Mathew Beard

List of Publications by Year in Descending Order

185 papers	21,730 citations	70 h-index	147 g-index
214 ext. papers	24,693 ext. citations	13.2 avg, IF	7.07 L-index

#	Paper	IF	Citations
185	Metastable Dion-Jacobson 2D structure enables efficient and stable perovskite solar cells. *Science*, **2022**, 375, 71-76	33.3	51
184	Pickering Emulsions of Self-Assembled Lead Sulfide Quantum Dots with Janus-Ligand Shells as Nanoreactors for Photocatalytic Reactions. *ACS Applied Nano Materials*, **2022**, 5, 3183-3187	5.6	1
183	Gradient Doping in Sn-Pb Perovskites by Barium Ions for Efficient Single-junction and Tandem Solar Cells.. *Advanced Materials*, **2022**, e2110351	24	19
182	Tuning Spin-Polarized Lifetime in Two-Dimensional Metal-Halide Perovskite through Exciton Binding Energy. *Journal of the American Chemical Society*, **2021**, 143, 19438-19445	16.4	9
181	Atomlike interaction and optically tunable giant band-gap renormalization in large-area atomically thin MoS2. *Physical Review B*, **2021**, 104,	3.3	2
180	Exciton–Phonon Coupling and Carrier Relaxation in PbS Quantum Dots: The Case of Carboxylate Ligands. *Journal of Physical Chemistry C*, **2021**, 125, 22622-22629	3.8	0
179	Nanotechnology for catalysis and solar energy conversion. *Nanotechnology*, **2021**, 32, 042003	3.4	24
178	A Multi-Dimensional Perspective on Electronic Doping in Metal Halide Perovskites. *ACS Energy Letters*, **2021**, 6, 1104-1123	20.1	13
177	In-situ observation of trapped carriers in organic metal halide perovskite films with ultra-fast temporal and ultra-high energetic resolutions. *Nature Communications*, **2021**, 12, 1636	17.4	3
176	Chiral-induced spin selectivity enables a room-temperature spin light-emitting diode. *Science*, **2021**, 371, 1129-1133	33.3	86
175	Surface lattice engineering through three-dimensional lead iodide perovskitoid for high-performance perovskite solar cells. *CheM*, **2021**, 7, 774-785	16.2	18
174	Direct Detection of Circularly Polarized Light Using Chiral Copper Chloride-Carbon Nanotube Heterostructures. *ACS Nano*, **2021**, 15, 7608-7617	16.7	20
173	A Nanocrystal Catalyst Incorporating a Surface Bound Transition Metal to Induce Photocatalytic Sequential Electron Transfer Events. *Journal of the American Chemical Society*, **2021**, 143, 11361-11369	16.4	17
172	Spin-Dependent Photovoltaic and Photogalvanic Responses of Optoelectronic Devices Based on Chiral Two-Dimensional Hybrid Organic-Inorganic Perovskites. *ACS Nano*, **2021**, 15, 588-595	16.7	24
171	SMART Perovskite Growth: Enabling a Larger Range of Process Conditions. *ACS Energy Letters*, **2021**, 6, 650-658	20.1	4
170	Suppressing Auger Recombination in Multiply Excited Colloidal Silicon Nanocrystals with Ligand-Induced Hole Traps. *Journal of Physical Chemistry C*, **2021**, 125, 2565-2574	3.8	2
169	Reconfiguring the band-edge states of photovoltaic perovskites by conjugated organic cations. *Science*, **2021**, 371, 636-640	33.3	69

168	Unraveling the surface state of photovoltaic perovskite thin film. *Matter*, **2021**, 4, 2417-2428	12.7	9
167	Pyroelectricity of Lead Sulfide (PbS) Quantum Dot Films Induced by Janus-Ligand Shells. *ACS Nano*, **2021**, 15, 14965-14971	16.7	1
166	Influence of Ligand Structure on Excited State Surface Chemistry of Lead Sulfide Quantum Dots. *Journal of the American Chemical Society*, **2021**, 143, 13824-13834	16.4	5
165	Metastable Dion-Jacobson 2D structure enables efficient and stable perovskite solar cells. *Science*, **2021**, eabj2637	33.3	2
164	Dynamic Ligand Surface Chemistry of Excited PbS Quantum Dots. *Journal of Physical Chemistry Letters*, **2020**, 11, 2291-2297	6.4	10
163	Role of Exciton Binding Energy on LO Phonon Broadening and Polaron Formation in (BA)2PbI4 Ruddlesden□Popper Films. *Journal of Physical Chemistry C*, **2020**, 124, 9496-9505	3.8	12
162	Transforming energy using quantum dots. *Energy and Environmental Science*, **2020**, 13, 1347-1376	35.4	45
161	Highly Distorted Chiral Two-Dimensional Tin Iodide Perovskites for Spin Polarized Charge Transport. *Journal of the American Chemical Society*, **2020**, 142, 13030-13040	16.4	79
160	Strategies to Achieve High Circularly Polarized Luminescence from Colloidal Organic-Inorganic Hybrid Perovskite Nanocrystals. *ACS Nano*, **2020**, 14, 8816-8825	16.7	33
159	Advances in two-dimensional organic□inorganic hybrid perovskites. *Energy and Environmental Science*, **2020**, 13, 1154-1186	35.4	239
158	Ultrafast Reaction Mechanisms in Perovskite Based Photocatalytic C□□ Coupling. *ACS Energy Letters*, **2020**, 5, 566-571	20.1	38
157	Cation-Exchange Synthesis of Highly Monodisperse PbS Quantum Dots from ZnS Nanorods for Efficient Infrared Solar Cells. *Advanced Functional Materials*, **2020**, 30, 1907379	15.6	41
156	Origin of Broad-Band Emission and Impact of Structural Dimensionality in Tin-Alloyed Ruddlesden□Popper Hybrid Lead Iodide Perovskites. *ACS Energy Letters*, **2020**, 5, 347-352	20.1	36
155	Individual Electron and Hole Mobilities in Lead-Halide Perovskites Revealed by Noncontact Methods. *ACS Energy Letters*, **2020**, 5, 47-55	20.1	20
154	Polaron and Spin Dynamics in Organic□inorganic Lead Halide Perovskite Nanocrystals. *Advanced Optical Materials*, **2020**, 8, 2001016	8.1	7
153	Embedding PbS Quantum Dots (QDs) in Pb-Halide Perovskite Matrices: QD Surface Chemistry and Antisolvent Effects on QD Dispersion and Confinement Properties **2020**, 2, 1464-1472		9
152	Transient Evolution of the Built-in Field at Junctions of GaAs. *ACS Applied Materials & Interfaces*, **2020**, 12, 40339-40346	9.5	5
151	Hot-carrier transfer at photocatalytic silicon/platinum interfaces. *Journal of Chemical Physics*, **2020**, 152, 144705	3.9	6

150	Theoretical limits of multiple exciton generation and singlet fission tandem devices for solar water splitting. *Journal of Chemical Physics*, **2019**, 151, 114111	3.9	9
149	Enhancing electron diffusion length in narrow-bandgap perovskites for efficient monolithic perovskite tandem solar cells. *Nature Communications*, **2019**, 10, 4498	17.4	138
148	Thin-Film Colloidal Quantum Dot Solar Cells **2019**, 35-52		0
147	Carrier lifetimes of >1 μs in Sn-Pb perovskites enable efficient all-perovskite tandem solar cells. *Science*, **2019**, 364, 475-479	33.3	496
146	Enhanced Charge Transport in 2D Perovskites via Fluorination of Organic Cation. *Journal of the American Chemical Society*, **2019**, 141, 5972-5979	16.4	170
145	Designing Janus Ligand Shells on PbS Quantum Dots using Ligand-Ligand Cooperativity. *ACS Nano*, **2019**, 13, 3839-3846	16.7	17
144	Influence of One Specific Carbon–Carbon Bond on the Quality, Stability, and Photovoltaic Performance of Hybrid Organic–Inorganic Bismuth Iodide Materials. *ACS Applied Energy Materials*, **2019**, 2, 1579-1587	6.1	4
143	Both Free and Trapped Carriers Contribute to Photocurrent of SbSe Solar Cells. *Journal of Physical Chemistry Letters*, **2019**, 10, 4881-4887	6.4	28
142	Monitoring Electron-Phonon Interactions in Lead Halide Perovskites Using Time-Resolved THz Spectroscopy. *ACS Nano*, **2019**, 13, 8826-8835	16.7	26
141	High efficiency perovskite quantum dot solar cells with charge separating heterostructure. *Nature Communications*, **2019**, 10, 2842	17.4	205
140	Ultrafast probes at the interfaces of solar energy conversion materials. *Physical Chemistry Chemical Physics*, **2019**, 21, 16399-16407	3.6	21
139	Interfacial engineering of gallium indium phosphide photoelectrodes for hydrogen evolution with precious metal and non-precious metal based catalysts. *Journal of Materials Chemistry A*, **2019**, 7, 16821-16832	13	15
138	Atomically Thin Metal Sulfides. *Journal of the American Chemical Society*, **2019**, 141, 12121-12127	16.4	7
137	Sensitizing Singlet Fission with Perovskite Nanocrystals. *Journal of the American Chemical Society*, **2019**, 141, 4919-4927	16.4	61
136	Enhanced photoredox activity of CsPbBr nanocrystals by quantitative colloidal ligand exchange. *Journal of Chemical Physics*, **2019**, 151, 204305	3.9	35
135	Spin-dependent charge transport through 2D chiral hybrid lead-iodide perovskites. *Science Advances*, **2019**, 5, eaay0571	14.3	118
134	Lead-Halide Perovskites for Photocatalytic α-Alkylation of Aldehydes. *Journal of the American Chemical Society*, **2019**, 141, 733-738	16.4	182
133	Infrared Quantum Dots: Progress, Challenges, and Opportunities. *ACS Nano*, **2019**, 13, 939-953	16.7	103

132	Curtailing Perovskite Processing Limitations via Lamination at the Perovskite/Perovskite Interface. *ACS Energy Letters*, **2018**, 3, 1192-1197	20.1	17
131	Control of Energy Flow Dynamics between Tetracene Ligands and PbS Quantum Dots by Size Tuning and Ligand Coverage. *Nano Letters*, **2018**, 18, 865-873	11.5	47
130	Efficient Steplike Carrier Multiplication in Percolative Networks of Epitaxially Connected PbSe Nanocrystals. *ACS Nano*, **2018**, 12, 378-384	16.7	13
129	Excitonic Effects in Methylammonium Lead Halide Perovskites. *Journal of Physical Chemistry Letters* , **2018**, 9, 2595-2603	6.4	72
128	Feature issue introduction: light, energy and the environment, 2017. *Optics Express*, **2018**, 26, A636-A639	3.3	3
127	Perovskite Solar Cells: Stable Formamidinium-Based Perovskite Solar Cells via In Situ Grain Encapsulation (Adv. Energy Mater. 22/2018). *Advanced Energy Materials*, **2018**, 8, 1870101	21.8	1
126	Impact of Layer Thickness on the Charge Carrier and Spin Coherence Lifetime in Two-Dimensional Layered Perovskite Single Crystals. *ACS Energy Letters*, **2018**, 3, 2273-2279	20.1	84
125	n-Type PbSe Quantum Dots via Post-Synthetic Indium Doping. *Journal of the American Chemical Society*, **2018**, 140, 13753-13763	16.4	20
124	Enhanced Multiple Exciton Generation in PbS|CdS Janus-like Heterostructured Nanocrystals. *ACS Nano*, **2018**, 12, 10084-10094	16.7	41
123	Ultrafast exciton many-body interactions and hot-phonon bottleneck in colloidal cesium lead halide perovskite nanocrystals. *Physical Review B*, **2018**, 98,	3.3	51
122	Electron-Phonon Coupling and Resonant Relaxation from 1D and 1P States in PbS Quantum Dots. *ACS Nano*, **2018**, 12, 6263-6272	16.7	14
121	Stable Formamidinium-Based Perovskite Solar Cells via In Situ Grain Encapsulation. *Advanced Energy Materials*, **2018**, 8, 1800232	21.8	59
120	Optical Absorbance Enhancement in PbS QD/Cinnamate Ligand Complexes. *Journal of Physical Chemistry Letters*, **2018**, 9, 3425-3433	6.4	24
119	Top and bottom surfaces limit carrier lifetime in lead iodide perovskite films. *Nature Energy*, **2017**, 2,	62.3	275
118	Tandem Solar Cells from Solution-Processed CdTe and PbS Quantum Dots Using a ZnTe-ZnO Tunnel Junction. *Nano Letters*, **2017**, 17, 1020-1027	11.5	55
117	Characterization of basic physical properties of Sb2Se3 and its relevance for photovoltaics. *Frontiers of Optoelectronics*, **2017**, 10, 18-30	2.8	191
116	Extrinsic ion migration in perovskite solar cells. *Energy and Environmental Science*, **2017**, 10, 1234-1242	35.4	336
115	Tuning colloidal quantum dot band edge positions through solution-phase surface chemistry modification. *Nature Communications*, **2017**, 8, 15257	17.4	173

114	Enhanced Sb2Se3 solar cell performance through theory-guided defect control. *Progress in Photovoltaics: Research and Applications*, **2017**, 25, 861-870	6.8	94
113	Multiple exciton generation for photoelectrochemical hydrogen evolution reactions with quantum yields exceeding 100%. *Nature Energy*, **2017**, 2,	62.3	130
112	Combination of Cation Exchange and Quantized Ostwald Ripening for Controlling Size Distribution of Lead Chalcogenide Quantum Dots. *Chemistry of Materials*, **2017**, 29, 3615-3622	9.6	32
111	Supersonically Spray-Coated Colloidal Quantum Dot Ink Solar Cells. *Scientific Reports*, **2017**, 7, 622	4.9	40
110	Enhanced mobility CsPbI quantum dot arrays for record-efficiency, high-voltage photovoltaic cells. *Science Advances*, **2017**, 3, eaao4204	14.3	636
109	Facet-Specific Ligand Interactions on Ternary AgSbS Colloidal Quantum Dots. *Chemistry - A European Journal*, **2017**, 23, 17707-17713	4.8	13
108	Facet-Specific Ligand Interactions on Ternary AgSbS2 Colloidal Quantum Dots.. *Chemistry - A European Journal*, **2017**, 23, 17625-17625	4.8	
107	Synthesis and Spectroscopy of Silver-Doped PbSe Quantum Dots. *Journal of the American Chemical Society*, **2017**, 139, 10382-10394	16.4	44
106	Quantum Dot Solar Cell Fabrication Protocols. *Chemistry of Materials*, **2017**, 29, 189-198	9.6	66
105	Large polarization-dependent exciton optical Stark effect in lead iodide perovskites. *Nature Communications*, **2016**, 7, 12613	17.4	72
104	Electron-Rotor Interaction in Organic-Inorganic Lead Iodide Perovskites Discovered by Isotope Effects. *Journal of Physical Chemistry Letters*, **2016**, 7, 2879-87	6.4	69
103	In situ spectroscopic characterization of a solution-phase X-type ligand exchange at colloidal lead sulphide quantum dot surfaces. *Chemical Communications*, **2016**, 52, 13893-13896	5.8	29
102	Roadmap on optical energy conversion. *Journal of Optics (United Kingdom)*, **2016**, 18, 073004	1.7	69
101	Nongeminate radiative recombination of free charges in cation-exchanged PbS quantum dot films. *Chemical Physics*, **2016**, 471, 75-80	2.3	7
100	Size-Dependent Exciton Formation Dynamics in Colloidal Silicon Quantum Dots. *ACS Nano*, **2016**, 10, 2316-23	16.7	44
99	Revisiting the Valence and Conduction Band Size Dependence of PbS Quantum Dot Thin Films. *ACS Nano*, **2016**, 10, 3302-11	16.7	89
98	Quasi-Direct Optical Transitions in Silicon Nanocrystals with Intensity Exceeding the Bulk. *Nano Letters*, **2016**, 16, 1583-9	11.5	52
97	All-Inorganic Germanium Nanocrystal Films by Cationic Ligand Exchange. *Nano Letters*, **2016**, 16, 1949-54	11.5	28

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95	Observation of a hot-phonon bottleneck in lead-iodide perovskites. *Nature Photonics*, **2016**, 10, 53-59	33.9	577
94	Status and Prognosis of Future-Generation Photoconversion to Photovoltaics and Solar Fuels. *ACS Energy Letters*, **2016**, 1, 344-347	20.1	8
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92	Air-Stable and Efficient PbSe Quantum-Dot Solar Cells Based upon ZnSe to PbSe Cation-Exchanged Quantum Dots. *ACS Nano*, **2015**, 9, 8157-64	16.7	95
91	Exploration of Metal Chloride Uptake for Improved Performance Characteristics of PbSe Quantum Dot Solar Cells. *Journal of Physical Chemistry Letters*, **2015**, 6, 2892-9	6.4	40
90	Preparation of Cd/Pb Chalcogenide Heterostructured Janus Particles via Controllable Cation Exchange. *ACS Nano*, **2015**, 9, 7151-63	16.7	82
89	Metal halide solid-state surface treatment for high efficiency PbS and PbSe QD solar cells. *Scientific Reports*, **2015**, 5, 9945	4.9	186
88	Synthetic Conditions for High-Accuracy Size Control of PbS Quantum Dots. *Journal of Physical Chemistry Letters*, **2015**, 6, 1830-3	6.4	90
87	Low surface recombination velocity in solution-grown CH3NH3PbBr3 perovskite single crystal. *Nature Communications*, **2015**, 6, 7961	17.4	329
86	Semiconductor interfacial carrier dynamics via photoinduced electric fields. *Science*, **2015**, 350, 1061-5	33.3	85
85	Multiple exciton generation in quantum dots versus singlet fission in molecular chromophores for solar photon conversion. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2015**, 373,	3	30
84	Comparison of Recombination Dynamics in CH3NH3PbBr3 and CH3NH3PbI3 Perovskite Films: Influence of Exciton Binding Energy. *Journal of Physical Chemistry Letters*, **2015**, 6, 4688-92	6.4	284
83	Quantum confined electron-phonon interaction in silicon nanocrystals. *Nano Letters*, **2015**, 15, 1511-6	11.5	45
82	Synthesis and spectroscopy of PbSe fused quantum-dot dimers. *Journal of the American Chemical Society*, **2014**, 136, 4670-9	16.4	26
81	Diffusion-controlled synthesis of PbS and PbSe quantum dots with in situ halide passivation for quantum dot solar cells. *ACS Nano*, **2014**, 8, 614-22	16.7	219
80	One-Step Deposition of Photovoltaic Layers Using Iodide Terminated PbS Quantum Dots. *Journal of Physical Chemistry Letters*, **2014**, 5, 4002-7	6.4	49
79	PbSe quantum dot solar cells with more than 6% efficiency fabricated in ambient atmosphere. *Nano Letters*, **2014**, 14, 6010-5	11.5	191

78	Carrier Transport in PbS and PbSe QD Films Measured by Photoluminescence Quenching. *Journal of Physical Chemistry C*, **2014**, 118, 16228-16235	3.8	44
77	Ultrafast Electrical Measurements of Isolated Silicon Nanowires and Nanocrystals. *Journal of Physical Chemistry Letters*, **2014**, 5, 2050-7	6.4	18
76	The promise and challenge of nanostructured solar cells. *Nature Nanotechnology*, **2014**, 9, 951-4	28.7	153
75	Charge generation in PbS quantum dot solar cells characterized by temperature-dependent steady-state photoluminescence. *ACS Nano*, **2014**, 8, 12814-25	16.7	52
74	Origin of the temperature dependence of the band gap of PbS and PbSe quantum dots. *Solid State Communications*, **2013**, 165, 49-54	1.6	70
73	Coherent exciton delocalization in strongly coupled quantum dot arrays. *Nano Letters*, **2013**, 13, 4862-9	11.5	46
72	Lead sulfide nanocrystal quantum dot solar cells with trenched ZnO fabricated via nanoimprinting. *ACS Applied Materials & Interfaces*, **2013**, 5, 3803-8	9.5	19
71	Third generation photovoltaics based on multiple exciton generation in quantum confined semiconductors. *Accounts of Chemical Research*, **2013**, 46, 1252-60	24.3	285
70	Size and composition dependent multiple exciton generation efficiency in PbS, PbSe, and PbS(x)Se(1-x) alloyed quantum dots. *Nano Letters*, **2013**, 13, 3078-85	11.5	133
69	Electron transfer in hydrogenated nanocrystalline silicon observed by time-resolved terahertz spectroscopy. *Physical Review B*, **2013**, 87,	3.3	15
68	Improvement in carrier transport properties by mild thermal annealing of PbS quantum dot solar cells. *Applied Physics Letters*, **2013**, 102, 043506	3.4	37
67	Effect of Solar Concentration on the Thermodynamic Power Conversion Efficiency of Quantum-Dot Solar Cells Exhibiting Multiple Exciton Generation. *Journal of Physical Chemistry Letters*, **2012**, 3, 2857-2862	6.4	54
66	Quantum dots for next-generation photovoltaics. *Materials Today*, **2012**, 15, 508-515	21.8	212
65	Control of PbSe quantum dot surface chemistry and photophysics using an alkylselenide ligand. *ACS Nano*, **2012**, 6, 5498-506	16.7	90
64	Comparison of carrier multiplication yields in PbS and PbSe nanocrystals: the role of competing energy-loss processes. *Nano Letters*, **2012**, 12, 622-8	11.5	103
63	Strained Interface Defects in Silicon Nanocrystals. *Advanced Functional Materials*, **2012**, 22, 3223-3232	15.6	59
62	Comparing the Fundamental Physics and Device Performance of Transparent, Conductive Nanostructured Networks with Conventional Transparent Conducting Oxides. *Advanced Energy Materials*, **2012**, 2, 353-360	21.8	121
61	The subtle chemistry of colloidal, quantum-confined semiconductor nanostructures. *ACS Nano*, **2012**, 6, 4573-9	16.7	42

60	Sharp exponential band tails in highly disordered lead sulfide quantum dot arrays. *Physical Review B* , **2012**, 86,	3.3	49
59	Quantum beats due to excitonic ground-state splitting in colloidal quantum dots. *Physical Review B*, **2012**, 86,	3.3	20
58	Annealing effect of PbS quantum dot solar cells **2011**,		1
57	Emission Quenching in PbSe Quantum Dot Arrays by Short-Term Air Exposure. *Journal of Physical Chemistry Letters*, **2011**, 2, 889-93	6.4	47
56	Multiple Exciton Generation in Semiconductor Quantum Dots. *Journal of Physical Chemistry Letters*, **2011**, 2, 1282-8	6.4	322
55	Single-walled carbon nanotubes as base material for THz photoconductive switching: a theoretical study from input power to output THz emission. *Optics Express*, **2011**, 19, 15077-89	3.3	19
54	Quantum dot size dependent J-V characteristics in heterojunction ZnO/PbS quantum dot solar cells. *Nano Letters*, **2011**, 11, 1002-8	11.5	249
53	Peak external photocurrent quantum efficiency exceeding 100% via MEG in a quantum dot solar cell. *Science*, **2011**, 334, 1530-3	33.3	1344
52	Anomalous independence of multiple exciton generation on different group IV-VI quantum dot architectures. *Nano Letters*, **2011**, 11, 1623-9	11.5	52
51	n-Type transition metal oxide as a hole extraction layer in PbS quantum dot solar cells. *Nano Letters* , **2011**, 11, 3263-6	11.5	230
50	Tuning the synthesis of ternary lead chalcogenide quantum dots by balancing precursor reactivity. *ACS Nano*, **2011**, 5, 183-90	16.7	119
49	A p-Type Quantum Dot/Organic Donor:Acceptor Solar-Cell Structure for Extended Spectral Response. *Advanced Energy Materials*, **2011**, 1, 528-533	21.8	19
48	Flowing versus Static Conditions for Measuring Multiple Exciton Generation in PbSe Quantum Dots. *Journal of Physical Chemistry C*, **2010**, 114, 17486-17500	3.8	89
47	**2010**,		1
46	Comparing multiple exciton generation in quantum dots to impact ionization in bulk semiconductors: implications for enhancement of solar energy conversion. *Nano Letters*, **2010**, 10, 3019-27	11.5	292
45	Absolute Photoluminescence Quantum Yields of IR-26 Dye, PbS, and PbSe Quantum Dots. *Journal of Physical Chemistry Letters*, **2010**, 1, 2445-2450	6.4	216
44	Semiconductor quantum dots and quantum dot arrays and applications of multiple exciton generation to third-generation photovoltaic solar cells. *Chemical Reviews*, **2010**, 110, 6873-90	68.1	996
43	Stability assessment on a 3% bilayer PbS/ZnO quantum dot heterojunction solar cell. *Advanced Materials*, **2010**, 22, 3704-7	24	315

42	Solar cells based on colloidal quantum dot solids: Seeking enhanced photocurrent **2009**,		2
41	Solar cells from colloidal nanocrystals: Fundamentals, materials, devices, and economics. *Current Opinion in Colloid and Interface Science*, **2009**, 14, 245-259	7.6	292
40	Variations in the quantum efficiency of multiple exciton generation for a series of chemically treated PbSe nanocrystal films. *Nano Letters*, **2009**, 9, 836-45	11.5	201
39	Transparent conductive single-walled carbon nanotube networks with precisely tunable ratios of semiconducting and metallic nanotubes. *ACS Nano*, **2008**, 2, 1266-74	16.7	278
38	Schottky solar cells based on colloidal nanocrystal films. *Nano Letters*, **2008**, 8, 3488-92	11.5	824
37	Determining the internal quantum efficiency of PbSe nanocrystal solar cells with the aid of an optical model. *Nano Letters*, **2008**, 8, 3904-10	11.5	150
36	Photogenerated free carrier dynamics in metal and semiconductor single-walled carbon nanotube films. *Nano Letters*, **2008**, 8, 4238-42	11.5	70
35	Multiple exciton generation in semiconductor nanocrystals: Toward efficient solar energy conversion. *Laser and Photonics Reviews*, **2008**, 2, 377-399	8.3	114
34	Structural, optical, and electrical properties of self-assembled films of PbSe nanocrystals treated with 1,2-ethanedithiol. *ACS Nano*, **2008**, 2, 271-80	16.7	638
33	Multiple exciton generation in films of electronically coupled PbSe quantum dots. *Nano Letters*, **2007**, 7, 1779-84	11.5	213
32	Multiple exciton generation in colloidal silicon nanocrystals. *Nano Letters*, **2007**, 7, 2506-12	11.5	710
31	Photoinduced charge carrier generation in a poly(3-hexylthiophene) and methanofullerene bulk heterojunction investigated by time-resolved terahertz spectroscopy. *Journal of Physical Chemistry B*, **2006**, 110, 25462-71	3.4	130
30	Time-resolved photoconductivity of PbSe nanocrystal arrays. *Journal of Physical Chemistry B*, **2006**, 110, 25455-61	3.4	113
29	PbTe colloidal nanocrystals: synthesis, characterization, and multiple exciton generation. *Journal of the American Chemical Society*, **2006**, 128, 3241-7	16.4	605
28	Terahertz spectroscopy of solid serine and cysteine. *Chemical Physics Letters*, **2006**, 418, 65-70	2.5	146
27	Absorption cross-section and related optical properties of colloidal InAs quantum dots. *Journal of Physical Chemistry B*, **2005**, 109, 7084-7	3.4	127
26	Highly efficient multiple exciton generation in colloidal PbSe and PbS quantum dots. *Nano Letters*, **2005**, 5, 865-71	11.5	1425
25	Coherent terahertz emission from ferromagnetic films excited by femtosecond laser pulses. *Applied Physics Letters*, **2004**, 84, 3465-3467	3.4	178

24	Comparative OHD-RIKES and THz-TDS Probes of Ultrafast Structural Dynamics in Molecular Liquids. *Journal of Physical Chemistry A*, **2004**, 108, 9348-9360	2.8	23
23	Transient photoconductivity in CdSe nanoparticles and nanocrystalline TiO2 as measured by time-resolved terahertz spectroscopy **2003**,		2
22	Electronic Coupling in InP Nanoparticle Arrays. *Nano Letters*, **2003**, 3, 1695-1699	11.5	77
21	Exploring sub-picosecond dynamics in the far-infrared with THz spectroscopy. *Springer Series in Chemical Physics*, **2003**, 407-411	0.3	
20	Photoconductivity of dye-sensitized titanium dioxide films measured by time-resolved THz spectroscopy (TRTS). *Springer Series in Chemical Physics*, **2003**, 331-333	0.3	2
19	Carrier Localization and Cooling in Dye-Sensitized Nanocrystalline Titanium Dioxide. *Journal of Physical Chemistry B*, **2002**, 106, 11716-11719	3.4	188
18	Size-Dependent Photoconductivity in CdSe Nanoparticles as Measured by Time-Resolved Terahertz Spectroscopy. *Nano Letters*, **2002**, 2, 983-987	11.5	113
17	Measuring Intramolecular Charge Transfer via Coherent Generation of THz Radiation. *Journal of Physical Chemistry A*, **2002**, 106, 878-883	2.8	63
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12	Ballistic trajectories of optical wave packets within microcavities. *Physical Review A*, **2001**, 64,	2.6	19
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10	Two-dimensional time-resolved THz spectroscopy of solvent response to photo excitation. *Springer Series in Chemical Physics*, **2001**, 522-524	0.3	1
9	Transient photoconductivity in GaAs as measured by time-resolved terahertz spectroscopy. *Physical Review B*, **2000**, 62, 15764-15777	3.3	379
8	Measurement of Electromagnetic Radiation Emitted during Rapid Intramolecular Electron Transfer. *Journal of the American Chemical Society*, **2000**, 122, 11541-11542	16.4	30
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6	CHAPTER 11:Quantum Confined Semiconductors for Enhancing Solar Photoconversion through Multiple Exciton Generation. *RSC Energy and Environment Series*,345-378	0.6	5
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