS ₄) nanocrystal dispersions in polar liquids. <i>Chemical Communications</i> , 2013 , 49, 3549-51	5.8	25
102	Synthesis of Cu ₂ (Zn _{1-x} Cox)SnS ₄ nanocrystals and formation of polycrystalline thin films from their aqueous dispersions. <i>Journal of Materials Chemistry A</i> , 2018 , 6, 999-1008	13	24
101	Selective removal of Cu ₂ (S,Se) phases from Cu ₂ ZnSn(S,Se) ₄ thin films. <i>Green Chemistry</i> , 2016 , 18, 5814-5821	9.2	24
100	Atomistic calculation of the SiH ₃ surface reactivity during plasma deposition of amorphous silicon thin films. <i>Surface Science</i> , 2004 , 572, L339-L347	1.8	24
99	Surface smoothening mechanism of amorphous silicon thin films. <i>Physical Review Letters</i> , 2005 , 95, 216102	9.2	24

98	Functionalization of Cadmium Selenide Quantum Dots with Poly(ethylene glycol): Ligand Exchange, Surface Coverage, and Dispersion Stability. <i>Langmuir</i> , 2017 , 33, 8239-8245	4	23
97	Incidence angle distributions of ions bombarding grounded surfaces in high density plasma reactors. <i>Materials Science in Semiconductor Processing</i> , 1998 , 1, 75-82	4.3	23
96	Plasma and surface diagnostics during plasma-enhanced chemical vapor deposition of SiO ₂ from SiH ₄ /O ₂ /Ar discharges. <i>Thin Solid Films</i> , 1996 , 290-291, 427-434	2.2	23
95	Real-time monitoring of surface chemistry during plasma processing. <i>Pure and Applied Chemistry</i> , 1994 , 66, 1381-1388	2.1	23
94	Theoretical and Experimental Investigations of Chlorine RF Glow Discharges: II . Experimental. <i>Journal of the Electrochemical Society</i> , 1992 , 139, 1406-1412	3.9	23
93	Catalyst rotation, twisting, and bending during multiwall carbon nanotube growth. <i>Carbon</i> , 2010 , 48, 3840-3845	10.4	22
92	Metal-oxide broken-gap tunnel junction for copper indium gallium diselenide tandem solar cells. <i>Solar Energy Materials and Solar Cells</i> , 2015 , 133, 133-142	6.4	21
91	Effects of Water Adsorption and Surface Oxidation on the Electrical Conductivity of Silicon Nanocrystal Films. <i>Journal of Physical Chemistry C</i> , 2013 , 117, 4211-4218	3.8	21
90	Hydrogen etching and cutting of multiwall carbon nanotubes. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2010 , 28, 1187-1194	1.3	21
89	Improving the damp-heat stability of copper indium gallium diselenide solar cells with a semicrystalline tin dioxide overlayer. <i>Solar Energy Materials and Solar Cells</i> , 2012 , 101, 270-276	6.4	20
88	Metallorganic Chemical Vapor Deposition of ZnO Nanowires from Zinc Acetylacetonate and Oxygen. <i>Journal of the Electrochemical Society</i> , 2009 , 156, H52	3.9	20
87	Feature scale model of Si etching in SF ₆ /D ₂ /Br plasma and comparison with experiments. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2006 , 24, 350-361	2.9	20
86	Angle-dependent photoluminescence spectra of hydrogenated amorphous silicon thin films. <i>Applied Physics Letters</i> , 2000 , 77, 3346-3348	3.4	20
85	Real-time, in situ monitoring of surface reactions during plasma passivation of GaAs. <i>Applied Physics Letters</i> , 1993 , 62, 3156-3158	3.4	20
84	Transport Evidence for Sulfur Vacancies as the Origin of Unintentional n-Type Doping in Pyrite FeS. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 15552-15563	9.5	19
83	Deposition of nanocrystalline silicon films at room temperature. <i>Journal of Applied Physics</i> , 2007 , 102, 043305	2.5	19
82	Potential resolution to the doping puzzle in iron pyrite: Carrier type determination by Hall effect and thermopower. <i>Physical Review Materials</i> , 2017 , 1,	3.2	19
81	Lead-free double perovskites CsInCuCl and (CHNH)InCuCl: electronic, optical, and electrical properties. <i>Nanoscale</i> , 2019 , 11, 11173-11182	7.7	18

80	Nonthermal plasma synthesis of metal sulfide nanocrystals from metalorganic vapor and elemental sulfur. <i>Journal Physics D: Applied Physics</i> , 2015 , 48, 314004	3	18
79	Structural and electrical properties of Cu ₂ O thin films deposited on ZnO by metal organic chemical vapor deposition. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2010 , 28, 1338-1343	2.9	18
78	Growth and characterization of hydrogenated amorphous silicon thin films from SiH ₂ radical precursor: Atomic-scale analysis. <i>Journal of Applied Physics</i> , 2004 , 95, 1792-1805	2.5	18
77	Mechanisms and energetics of SiH ₃ adsorption on the pristine Si(001)-(2×1) surface. <i>Chemical Physics Letters</i> , 2001 , 344, 249-255	2.5	18
76	Atomistic simulation of SiH interactions with silicon surfaces during deposition from silane containing plasmas. <i>Applied Physics Letters</i> , 1998 , 72, 578-580	3.4	18
75	Real time in situ monitoring of surfaces during glow discharge processing: NH ₃ and H ₂ plasma passivation of GaAs. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 1995 , 13, 258		18
74	Electron cyclotron resonance plasma reactor for cryogenic etching. <i>Review of Scientific Instruments</i> , 1993 , 64, 3572-3584	1.7	18
73	Surface conduction in n-type pyrite FeS ₂ single crystals. <i>Physical Review Materials</i> , 2017 , 1,	3.2	18
72	Resolving the discrepancies in the reported optical absorption of low-dimensional non-toxic perovskites, Cs ₃ Bi ₂ Br ₉ and Cs ₃ BiBr ₆ . <i>Journal of Materials Chemistry C</i> , 2020 , 8, 10456-10463	7.1	18
71	Plasma synthesis of stoichiometric Cu ₂ S nanocrystals stabilized by oleylamine. <i>Chemical Communications</i> , 2014 , 50, 8346-9	5.8	17
70	Analysis of diamond nanocrystal formation from multiwalled carbon nanotubes. <i>Physical Review B</i> , 2009 , 80,	3.3	17
69	Hydrogen in SiBi bond center and platelet-like defect configurations in amorphous hydrogenated silicon. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 2004 , 22, 2719		17
68	Interaction of SiH ₃ radicals with deuterated (hydrogenated) amorphous silicon surfaces. <i>Surface Science</i> , 2005 , 598, 35-44	1.8	17
67	In Situ Probing and Atomistic Simulation of a-Si:H Plasma Deposition. <i>Materials Research Society Symposia Proceedings</i> , 2001 , 664, 111		17
66	Modeling of Heat Transport and Wafer Heating Effects during Plasma Etching. <i>Journal of the Electrochemical Society</i> , 1996 , 143, 3674-3680	3.9	17
65	Multiple steady states in a radio frequency chlorine glow discharge. <i>Journal of Applied Physics</i> , 1991 , 69, 109-114	2.5	17
64	Temperature dependence of precursor-surface interactions in plasma deposition of silicon thin films. <i>Chemical Physics Letters</i> , 2005 , 414, 61-65	2.5	16
63	Reactive sputter deposition of pyrite structure transition metal disulfide thin films: Microstructure, transport, and magnetism. <i>Journal of Applied Physics</i> , 2012 , 112, 054328	2.5	15

62	Effect of H ₂ dilution on the surface composition of plasma-deposited silicon films from SiH ₄ . <i>Applied Surface Science</i> , 1998 , 133, 148-151	6.7	15
61	Formation and removal of composite halogenated silicon oxide and fluorocarbon films deposited on chamber walls during plasma etching of multiple film stacks. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 2002 , 20, 1933		15
60	Controlling Cu ₂ ZnSnS ₄ (CZTS) phase in microwave solvothermal synthesis. <i>Journal of Materials Chemistry A</i> , 2017 , 5, 23179-23189	13	14
59	Sulfur Vacancy Clustering and Its Impact on Electronic Properties in Pyrite FeS ₂ . <i>Chemistry of Materials</i> , 2020 , 32, 4820-4831	9.6	14
58	Excited-State Dynamics in CZTS Nanocrystals. <i>Journal of Physical Chemistry Letters</i> , 2013 , 4, 2711-2714	6.4	14
57	Sputtered metal oxide broken gap junctions for tandem solar cells. <i>Solar Energy Materials and Solar Cells</i> , 2015 , 132, 515-522	6.4	13
56	Synthesis of Cu ₂ ZnSnS ₄ thin films directly onto conductive substrates via selective thermolysis using microwave energy. <i>Chemical Communications</i> , 2014 , 50, 5902-4	5.8	13
55	Structure optimization for a high efficiency CIGS solar cell 2010 ,		13
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