Samuel D Stranks

List of Publications by Citations

178 papers	39,723 citations	67 h-index	199 g-index
205 ext. papers	45,213 ext. citations	18.7 avg, IF	7.78 L-index

#	Paper	IF	Citations
178	Electron-hole diffusion lengths exceeding 1 micrometer in an organometal trihalide perovskite absorber. *Science*, **2013**, 342, 341-4	33.3	7280
177	Formamidinium lead trihalide: a broadly tunable perovskite for efficient planar heterojunction solar cells. *Energy and Environmental Science*, **2014**, 7, 982	35.4	2706
176	Metal-halide perovskites for photovoltaic and light-emitting devices. *Nature Nanotechnology*, **2015**, 10, 391-402	28.7	2083
175	Anomalous Hysteresis in Perovskite Solar Cells. *Journal of Physical Chemistry Letters*, **2014**, 5, 1511-5	6.4	1951
174	Lead-free organic–inorganic tin halide perovskites for photovoltaic applications. *Energy and Environmental Science*, **2014**, 7, 3061-3068	35.4	1635
173	Solar cells. Impact of microstructure on local carrier lifetime in perovskite solar cells. *Science*, **2015**, 348, 683-6	33.3	1533
172	High Photoluminescence Efficiency and Optically Pumped Lasing in Solution-Processed Mixed Halide Perovskite Semiconductors. *Journal of Physical Chemistry Letters*, **2014**, 5, 1421-6	6.4	1292
171	Direct measurement of the exciton binding energy and effective masses for charge carriers in organic–inorganic tri-halide perovskites. *Nature Physics*, **2015**, 11, 582-587	16.2	1282
170	Excitons versus free charges in organo-lead tri-halide perovskites. *Nature Communications*, **2014**, 5, 3586	17.4	1231
169	Enhanced photoluminescence and solar cell performance via Lewis base passivation of organic-inorganic lead halide perovskites. *ACS Nano*, **2014**, 8, 9815-21	16.7	1194
168	Maximizing and stabilizing luminescence from halide perovskites with potassium passivation. *Nature*, **2018**, 555, 497-501	50.4	975
167	Carbon nanotube/polymer composites as a highly stable hole collection layer in perovskite solar cells. *Nano Letters*, **2014**, 14, 5561-8	11.5	944
166	Recombination Kinetics in Organic-Inorganic Perovskites: Excitons, Free Charge, and Subgap States. *Physical Review Applied*, **2014**, 2,	4.3	874
165	Ultrasmooth organic-inorganic perovskite thin-film formation and crystallization for efficient planar heterojunction solar cells. *Nature Communications*, **2015**, 6, 6142	17.4	695
164	Photo-induced halide redistribution in organic-inorganic perovskite films. *Nature Communications*, **2016**, 7, 11683	17.4	621
163	Heterojunction modification for highly efficient organic-inorganic perovskite solar cells. *ACS Nano*, **2014**, 8, 12701-9	16.7	546
162	High-performance perovskite-polymer hybrid solar cells via electronic coupling with fullerene monolayers. *Nano Letters*, **2013**, 13, 3124-8	11.5	545

161	Unreacted PbI2 as a Double-Edged Sword for Enhancing the Performance of Perovskite Solar Cells. *Journal of the American Chemical Society*, **2016**, 138, 10331-43	16.4	537
160	Supramolecular halogen bond passivation of organic-inorganic halide perovskite solar cells. *Nano Letters*, **2014**, 14, 3247-54	11.5	527
159	Determination of the exciton binding energy and effective masses for methylammonium and formamidinium lead tri-halide perovskite semiconductors. *Energy and Environmental Science*, **2016**, 9, 962-970	35.4	457
158	Enhancement of perovskite-based solar cells employing core-shell metal nanoparticles. *Nano Letters*, **2013**, 13, 4505-10	11.5	447
157	Consensus statement for stability assessment and reporting for perovskite photovoltaics based on ISOS procedures. *Nature Energy*, **2020**, 5, 35-49	62.3	369
156	Highly Tunable Colloidal Perovskite Nanoplatelets through Variable Cation, Metal, and Halide Composition. *ACS Nano*, **2016**, 10, 7830-9	16.7	368
155	Optical properties and limiting photocurrent of thin-film perovskite solar cells. *Energy and Environmental Science*, **2015**, 8, 602-609	35.4	335
154	Electronic properties of meso-superstructured and planar organometal halide perovskite films: charge trapping, photodoping, and carrier mobility. *ACS Nano*, **2014**, 8, 7147-55	16.7	328
153	Perovskite Crystals for Tunable White Light Emission. *Chemistry of Materials*, **2015**, 27, 8066-8075	9.6	327
152	Solution Deposition-Conversion for Planar Heterojunction Mixed Halide Perovskite Solar Cells. *Advanced Energy Materials*, **2014**, 4, 1400355	21.8	305
151	Direct-indirect character of the bandgap in methylammonium lead iodide perovskite. *Nature Materials*, **2017**, 16, 115-120	27	298
150	Methylammonium Bismuth Iodide as a Lead-Free, Stable Hybrid Organic-Inorganic Solar Absorber. *Chemistry - A European Journal*, **2016**, 22, 2605-10	4.8	253
149	Boosting Tunable Blue Luminescence of Halide Perovskite Nanoplatelets through Postsynthetic Surface Trap Repair. *Nano Letters*, **2018**, 18, 5231-5238	11.5	245
148	Light-induced annihilation of Frenkel defects in organo-lead halide perovskites. *Energy and Environmental Science*, **2016**, 9, 3180-3187	35.4	243
147	Nonradiative Losses in Metal Halide Perovskites. *ACS Energy Letters*, **2017**, 2, 1515-1525	20.1	234
146	Charge Carriers in Planar and Meso-Structured Organic-Inorganic Perovskites: Mobilities, Lifetimes, and Concentrations of Trap States. *Journal of Physical Chemistry Letters*, **2015**, 6, 3082-90	6.4	225
145	Metal Halide Perovskite Polycrystalline Films Exhibiting Properties of Single Crystals. *Joule*, **2017**, 1, 155-167	27.7	222
144	State of the Art and Prospects for Halide Perovskite Nanocrystals. *ACS Nano*, **2021**, 15, 10775-10981	16.7	222

143	Formation of thin films of organic-inorganic perovskites for high-efficiency solar cells. *Angewandte Chemie - International Edition*, **2015**, 54, 3240-8	16.4	214
142	Lattice strain causes non-radiative losses in halide perovskites. *Energy and Environmental Science*, **2019**, 12, 596-606	35.4	211
141	Stable Light-Emitting Diodes Using Phase-Pure Ruddlesden-Popper Layered Perovskites. *Advanced Materials*, **2018**, 30, 1704217	24	210
140	Structured Organic-Inorganic Perovskite toward a Distributed Feedback Laser. *Advanced Materials*, **2016**, 28, 923-9	24	209
139	The Importance of Perovskite Pore Filling in Organometal Mixed Halide Sensitized TiO2-Based Solar Cells. *Journal of Physical Chemistry Letters*, **2014**, 5, 1096-102	6.4	200
138	Tailoring metal halide perovskites through metal substitution: influence on photovoltaic and material properties. *Energy and Environmental Science*, **2017**, 10, 236-246	35.4	185
137	Plasmonic-Induced Photon Recycling in Metal Halide Perovskite Solar Cells. *Advanced Functional Materials*, **2015**, 25, 5038-5046	15.6	167
136	Performance-limiting nanoscale trap clusters at grain junctions in halide perovskites. *Nature*, **2020**, 580, 360-366	50.4	155
135	Efficient, Semitransparent Neutral-Colored Solar Cells Based on Microstructured Formamidinium Lead Trihalide Perovskite. *Journal of Physical Chemistry Letters*, **2015**, 6, 129-38	6.4	153
134	Atmospheric influence upon crystallization and electronic disorder and its impact on the photophysical properties of organic-inorganic perovskite solar cells. *ACS Nano*, **2015**, 9, 2311-20	16.7	152
133	The Physics of Light Emission in Halide Perovskite Devices. *Advanced Materials*, **2019**, 31, e1803336	24	137
132	Heterogeneity at multiple length scales in halide perovskite semiconductors. *Nature Reviews Materials*, **2019**, 4, 573-587	73.3	136
131	Enhanced Hole Extraction in Perovskite Solar Cells Through Carbon Nanotubes. *Journal of Physical Chemistry Letters*, **2014**, 5, 4207-12	6.4	126
130	Observation and Mediation of the Presence of Metallic Lead in Organic-Inorganic Perovskite Films. *ACS Applied Materials & Interfaces*, **2015**, 7, 13440-4	9.5	125
129	Taking Control of Ion Transport in Halide Perovskite Solar Cells. *ACS Energy Letters*, **2018**, 3, 1983-1990	20.1	121
128	The Impact of Atmosphere on the Local Luminescence Properties of Metal Halide Perovskite Grains. *Advanced Materials*, **2018**, 30, e1706208	24	116
127	Influence of Shell Thickness and Surface Passivation on PbS/CdS Core/Shell Colloidal Quantum Dot Solar Cells. *Chemistry of Materials*, **2014**, 26, 4004-4013	9.6	115
126	Charge-Carrier Recombination in Halide Perovskites. *Chemical Reviews*, **2019**, 119, 11007-11019	68.1	113

125	Vapour-Deposited Cesium Lead Iodide Perovskites: Microsecond Charge Carrier Lifetimes and Enhanced Photovoltaic Performance. *ACS Energy Letters*, **2017**, 2, 1901-1908	20.1	104
124	Enhanced Amplified Spontaneous Emission in Perovskites Using a Flexible Cholesteric Liquid Crystal Reflector. *Nano Letters*, **2015**, 15, 4935-41	11.5	97
123	Diacetylene bridged triphenylamines as hole transport materials for solid state dye sensitized solar cells. *Journal of Materials Chemistry A*, **2013**, 1, 6949	13	89
122	Potassium- and Rubidium-Passivated Alloyed Perovskite Films: Optoelectronic Properties and Moisture Stability. *ACS Energy Letters*, **2018**, 3, 2671-2678	20.1	88
121	Noncovalent binding of carbon nanotubes by porphyrin oligomers. *Angewandte Chemie - International Edition*, **2011**, 50, 2313-6	16.4	85
120	The influence of the Rashba effect. *Nature Materials*, **2018**, 17, 381-382	27	84
119	Role of the crystallization substrate on the photoluminescence properties of organo-lead mixed halides perovskites. *APL Materials*, **2014**, 2, 081509	5.7	83
118	Buried Interfaces in Halide Perovskite Photovoltaics. *Advanced Materials*, **2021**, 33, e2006435	24	83
117	Identifying and Reducing Interfacial Losses to Enhance Color-Pure Electroluminescence in Blue-Emitting Perovskite Nanoplatelet Light-Emitting Diodes. *ACS Energy Letters*, **2019**, 4, 1181-1188	20.1	80
116	Ultrafast charge separation at a polymer-single-walled carbon nanotube molecular junction. *Nano Letters*, **2011**, 11, 66-72	11.5	76
115	How To Quantify the Efficiency Potential of Neat Perovskite Films: Perovskite Semiconductors with an Implied Efficiency Exceeding 28. *Advanced Materials*, **2020**, 32, e2000080	24	75
114	The mechanism of toluene-assisted crystallization of organic–inorganic perovskites for highly efficient solar cells. *Journal of Materials Chemistry A*, **2016**, 4, 4464-4471	13	74
113	How Methylammonium Cations and Chlorine Dopants Heal Defects in Lead Iodide Perovskites. *Advanced Energy Materials*, **2018**, 8, 1702754	21.8	70
112	In situ simultaneous photovoltaic and structural evolution of perovskite solar cells during film formation. *Energy and Environmental Science*, **2018**, 11, 383-393	35.4	67
111	Efficient light-emitting diodes from mixed-dimensional perovskites on a fluoride interface. *Nature Electronics*, **2020**, 3, 704-710	28.4	67
110	22.8%-Efficient single-crystal mixed-cation inverted perovskite solar cells with a near-optimal bandgap. *Energy and Environmental Science*, **2021**, 14, 2263-2268	35.4	64
109	Photodoping through local charge carrier accumulation in alloyed hybrid perovskites for highly efficient luminescence. *Nature Photonics*, **2020**, 14, 123-128	33.9	60
108	Proton Radiation Hardness of Perovskite Tandem Photovoltaics. *Joule*, **2020**, 4, 1054-1069	27.8	53

107	The Impact of Phase Retention on the Structural and Optoelectronic Properties of Metal Halide Perovskites. *Advanced Materials*, **2016**, 28, 10757-10763	24	52
106	Modulating the Electron-Hole Interaction in a Hybrid Lead Halide Perovskite with an Electric Field. *Journal of the American Chemical Society*, **2015**, 137, 15451-9	16.4	51
105	Strain analysis and engineering in halide perovskite photovoltaics. *Nature Materials*, **2021**, 20, 1337-1346	27	51
104	Enhancing Photoluminescence and Mobilities in WS Monolayers with Oleic Acid Ligands. *Nano Letters*, **2019**, 19, 6299-6307	11.5	48
103	Electronic and mechanical modification of single-walled carbon nanotubes by binding to porphyrin oligomers. *ACS Nano*, **2011**, 5, 2307-15	16.7	47
102	Critical Assessment of the Use of Excess Lead Iodide in Lead Halide Perovskite Solar Cells. *Journal of Physical Chemistry Letters*, **2020**, 11, 6505-6512	6.4	46
101	Multisource Vacuum Deposition of Methylammonium-Free Perovskite Solar Cells. *ACS Energy Letters*, **2020**, 5, 2498-2504	20.1	45
100	Photo-rechargeable Zinc-Ion Capacitors using V2O5-Activated Carbon Electrodes. *ACS Energy Letters*, **2020**, 5, 3132-3139	20.1	45
99	Local Structure and Dynamics in Methylammonium, Formamidinium, and Cesium Tin(II) Mixed-Halide Perovskites from Sn Solid-State NMR. *Journal of the American Chemical Society*, **2020**, 142, 7813-7826	16.4	43
98	Impact of Excess Lead Iodide on the Recombination Kinetics in Metal Halide Perovskites. *ACS Energy Letters*, **2019**, 4, 1370-1378	20.1	42
97	Layered Mixed Tin–Lead Hybrid Perovskite Solar Cells with High Stability. *ACS Energy Letters*, **2018**, 3, 2246-2251	20.1	39
96	A Highly Emissive Surface Layer in Mixed-Halide Multication Perovskites. *Advanced Materials*, **2019**, 31, e1902374	24	39
95	Two-step purification of pathogenesis-related proteins from grape juice and crystallization of thaumatin-like proteins. *Journal of Agricultural and Food Chemistry*, **2009**, 57, 11376-82	5.7	39
94	Stable Hexylphosphonate-Capped Blue-Emitting Quantum-Confined CsPbBr Nanoplatelets. *ACS Energy Letters*, **2020**, 5, 1900-1907	20.1	38
93	Charge carrier recombination dynamics in perovskite and polymer solar cells. *Applied Physics Letters* , **2016**, 108, 113505	3.4	38
92	Conjugated Polyelectrolytes as Efficient Hole Transport Layers in Perovskite Light-Emitting Diodes. *ACS Nano*, **2018**, 12, 5826-5833	16.7	38
91	Excitonic Properties of Low-Band-Gap Lead–Tin Halide Perovskites. *ACS Energy Letters*, **2019**, 4, 615-621	20.1	36
90	Microsecond Carrier Lifetimes, Controlled p-Doping, and Enhanced Air Stability in Low-Bandgap Metal Halide Perovskites. *ACS Energy Letters*, **2019**, 4, 2301-2307	20.1	35

89	Photobrightening in Lead Halide Perovskites: Observations, Mechanisms, and Future Potential. *Advanced Energy Materials*, **2020**, 10, 1903109	21.8	35
88	Thiophene-based dyes for probing membranes. *Organic and Biomolecular Chemistry*, **2015**, 13, 3792-802	3.9	33
87	Probing buried recombination pathways in perovskite structures using 3D photoluminescence tomography. *Energy and Environmental Science*, **2018**, 11, 2846-2852	35.4	32
86	Nanoengineering coaxial carbon nanotube-dual-polymer heterostructures. *ACS Nano*, **2012**, 6, 6058-66	16.7	32
85	Impact of microstructure on the electron□hole interaction in lead halide perovskites. *Energy and Environmental Science*, **2017**, 10, 1358-1366	35.4	31
84	An Organic □Donor-Free□Dye with Enhanced Open-Circuit Voltage in Solid-State Sensitized Solar Cells. *Advanced Energy Materials*, **2014**, 4, 1400166	21.8	31
83	Decoupling the effects of defects on efficiency and stability through phosphonates in stable halide perovskite solar cells. *Joule*, **2021**, 5, 1246-1266	27.8	30
82	Halide Perovskite Light-Emitting Diode Technologies. *Advanced Optical Materials*, **2021**, 9, 2002128	8.1	29
81	Life cycle assessment of recycling strategies for perovskite photovoltaic modules. *Nature Sustainability*, **2021**, 4, 821-829	22.1	28
80	Stabilized tilted-octahedra halide perovskites inhibit local formation of performance-limiting phases.. *Science*, **2021**, 374, 1598-1605	33.3	28
79	Dependence of Dye Regeneration and Charge Collection on the Pore-Filling Fraction in Solid-State Dye-Sensitized Solar Cells. *Advanced Functional Materials*, **2014**, 24, 668-677	15.6	27
78	NMR spectroscopy probes microstructure, dynamics and doping of metal halide perovskites. *Nature Reviews Chemistry*, **2021**, 5, 624-645	34.6	27
77	An open-access database and analysis tool for perovskite solar cells based on the FAIR data principles. *Nature Energy*, **2022**, 7, 107-115	62.3	26
76	Phase-Transition-Induced Carrier Mass Enhancement in 2D Ruddlesden□opper Perovskites. *ACS Energy Letters*, **2019**, 4, 2386-2392	20.1	25
75	Organisch-anorganische Perowskit-D□nnfilme f□ hocheffiziente Solarzellen. *Angewandte Chemie*, **2015**, 127, 3288-3297	3.6	25
74	An ultrafast carbon nanotube terahertz polarisation modulator. *Journal of Applied Physics*, **2014**, 115, 203108	2.5	25
73	Model for amorphous aggregation processes. *Physical Review E*, **2009**, 80, 051907	2.4	25
72	Nanoscale chemical heterogeneity dominates the optoelectronic response of alloyed perovskite solar cells. *Nature Nanotechnology*, **2021**,	28.7	25

71	Life cycle energy use and environmental implications of high-performance perovskite tandem solar cells. *Science Advances*, **2020**, 6, eabb0055	14.3	25
70	Reversible Removal of Intermixed Shallow States by Light Soaking in Multication Mixed Halide Perovskite Films. *ACS Energy Letters*, **2019**, 4, 2360-2367	20.1	24
69	Controlling the Growth Kinetics and Optoelectronic Properties of 2D/3D Lead-Tin Perovskite Heterojunctions. *Advanced Materials*, **2019**, 31, e1905247	24	24
68	Impact of Oxygen on the Electronic Structure of Triple-Cation Halide Perovskites **2019**, 1, 506-510		23
67	Colloidal Synthesis and Optical Properties of Perovskite-Inspired Cesium Zirconium Halide Nanocrystals **2020**, 2, 1644-1652		23
66	Rapid Vapor-Phase Deposition of High-Mobility p-Type Buffer Layers on Perovskite Photovoltaics for Efficient Semitransparent Devices. *ACS Energy Letters*, **2020**, 5, 2456-2465	20.1	22
65	Production of high-purity single-chirality carbon nanotube hybrids by selective polymer exchange. *Small*, **2013**, 9, 2245-9	11	21
64	Understanding the Origin of Ultrasharp Sub-bandgap Luminescence from Zero-Dimensional Inorganic Perovskite Cs4PbBr6. *ACS Applied Energy Materials*, **2020**, 3, 192-199	6.1	21
63	Quantifying Photon Recycling in Solar Cells and Light-Emitting Diodes: Absorption and Emission Are Always Key. *Physical Review Letters*, **2020**, 125, 067401	7.4	21
62	Outshining Silicon. *Scientific American*, **2015**, 313, 54-59	0.5	20
61	Influence of Grain Size on Phase Transitions in Halide Perovskite Films. *Advanced Energy Materials*, **2019**, 9, 1901883	21.8	20
60	Visualizing Buried Local Carrier Diffusion in Halide Perovskite Crystals via Two-Photon Microscopy. *ACS Energy Letters*, **2020**, 5, 117-123	20.1	20
59	Relaxed Current Matching Requirements in Highly Luminescent Perovskite Tandem Solar Cells and Their Fundamental Efficiency Limits. *ACS Energy Letters*, **2021**, 6, 612-620	20.1	20
58	Halide Mixing and Phase Segregation in CsAgBiX (X = Cl, Br, and I) Double Perovskites from Cesium-133 Solid-State NMR and Optical Spectroscopy. *Chemistry of Materials*, **2020**, 32, 8129-8138	9.6	19
57	Rational Passivation of Sulfur Vacancy Defects in Two-Dimensional Transition Metal Dichalcogenides. *ACS Nano*, **2021**, 15, 8780-8789	16.7	19
56	Unveiling the Chemical Composition of Halide Perovskite Films Using Multivariate Statistical Analyses. *ACS Applied Energy Materials*, **2018**, 1, 7174-7181	6.1	19
55	Optimizing the Energy Offset between Dye and Hole-Transporting Material in Solid-State Dye-Sensitized Solar Cells. *Journal of Physical Chemistry C*, **2013**, 117, 19850-19858	3.8	18
54	Efficient and Spectrally Stable Blue Perovskite Light-Emitting Diodes Employing a Cationic Conjugated Polymer. *Advanced Materials*, **2021**, 33, e2103640	24	18

53	Functional Single-Walled Carbon Nanotubes and Nanoengineered Networks for Organic- and Perovskite-Solar-Cell Applications. *Advanced Materials*, **2016**, 28, 9668-9685	24	17
52	Degradation mechanisms of perovskite solar cells under vacuum and one atmosphere of nitrogen. *Nature Energy*, **2021**, 6, 977-986	62.3	17
51	Revisiting photocarrier lifetimes in photovoltaics. *Nature Photonics*, **2016**, 10, 562-562	33.9	16
50	Elucidating and Mitigating Degradation Processes in Perovskite Light-Emitting Diodes. *Advanced Energy Materials*, **2020**, 10, 2002676	21.8	16
49	Hyperspectral imaging of exciton photoluminescence in individual carbon nanotubes controlled by high magnetic fields. *Nano Letters*, **2014**, 14, 5194-200	11.5	15
48	Static and Dynamic Disorder in Triple-Cation Hybrid Perovskites. *Journal of Physical Chemistry C*, **2018**, 122, 17473-17480	3.8	14
47	Pressing challenges in halide perovskite photovoltaics From the atomic to module level. *Joule*, **2021**, 5, 1024-1030	27.8	14
46	Imaging Carrier Transport Properties in Halide Perovskites using Time-Resolved Optical Microscopy. *Advanced Energy Materials*, **2020**, 10, 1903814	21.8	14
45	Understanding Performance Limiting Interfacial Recombination in pin Perovskite Solar Cells. *Advanced Energy Materials*, **2022**, 2103567	21.8	13
44	Spray-Coated Lead-Free Cs2AgBiBr6 Double Perovskite Solar Cells with High Open-Circuit Voltage. *Solar Rrl*, **2021**, 5, 2100422	7.1	13
43	Halide perovskites scintillators: unique promise and current limitations. *Journal of Materials Chemistry C*, **2021**, 9, 11588-11604	7.1	13
42	Unraveling the antisolvent dripping delay effect on the Stranski-Krastanov growth of CHNHPbBr thin films: a facile route for preparing a textured morphology with improved optoelectronic properties. *Physical Chemistry Chemical Physics*, **2020**, 22, 26592-26604	3.6	12
41	Synthesis of Polycrystalline Ruddlesden Popper Organic Lead Halides and Their Growth Dynamics. *Chemistry of Materials*, **2019**, 31, 9472-9479	9.6	12
40	Molecular aggregation method for perovskite fullerene bulk heterostructure solar cells. *Journal of Materials Chemistry A*, **2020**, 8, 1326-1334	13	12
39	Charge Carriers Are Not Affected by the Relatively Slow-Rotating Methylammonium Cations in Lead Halide Perovskite Thin Films. *Journal of Physical Chemistry Letters*, **2019**, 10, 5128-5134	6.4	11
38	Influence of the Vibrational Modes from the Organic Moieties in 2D Lead Halides on Excitonic Recombination and Phase Transition. *Advanced Optical Materials*, **2020**, 8, 2001431	8.1	11
37	Multimodal Microscale Imaging of Textured Perovskite-Silicon Tandem Solar Cells. *ACS Energy Letters*, **2021**, 6, 2293-2304	20.1	11
36	High-Performance ITO-Free Perovskite Solar Cells Enabled by Single-Walled Carbon Nanotube Films. *Advanced Functional Materials*, **2021**, 31, 2104396	15.6	11

35	Noncovalent Binding of Carbon Nanotubes by Porphyrin Oligomers. *Angewandte Chemie*, **2011**, 123, 2361-2364	3.6	10
34	Revealing Nanomechanical Domains and Their Transient Behavior in Mixed-Halide Perovskite Films. *Advanced Functional Materials*, **2021**, 31, 2100293	15.6	10
33	Engineering nanostructures by binding single molecules to single-walled carbon nanotubes. *ACS Nano*, **2014**, 8, 12748-54	16.7	9
32	Unraveling the varied nature and roles of defects in hybrid halide perovskites with time-resolved photoemission electron microscopy.. *Energy and Environmental Science*, **2021**, 14, 6320-6328	35.4	9
31	Tetrafluoroborate-Induced Reduction in Defect Density in Hybrid Perovskites through Halide Management. *Advanced Materials*, **2021**, 33, e2102462	24	9
30	To nano or not to nano for bright halide perovskite emitters. *Nature Nanotechnology*, **2021**, 16, 1164-1168	38.7	8
29	Enhanced visible light absorption in layered CsBiBr through mixed-valence Sn(ii)/Sn(iv) doping. *Chemical Science*, **2021**, 12, 14686-14699	9.4	8
28	Directed Energy Transfer from Monolayer WS to Near-Infrared Emitting PbS-CdS Quantum Dots. *ACS Nano*, **2020**, 14, 15374-15384	16.7	8
27	Hybrid perovskites for device applications **2019**, 211-256		8
26	Multimodal microscopy characterization of halide perovskite semiconductors: Revealing a new world (dis)order. *Matter*, **2021**, 4, 3852-3866	12.7	7
25	Proton-Radiation Tolerant All-Perovskite Multijunction Solar Cells. *Advanced Energy Materials*, **2021** , 11, 2102246	21.8	7
24	Quantum funneling in blended multi-band gap core/shell colloidal quantum dot solar cells. *Applied Physics Letters*, **2015**, 107, 103902	3.4	6
23	Optoelectronic Properties of Low-Bandgap Halide Perovskites for Solar Cell Applications. *Advanced Materials*, **2021**, 33, e2102300	24	6
22	Quantum dot-like excitonic behavior in individual single walled-carbon nanotubes. *Scientific Reports* , **2016**, 6, 37167	4.9	4
21	Perovskite Solar Cells with Carbon-Based Electrodes Quantification of Losses and Strategies to Overcome Them. *Advanced Energy Materials*,2103128	21.8	4
20	Maximizing the external radiative efficiency of hybrid perovskite solar cells. *Pure and Applied Chemistry*, **2020**, 92, 697-706	2.1	4
19	Mechanistic insight into the chemical treatments of monolayer transition metal disulfides for photoluminescence enhancement. *Nature Communications*, **2021**, 12, 6044	17.4	4
18	Local Energy Landscape Drives Long-Range Exciton Diffusion in Two-Dimensional Halide Perovskite Semiconductors. *Journal of Physical Chemistry Letters*, **2021**, 12, 4003-4011	6.4	4

List of Publications

17	Influence of Halide Choice on Formation of Low-Dimensional Perovskite Interlayer in Efficient Perovskite Solar Cells. *Energy and Environmental Materials*,	13	4
16	Perovskite Solar Cells **2017**, 277-291		3
15	Correlated Electrical and Chemical Nanoscale Properties in Potassium-Passivated, Triple-Cation Perovskite Solar Cells. *Advanced Materials Interfaces*, **2020**, 7, 2000515	4.6	3
14	Optical emission from focused ion beam milled halide perovskite device cross-sections.. *Microscopy Research and Technique*, **2022**,	2.8	3
13	Optical and Electronic Properties of Colloidal CdSe Quantum Rings. *ACS Nano*, **2020**, 14, 14740-14760	16.7	3
12	From Bulk to Surface Passivation: Double Role of Chlorine-Doping for Boosting Efficiency of FAPbI 3 -rich Perovskite Solar Cells. *Solar Rrl*,2200038	7.1	3
11	Investigation of Trap States and Their Dynamics in Hybrid Organic-inorganic Mixed Cation Perovskite Films Using Time Resolved Photoemission Electron Microscopy **2018**,		2
10	Using pulsed mode scanning electron microscopy for cathodoluminescence studies on hybrid perovskite films. *Nano Express*, **2021**, 2, 024002	2	2
9	Structural and spectroscopic studies of a nanostructured silicon-perovskite interface. *Nanoscale*, **2020**, 12, 4498-4505	7.7	1
8	Visualizing the Creation and Healing of Traps in Perovskite Photovoltaic Films by Light Soaking and Passivation Treatments **2019**,		1
7	Unveiling the interaction mechanisms of electron and X-ray radiation with halide perovskite semiconductors using scanning nano-probe diffraction.. *Advanced Materials*, **2022**, e2200383	24	1
6	Halide Perovskites: Low Dimensions for Devices. *ACS Energy Letters*, **2019**, 4, 2902-2904	20.1	
5	Ultrafast Charge Separation at a Single-walled Carbon Nanotube Polymer Interface. *Materials Research Society Symposia Proceedings*, **2011**, 1286, 7		
4	Proton-Radiation Tolerant All-Perovskite Multijunction Solar Cells (Adv. Energy Mater. 41/2021). *Advanced Energy Materials*, **2021**, 11, 2170164	21.8	
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