Harry A Atwater

List of Publications by Year in descending order

759 papers	61,202 citations	1368 108 h-index	981 237 g-index
769 all docs	769 docs citations	769 times ranked	40965 citing authors

#	Article	IF	Citations
1	Plasmonics for improved photovoltaic devices. Nature Materials, 2010, 9, 205-213.	13.3	7,449
2	Local detection of electromagnetic energy transport below the diffraction limit in metal nanoparticle plasmon waveguides. Nature Materials, 2003, 2, 229-232.	13.3	2,207
3	Plasmonics: Localization and guiding of electromagnetic energy in metal/dielectric structures. Journal of Applied Physics, 2005, 98, 011101.	1.1	1,660
4	Broadband polarization-independent resonant light absorption using ultrathin plasmonic super absorbers. Nature Communications, 2011, 2, 517.	5.8	1,464
5	Plasmonics-A Route to Nanoscale Optical Devices. Advanced Materials, 2001, 13, 1501-1505.	11.1	1,463
6	Low-Loss Plasmonic Metamaterials. Science, 2011, 331, 290-291.	6.0	1,267
7	Comparison of the device physics principles of planar and radial p-n junction nanorod solar cells. Journal of Applied Physics, 2005, 97, 114302.	1.1	1,261
8	Enhanced absorption and carrier collection in Si wire arrays for photovoltaic applications. Nature Materials, 2010, 9, 239-244.	13.3	1,085
9	Photonic design principles for ultrahigh-efficiency photovoltaics. Nature Materials, 2012, 11, 174-177.	13.3	771
10	Plasmonic Nanostructure Design for Efficient Light Coupling into Solar Cells. Nano Letters, 2008, 8, 4391-4397.	4.5	727
11	Electromagnetic energy transfer and switching in nanoparticle chain arrays below the diffraction limit. Physical Review B, 2000, 62, R16356-R16359.	1.1	722
12	Plasmonic nanoparticle enhanced light absorption in GaAs solar cells. Applied Physics Letters, 2008, 93, .	1.5	705
13	A comparative technoeconomic analysis of renewable hydrogen production using solar energy. Energy and Environmental Science, 2016, 9, 2354-2371.	15.6	688
14	The Promise of Plasmonics. Scientific American, 2007, 296, 56-62.	1.0	680
15	Design Considerations for Plasmonic Photovoltaics. Advanced Materials, 2010, 22, 4794-4808.	11.1	645
16	Theoretical predictions for hot-carrier generation from surface plasmon decay. Nature Communications, 2014, 5, 5788.	5.8	600
17	Subwavelength integrated photonics. Nature, 2018, 560, 565-572.	13.7	594
18	Light trapping in ultrathin plasmonic solar cells. Optics Express, 2010, 18, A237.	1.7	587

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19	Field-effect electroluminescence in silicon nanocrystals. Nature Materials, 2005, 4, 143-146.	13.3	577
20	Photoelectrochemical Hydrogen Evolution Using Si Microwire Arrays. Journal of the American Chemical Society, 2011, 133, 1216-1219.	6.6	561
21	Gate-Tunable Conducting Oxide Metasurfaces. Nano Letters, 2016, 16, 5319-5325.	4.5	552
22	Photovoltaic Measurements in Single-Nanowire Silicon Solar Cells. Nano Letters, 2008, 8, 710-714.	4.5	550
23	Negative Refraction at Visible Frequencies. Science, 2007, 316, 430-432.	6.0	545
24	Nonradiative Plasmon Decay and Hot Carrier Dynamics: Effects of Phonons, Surfaces, and Geometry. ACS Nano, 2016, 10, 957-966.	7.3	534
25	Plasmonic Color Filters for CMOS Image Sensor Applications. Nano Letters, 2012, 12, 4349-4354.	4.5	531
26	PlasMOStor: A Metalâ^'Oxideâ^'Si Field Effect Plasmonic Modulator. Nano Letters, 2009, 9, 897-902.	4.5	529
27	All-optical modulation by plasmonic excitation of CdSe quantum dots. Nature Photonics, 2007, 1, 402-406.	15.6	514
28	Energy-Conversion Properties of Vapor-Liquid-Solidâ€"Grown Silicon Wire-Array Photocathodes. Science, 2010, 327, 185-187.	6.0	489
29	Observation of coupled plasmon-polariton modes in Au nanoparticle chain waveguides of different lengths: Estimation of waveguide loss. Applied Physics Letters, 2002, 81, 1714-1716.	1.5	486
30	Highly Confined Tunable Mid-Infrared Plasmonics in Graphene Nanoresonators. Nano Letters, 2013, 13, 2541-2547.	4.5	486
31	Frequency tunable near-infrared metamaterials based on VO_2 phase transition. Optics Express, 2009, 17, 18330.	1.7	485
32	Unity-Order Index Change in Transparent Conducting Oxides at Visible Frequencies. Nano Letters, 2010, 10, 2111-2116.	4.5	446
33	Optical pulse propagation in metal nanoparticle chain waveguides. Physical Review B, 2003, 67, .	1.1	382
34	Defectâ€related versus excitonic visible light emission from ion beam synthesized Si nanocrystals in SiO2. Applied Physics Letters, 1996, 69, 2033-2035.	1.5	377
35	Highly Strained Compliant Optical Metamaterials with Large Frequency Tunability. Nano Letters, 2010, 10, 4222-4227.	4.5	367
36	Observation of near-field coupling in metal nanoparticle chains using far-field polarization spectroscopy. Physical Review B, 2002, 65, .	1.1	365

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37	Optimized Spatial Correlations for Broadband Light Trapping Nanopatterns in High Efficiency Ultrathin Film a-Si:H Solar Cells. Nano Letters, 2011, 11, 4239-4245.	4.5	350
38	Rapid self-assembly of brush block copolymers to photonic crystals. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 14332-14336.	3.3	338
39	Large Integrated Absorption Enhancement in Plasmonic Solar Cells by Combining Metallic Gratings and Antireflection Coatings. Nano Letters, 2011, 11, 2195-2201.	4.5	330
40	Light Absorption Enhancement in Thinâ€Film Solar Cells Using Whispering Gallery Modes in Dielectric Nanospheres. Advanced Materials, 2011, 23, 1272-1276.	11.1	329
41	Monolithic Photoelectrochemical Device for Direct Water Splitting with 19% Efficiency. ACS Energy Letters, 2018, 3, 1795-1800.	8.8	321
42	Terawatt-scale photovoltaics: Transform global energy. Science, 2019, 364, 836-838.	6.0	320
43	Hot Hole Collection and Photoelectrochemical CO₂ Reduction with Plasmonic Au/p-GaN Photocathodes. Nano Letters, 2018, 18, 2545-2550.	4.5	307
44	Solar Cell Light Trapping beyond the Ray Optic Limit. Nano Letters, 2012, 12, 214-218.	4.5	298
45	Interband Transitions inSnxGe1âˆ'xAlloys. Physical Review Letters, 1997, 79, 1937-1940.	2.9	296
46	Hybrid Surface-Phonon-Plasmon Polariton Modes in Graphene/Monolayer h-BN Heterostructures. Nano Letters, 2014, 14, 3876-3880.	4.5	296
47	Growth of vertically aligned Si wire arrays over large areas (>1cm2) with Au and Cu catalysts. Applied Physics Letters, 2007, 91, .	1.5	274
48	Coupling electrochemical CO2 conversion with CO2 capture. Nature Catalysis, 2021, 4, 952-958.	16.1	272
49	Nanoscale Conducting Oxide PlasMOStor. Nano Letters, 2014, 14, 6463-6468.	4.5	267
50	Experimental Demonstration of >230Â° Phase Modulation in Gate-Tunable Grapheneâ€“Gold Reconfigurable Mid-Infrared Metasurfaces. Nano Letters, 2017, 17, 3027-3034.	4.5	267
51	Highly Confined Photon Transport in Subwavelength Metallic Slot Waveguides. Nano Letters, 2006, 6, 1928-1932.	4.5	265
52	A monolithically integrated, intrinsically safe, 10% efficient, solar-driven water-splitting system based on active, stable earth-abundant electrocatalysts in conjunction with tandem IIIâ€“V light absorbers protected by amorphous TiO₂ films. Energy and Environmental Science, 2015, 8, 3166-3172.	15.6	263
53	Highly efficient GaAs solar cells by limiting light emission angle. Light: Science and Applications, 2013, 2, e45-e45.	7.7	260
54	Improved red-response in thin film a-Si:H solar cells with soft-imprinted plasmonic back reflectors. Applied Physics Letters, 2009, 95, .	1.5	257

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55	Van der Waals Materials for Atomically-Thin Photovoltaics: Promise and Outlook. ACS Photonics, 2017, 4, 2962-2970.	3.2	241
56	High Aspect Ratio Silicon Wire Array Photoelectrochemical Cells. Journal of the American Chemical Society, 2007, 129, 12346-12347.	6.6	240
57	A single-layer wide-angle negative-index metamaterial at visible frequencies. Nature Materials, 2010, 9, 407-412.	13.3	238
58	Plasmonic hot carrier dynamics in solid-state and chemical systems for energy conversion. Nanophotonics, 2016, 5, 96-111.	2.9	237
59	Design of Nanostructured Solar Cells Using Coupled Optical and Electrical Modeling. Nano Letters, 2012, 12, 2894-2900.	4.5	224
60	Enhanced Radiative Emission Rate and Quantum Efficiency in Coupled Silicon Nanocrystal-Nanostructured Gold Emitters. Nano Letters, 2005, 5, 1768-1773.	4.5	222
61	Tuning the emission wavelength of Si nanocrystals in SiO2 by oxidation. Applied Physics Letters, 1998, 72, 2577-2579.	1.5	220
62	Efficiency limits for photoelectrochemical water-splitting. Nature Communications, 2016, 7, 13706.	5.8	218
63	Si microwire-array solar cells. Energy and Environmental Science, 2010, 3, 1037.	15.6	217
64	Electronic modulation of infrared radiation in graphene plasmonic resonators. Nature Communications, 2015, 6, 7032.	5.8	213
65	Electrooptic Modulation in Thin Film Barium Titanate Plasmonic Interferometers. Nano Letters, 2008, 8, 4048-4052.	4.5	212
66	Photovoltaic Performance of Ultrasmall PbSe Quantum Dots. ACS Nano, 2011, 5, 8140-8147.	7.3	210
67	Plasmoelectric potentials in metal nanostructures. Science, 2014, 346, 828-831.	6.0	209
68	The role of quantumâ€confined excitons vs defects in the visible luminescence of SiO2 films containing Ge nanocrystals. Applied Physics Letters, 1996, 68, 2511-2513.	1.5	205
69	Modeling Light Trapping in Nanostructured Solar Cells. ACS Nano, 2011, 5, 10055-10064.	7.3	205
70	Polarization-Selective Plasmon-Enhanced Silicon Quantum-Dot Luminescence. Nano Letters, 2006, 6, 2622-2625.	4.5	201
71	Size-dependent electron-hole exchange interaction in Si nanocrystals. Applied Physics Letters, 2000, 76, 351-353.	1.5	199
72	Compliant Metamaterials for Resonantly Enhanced Infrared Absorption Spectroscopy and Refractive Index Sensing. ACS Nano, 2011, 5, 8167-8174.	7.3	198

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73	Electro-optically Tunable Multifunctional Metasurfaces. ACS Nano, 2020, 14, 6912-6920.	7.3	198
74	Compact silicon photonic waveguide modulator based on the vanadium dioxide metal-insulator phase transition. Optics Express, 2010, 18, 11192.	1.7	197
75	Electronically Tunable Perfect Absorption in Graphene. Nano Letters, 2018, 18, 971-979.	4.5	197
76	High-performance Si microwire photovoltaics. Energy and Environmental Science, 2011, 4, 866.	15.6	196
77	High Photovoltaic Quantum Efficiency in Ultrathin van der Waals Heterostructures. ACS Nano, 2017, 11, 7230-7240.	7.3	193
78	Dual-Gated Active Metasurface at 1550 nm with Wide (>300Â°) Phase Tunability. Nano Letters, 2018, 18, 2957-2963.	4.5	193
79	Spectral tuning of plasmon-enhanced silicon quantum dot luminescence. Applied Physics Letters, 2006, 88, 131109.	1.5	185
80	Hydrogen-evolution characteristics of Niâ€“Mo-coated, radial junction, n+p-silicon microwire array photocathodes. Energy and Environmental Science, 2012, 5, 9653.	15.6	182
81	Phase Modulation with Electrically Tunable Vanadium Dioxide Phase-Change Metasurfaces. Nano Letters, 2019, 19, 3961-3968.	4.5	179
82	Efficient Coupling between Dielectric-Loaded Plasmonic and Silicon Photonic Waveguides. Nano Letters, 2010, 10, 4851-4857.	4.5	170
83	Synthesis and characterization of aerosol silicon nanocrystal nonvolatile floating-gate memory devices. Applied Physics Letters, 2001, 79, 433-435.	1.5	161
84	Structural and Optoelectronic Characterization of RF Sputtered ZnSnN₂. Advanced Materials, 2013, 25, 2562-2566.	11.1	161
85	All-day fresh water harvesting by microstructured hydrogel membranes. Nature Communications, 2021, 12, 2797.	5.8	159
86	Color Imaging via Nearest Neighbor Hole Coupling in Plasmonic Color Filters Integrated onto a Complementary Metal-Oxide Semiconductor Image Sensor. ACS Nano, 2013, 7, 10038-10047.	7.3	157
87	Dynamic beam steering with all-dielectric electro-optic IIIâ€“V multiple-quantum-well metasurfaces. Nature Communications, 2019, 10, 3654.	5.8	157
88	Near-Unity Absorption in van der Waals Semiconductors for Ultrathin Optoelectronics. Nano Letters, 2016, 16, 5482-5487.	4.5	156
89	Tunable large resonant absorption in a midinfrared graphene Salisbury screen. Physical Review B, 2014, 90, .	1.1	155
90	Tunable Color Filters Based on Metalâ^'Insulatorâ^'Metal Resonators. Nano Letters, 2009, 9, 2579-2583.	4.5	154

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91	Photoelectrochemistry of coreâ€“shell tandem junction nâ€“p⁺-Si/n-WO₃microwire array photoelectrodes. Energy and Environmental Science, 2014, 7, 779-790.	15.6	152
92	Two-plasmon quantum interference. Nature Photonics, 2014, 8, 317-320.	15.6	150
93	Ultraefficient thermophotovoltaic power conversion by band-edge spectral filtering. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 15356-15361.	3.3	150
94	Quantifying the role of surface plasmon excitation and hot carrier transport in plasmonic devices. Nature Communications, 2018, 9, 3394.	5.8	147
95	Symmetry breaking and strong coupling in planar optical metamaterials. Optics Express, 2010, 18, 13407.	1.7	145
96	Flexible Polymerâ€Embedded Si Wire Arrays. Advanced Materials, 2009, 21, 325-328.	11.1	144
97	Ultrafast hot-hole injection modifies hot-electron dynamics in Au/p-GaN heterostructures. Nature Materials, 2020, 19, 1312-1318.	13.3	138
98	Silicon-Based Plasmonics for On-Chip Photonics. IEEE Journal of Selected Topics in Quantum Electronics, 2010, 16, 295-306.	1.9	136
99	Universal optical transmission features in periodic and quasiperiodic hole arrays. Optics Express, 2008, 16, 9222.	1.7	129
100	Solar energy conversion via hot electron internal photoemission in metallic nanostructures: Efficiency estimates. Journal of Applied Physics, 2014, 115, .	1.1	126
101	Ab initiophonon coupling and optical response of hot electrons in plasmonic metals. Physical Review B, 2016, 94, .	1.1	124
102	Ionâ€bombardmentâ€enhanced grain growth in germanium, silicon, and gold thin films. Journal of Applied Physics, 1988, 64, 2337-2353.	1.1	123
103	A Comparison Between the Behavior of Nanorod Array and Planar Cd(Se, Te) Photoelectrodes. Journal of Physical Chemistry C, 2008, 112, 6186-6193.	1.5	122
104	Improving Brush Polymer Infrared One-Dimensional Photonic Crystals via Linear Polymer Additives. Journal of the American Chemical Society, 2014, 136, 17374-17377.	6.6	118
105	CO₂ Reduction to CO with 19% Efficiency in a Solar-Driven Gas Diffusion Electrode Flow Cell under Outdoor Solar Illumination. ACS Energy Letters, 2020, 5, 470-476.	8.8	117
106	Experimental and AbÂInitio Ultrafast Carrier Dynamics in Plasmonic Nanoparticles. Physical Review Letters, 2017, 118, 087401.	2.9	116
107	How much can guided modes enhance absorption in thin solar cells?. Optics Express, 2009, 17, 20975.	1.7	112
108	Solar cell efficiency enhancement via light trapping in printable resonant dielectric nanosphere arrays. Physica Status Solidi (A) Applications and Materials Science, 2013, 210, 255-260.	0.8	109

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109	Direct-bonded GaAsâˆ•InGaAs tandem solar cell. Applied Physics Letters, 2006, 89, 102106.	1.5	108
110	Plasmonic Rainbow Trapping Structures for Light Localization and Spectrum Splitting. Physical Review Letters, 2011, 107, 207401.	2.9	108
111	Materials challenges for the Starshot lightsail. Nature Materials, 2018, 17, 861-867.	13.3	107
112	Ultraclean Two-Stage Aerosol Reactor for Production of Oxide-Passivated Silicon Nanoparticles for Novel Memory Devices. Journal of the Electrochemical Society, 2001, 148, G265.	1.3	106
113	Electromagnetic energy transport along arrays of closely spaced metal rods as an analogue to plasmonic devices. Applied Physics Letters, 2001, 78, 16-18.	1.5	103
114	Optical, electrical, and solar energy-conversion properties of gallium arsenide nanowire-array photoanodes. Energy and Environmental Science, 2013, 6, 1879.	15.6	102
115	Quantitative determination of optical transmission through subwavelength slit arrays in Ag films: Role of surface wave interference and local coupling between adjacent slits. Physical Review B, 2008, 77, .	1.1	101
116	Resonant absorption in semiconductor nanowires and nanowire arrays: Relating leaky waveguide modes to Bloch photonic crystal modes. Journal of Applied Physics, 2014, 116, .	1.1	100
117	Plasmon-Enhanced Photoluminescence of Silicon Quantum Dots:â€‰ Simulation and Experiment. Journal of Physical Chemistry C, 2007, 111, 13372-13377.	1.5	97
118	Empirical interatomic potential for Si-H interactions. Physical Review B, 1995, 51, 4889-4893.	1.1	96
119	Are negative index materials achievable with surface plasmon waveguides? A case study of three plasmonic geometries. Optics Express, 2008, 16, 19001.	1.7	95
120	Electronically tunable extraordinary optical transmission in graphene plasmonic ribbons coupled to subwavelength metallic slit arrays. Nature Communications, 2016, 7, 12323.	5.8	95
121	Near-unity broadband absorption designs for semiconducting nanowire arrays via localized radial mode excitation. Optics Express, 2014, 22, A930.	1.7	94
122	Near-Field Visualization of Strongly Confined Surface Plasmon Polaritons in Metalâˆ’Insulatorâˆ’Metal Waveguides. Nano Letters, 2008, 8, 2925-2929.	4.5	93
123	Electrically pumped hybrid evanescent Si/InGaAsP lasers. Optics Letters, 2009, 34, 1345.	1.7	93
124	Plasmon Dispersion in Coaxial Waveguides from Single-Cavity Optical Transmission Measurements. Nano Letters, 2009, 9, 2832-2837.	4.5	93
125	Plasmonic nanoparticle enhanced photocurrent in GaN/InGaN/GaN quantum well solar cells. Applied Physics Letters, 2010, 96, .	1.5	93
126	Towards an optimized all lattice-matched InAlAs/InGaAsP/InGaAs multijunction solar cell with efficiency >50%. Applied Physics Letters, 2013, 102, .	1.5	91

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127	A direct coupled electrochemical system for capture and conversion of CO2 from oceanwater. Nature Communications, 2020, 11, 4412.	5.8	91
128	Field Effect Optoelectronic Modulation of Quantum-Confined Carriers in Black Phosphorus. Nano Letters, 2017, 17, 78-84.	4.5	89
129	Self-stabilizing photonic levitation and propulsion of nanostructured macroscopic objects. Nature Photonics, 2019, 13, 289-295.	15.6	89
130	820 mV open-circuit voltages from Cu2O/CH3CN junctions. Energy and Environmental Science, 2011, 4, 1311.	15.6	87
131	Interface stoichiometry control to improve device voltage and modify band alignment in ZnO/Cu₂O heterojunction solar cells. Energy and Environmental Science, 2014, 7, 3606-3610.	15.6	87
132	Probing the Band Structure of Topological Silicon Photonic Lattices in the Visible Spectrum. Physical Review Letters, 2019, 122, 117401.	2.9	87
133	Synthesis of epitaxial SnxGe1â^'x alloy films by ionâ€assisted molecular beam epitaxy. Applied Physics Letters, 1996, 68, 664-666.	1.5	85
134	Secondary Ion Mass Spectrometry of Vaporâ^'Liquidâ^'Solid Grown, Au-Catalyzed, Si Wires. Nano Letters, 2008, 8, 3109-3113.	4.5	85
135	Flexible, Polymerâ€Supported, Si Wire Array Photoelectrodes. Advanced Materials, 2010, 22, 3277-3281.	11.1	85
136	Functional Plasmonic Nanocircuits with Low Insertion and Propagation Losses. Nano Letters, 2013, 13, 4539-4545.	4.5	85
137	Silicon Microwire Arrays for Solar Energy-Conversion Applications. Journal of Physical Chemistry C, 2014, 118, 747-759.	1.5	85
138	Ultralow threshold on-chip microcavity nanocrystal quantum dot lasers. Applied Physics Letters, 2006, 89, 191124.	1.5	84
139	10 â€, Î¼ m minority-carrier diffusion lengths in Si wires synthesized by Cu-catalyzed vapor-liquid-solid growth. Applied Physics Letters, 2009, 95, .	1.5	84
140	Gallium Arsenide Solar Cell Absorption Enhancement Using Whispering Gallery Modes of Dielectric Nanospheres. IEEE Journal of Photovoltaics, 2012, 2, 123-128.	1.5	84
141	Broadband enhancement of light emission in silicon slot waveguides. Optics Express, 2009, 17, 7479.	1.7	83
142	The Influence of Spectral Albedo on Bifacial Solar Cells: A Theoretical and Experimental Study. IEEE Journal of Photovoltaics, 2017, 7, 1611-1618.	1.5	83
143	Tunable all-dielectric metasurface for phase modulation of the reflected and transmitted light via permittivity tuning of indium tin oxide. Nanophotonics, 2019, 8, 415-427.	2.9	83
144	Optical Excitation of a Nanoparticle Cu/p-NiO Photocathode Improves Reaction Selectivity for CO₂ Reduction in Aqueous Electrolytes. Nano Letters, 2020, 20, 2348-2358.	4.5	82

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145	Near-Unity Unselective Absorption in Sparse InP Nanowire Arrays. ACS Photonics, 2016, 3, 1826-1832.	3.2	81
146	Resonant thermoelectric nanophotonics. Nature Nanotechnology, 2017, 12, 770-775.	15.6	81
147	Materials issues for layered tunnel barrier structures. Journal of Applied Physics, 2002, 92, 261-267.	1.1	80
148	The New â€œpâ€“n Junctionâ€• Plasmonics Enables Photonic Access to the Nanoworld. MRS Bulletin, 2005, 30, 385-389.	1.7	80
149	Electrochemical Tuning of the Dielectric Function of Au Nanoparticles. ACS Photonics, 2015, 2, 459-464.	3.2	80
150	The promise of plasmonics. Scientific American, 2007, 296, 56-63.	1.0	80
151	Tunable Visible and Near-IR Emission from Sub-10 nm Etched Single-Crystal Si Nanopillars. Nano Letters, 2010, 10, 4423-4428.	4.5	78
152	Bandgap Tunability in Zn(Sn,Ge)N₂ Semiconductor Alloys. Advanced Materials, 2014, 26, 1235-1241.	11.1	75
153	A new metal transfer process for van der Waals contacts to vertical Schottky-junction transition metal dichalcogenide photovoltaics. Science Advances, 2019, 5, eaax6061.	4.7	74
154	Measurement of the direct energy gap of coherently strained SnxGe1â^'x/Ge(001) heterostructures. Applied Physics Letters, 2000, 77, 3418-3420.	1.5	73
155	Electroluminescence and photoluminescence of Geâ€•implanted Si/SiO2/Si structures. Applied Physics Letters, 1995, 66, 745-747.	1.5	72
156	Conjugated Polymer/Metal Nanowire Heterostructure Plasmonic Antennas. Advanced Materials, 2010, 22, 1223-1227.	11.1	72
157	Graphene field effect transistor without an energy gap. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 8786-8789.	3.3	72
158	Giant Enhancement of Photoluminescence Emission in WS₂-Two-Dimensional Perovskite Heterostructures. Nano Letters, 2019, 19, 4852-4860.	4.5	72
159	Repeated epitaxial growth and transfer of arrays of patterned, vertically aligned, crystalline Si wires from a single Si(111) substrate. Applied Physics Letters, 2008, 93, .	1.5	71
160	High efficiency InGaAs solar cells on Si by InP layer transfer. Applied Physics Letters, 2007, 91, 012108.	1.5	70
161	Photoluminescence-based measurements of the energy gap and diffusion length of Zn3P2. Applied Physics Letters, 2009, 95, .	1.5	70
162	Active Radiative Thermal Switching with Graphene Plasmon Resonators. ACS Nano, 2018, 12, 2474-2481.	7.3	70

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163	Experimental demonstration of enhanced photon recycling in angle-restricted GaAs solar cells. Energy and Environmental Science, 2014, 7, 1907-1912.	15.6	69
164	Bicarbonate or Carbonate Processes for Coupling Carbon Dioxide Capture and Electrochemical Conversion. ACS Energy Letters, 2020, 5, 940-945.	8.8	68
165	Mega-electron-volt ion beam induced anisotropic plasmon resonance of silver nanocrystals in glass. Applied Physics Letters, 2003, 83, 4137-4139.	1.5	67
166	Plasmonic Modes of Annular Nanoresonators Imaged by Spectrally Resolved Cathodoluminescence. Nano Letters, 2007, 7, 3612-3617.	4.5	67
167	Plasmonics: Metal-worthy methods and materials in nanophotonics. MRS Bulletin, 2012, 37, 717-724.	1.7	67
168	InGaAs/InP double heterostructures on InP/Si templates fabricated by wafer bonding and hydrogen-induced exfoliation. Applied Physics Letters, 2003, 83, 5413-5415.	1.5	66
169	Millivolt Modulation of Plasmonic Metasurface Optical Response via Ionic Conductance. Advanced Materials, 2017, 29, 1701044.	11.1	66
170	Macroporous Silicon as a Model for Silicon Wire Array Solar Cells. Journal of Physical Chemistry C, 2008, 112, 6194-6201.	1.5	65
171	Rapid biaxial texture development during nucleation of MgO thin films during ion beam-assisted deposition. Applied Physics Letters, 2002, 80, 3388-3390.	1.5	64
172	Very low temperature (<400â€‰Â°C) silicon molecular beam epitaxy: The role of low energy ion irradiation. Applied Physics Letters, 1993, 62, 2566-2568.	1.5	63
173	GaInPâˆ•GaAs dual junction solar cells on Geâˆ•Si epitaxial templates. Applied Physics Letters, 2008, 92, 103503.	1.5	63
174	Measurement of minority-carrier diffusion lengths using wedge-shaped semiconductor photoelectrodes. Energy and Environmental Science, 2014, 7, 3424-3430.	15.6	63
175	Optical magnetism in planar metamaterial heterostructures. Nature Communications, 2018, 9, 296.	5.8	63
176	Localized charge injection in SiO2 films containing silicon nanocrystals. Applied Physics Letters, 2001, 79, 791-793.	1.5	61
177	Highly Strain-Tunable Interlayer Excitons in MoS₂/WSe₂ Heterobilayers. Nano Letters, 2021, 21, 3956-3964.	4.5	60
178	Probing the size and density of silicon nanocrystals in nanocrystal memory device applications. Applied Physics Letters, 2005, 86, 033103.	1.5	58
179	Effectively Transparent Front Contacts for Optoelectronic Devices. Advanced Optical Materials, 2016, 4, 1470-1474.	3.6	58
180	Nonreciprocal infrared absorption via resonant magneto-optical coupling to InAs. Science Advances, 2022, 8, eabm4308.	4.7	58

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181	The 2022 solar fuels roadmap. Journal Physics D: Applied Physics, 2022, 55, 323003.	1.3	58
182	Size classification of silicon nanocrystals. Applied Physics Letters, 1996, 68, 3162-3164.	1.5	57
183	Broadband electro-optic polarization conversion with atomically thin black phosphorus. Science, 2021, 374, 448-453.	6.0	57
184	Resonant Guided Wave Networks. Physical Review Letters, 2010, 104, 147402.	2.9	56
185	Dynamically controlled Purcell enhancement of visible spontaneous emission in a gated plasmonic heterostructure. Nature Communications, 2017, 8, 1631.	5.8	56
186	Hyper-selective plasmonic color filters. Optics Express, 2017, 25, 27386.	1.7	56
187	A flexible phased array system with low areal mass density. Nature Electronics, 2019, 2, 195-205.	13.1	56
188	Ion irradiation enhanced crystal nucleation in amorphous Si thin films. Applied Physics Letters, 1990, 57, 1766-1768.	1.5	55
189	Plasmonics: optics at the nanoscale. Materials Today, 2005, 8, 56.	8.3	55
190	Nanoporous Gold as a Highly Selective and Active Carbon Dioxide Reduction Catalyst. ACS Applied Energy Materials, 2019, 2, 164-170.	2.5	55
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