Nripan Mathews

List of Publications by Year
in descending order

310	35,267	5268 83	3487 182
papers	citations	h-index	g-index

340	340	340	28015
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Long-Range Balanced Electron- and Hole-Transport Lengths in Organic-Inorganic CH ₃ NH ₃ PbI ₃. Science, 2013, 342, 344-347.	12.6	6,060
2	Low-temperature solution-processed wavelength-tunable perovskites for lasing. Nature Materials, 2014, 13, 476-480.	27.5	2,725
3	Perovskite Materials for Lightâ€Emitting Diodes and Lasers. Advanced Materials, 2016, 28, 6804-6834.	21.0	1,188
4	The origin of high efficiency in low-temperature solution-processable bilayer organometal halide hybrid solar cells. Energy and Environmental Science, 2014, 7, 399-407.	30.8	965
5	Leadâ€Free Halide Perovskite Solar Cells with High Photocurrents Realized Through Vacancy Modulation. Advanced Materials, 2014, 26, 7122-7127.	21.0	942
6	Lead-free germanium iodide perovskite materials for photovoltaic applications. Journal of Materials Chemistry A, 2015, 3, 23829-23832.	10.3	841
7	Advancements in perovskite solar cells: photophysics behind the photovoltaics. Energy and Environmental Science, 2014, 7, 2518-2534.	30.8	694
8	Formamidinium-Containing Metal-Halide: An Alternative Material for Near-IR Absorption Perovskite Solar Cells. Journal of Physical Chemistry C, 2014, 118, 16458-16462.	3.1	657
9	Flexible, low-temperature, solution processed ZnO-based perovskite solid state solar cells. Chemical Communications, 2013, 49, 11089.	4.1	553
10	Synthesis of porous NiO nanocrystals with controllable surface area and their application as supercapacitor electrodes. Nano Research, 2010, 3, 643-652.	10.4	534
11	Band-gap tuning of lead halide perovskites using a sequential deposition process. Journal of Materials Chemistry A, 2014, 2, 9221-9225.	10.3	494
12	Inorganic Halide Perovskites for Efficient Light-Emitting Diodes. Journal of Physical Chemistry Letters, 2015, 6, 4360-4364.	4.6	482
13	Lead-Free MA₂CuCl_xBr_{4â€“x} Hybrid Perovskites. Inorganic Chemistry, 2016, 55, 1044-1052.	4.0	457
14	Formamidinium tin-based perovskite with low E_g for photovoltaic applications. Journal of Materials Chemistry A, 2015, 3, 14996-15000.	10.3	449
15	Laminated Carbon Nanotube Networks for Metal Electrode-Free Efficient Perovskite Solar Cells. ACS Nano, 2014, 8, 6797-6804.	14.6	427
16	Ultrathin films on copper(i) oxide water splitting photocathodes: a study on performance and stability. Energy and Environmental Science, 2012, 5, 8673.	30.8	401
17	Current progress and future perspectives for organic/inorganic perovskite solar cells. Materials Today, 2014, 17, 16-23.	14.2	349
18	Surface Recombination and Collection Efficiency in Perovskite Solar Cells from Impedance Analysis. Journal of Physical Chemistry Letters, 2016, 7, 5105-5113.	4.6	346

#	Article	IF	Citations
19	Impact of Anionic Br^{â€“} Substitution on Open Circuit Voltage in Lead Free Perovskite (CsSnI_{3-x}Br_x) Solar Cells. Journal of Physical Chemistry C, 2015, 119, 1763-1767.	3.1	332
20	Slow cooling and highly efficient extraction of hot carriers in colloidal perovskite nanocrystals. Nature Communications, 2017, 8, 14350.	12.8	282
21	Enhancement in the Performance of Ultrathin Hematite Photoanode for Water Splitting by an Oxide Underlayer. Advanced Materials, 2012, 24, 2699-2702.	21.0	271
22	Discerning the Surface and Bulk Recombination Kinetics of Organicâ€“Inorganic Halide Perovskite Single Crystals. Advanced Energy Materials, 2016, 6, 1600551.	19.5	271
23	Perovskite Solar Cells: Beyond Methylammonium Lead Iodide. Journal of Physical Chemistry Letters, 2015, 6, 898-907.	4.6	266
24	Synergistic Gating of Electroâ€Ionoâ€Photoactive 2D Chalcogenide Neuristors: Coexistence of Hebbian and Homeostatic Synaptic Metaplasticity. Advanced Materials, 2018, 30, e1800220.	21.0	261
25	Highly Efficient Thermally Co-evaporated Perovskite Solar Cells and Mini-modules. Joule, 2020, 4, 1035-1053.	24.0	257
26	Nanostructuring Mixedâ€Dimensional Perovskites: A Route Toward Tunable, Efficient Photovoltaics. Advanced Materials, 2016, 28, 3653-3661.	21.0	251
27	Perovskiteâ€“Hematite Tandem Cells for Efficient Overall Solar Driven Water Splitting. Nano Letters, 2015, 15, 3833-3839.	9.1	249
28	Rb as an Alternative Cation for Templating Inorganic Lead-Free Perovskites for Solution Processed Photovoltaics. Chemistry of Materials, 2016, 28, 7496-7504.	6.7	249
29	A Photonic Crystal Laser from Solution Based Organo-Lead Iodide Perovskite Thin Films. ACS Nano, 2016, 10, 3959-3967.	14.6	238
30	Solutionâ€Processed Tinâ€Based Perovskite for Nearâ€Infrared Lasing. Advanced Materials, 2016, 28, 8191-8196.	21.0	222
31	Charge Accumulation and Hysteresis in Perovskiteâ€Based Solar Cells: An Electroâ€Optical Analysis. Advanced Energy Materials, 2015, 5, 1500829.	19.5	217
32	Computational Study of Halide Perovskite-Derived A₂BX₆ Inorganic Compounds: Chemical Trends in Electronic Structure and Structural Stability. Chemistry of Materials, 2017, 29, 7740-7749.	6.7	215
33	A large area (70 cm²) monolithic perovskite solar module with a high efficiency and stability. Energy and Environmental Science, 2016, 9, 3687-3692.	30.8	213
34	Hydrothermal Synthesis of High Electron Mobility Zn-doped SnO₂ Nanoflowers as Photoanode Material for Efficient Dye-Sensitized Solar Cells. Chemistry of Materials, 2011, 23, 3938-3945.	6.7	206
35	Morphology-Independent Stable White-Light Emission from Self-Assembled Two-Dimensional Perovskites Driven by Strong Excitonâ€“Phonon Coupling to the Organic Framework. Chemistry of Materials, 2017, 29, 3947-3953.	6.7	200
36	Interfacial Electron Transfer Barrier at Compact TiO₂/CH₃NH₃PbI₃Heterojunction. Small, 2015, 11, 3606-3613.	10.0	196

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37	Polaron self-localization in white-light emitting hybrid perovskites. Journal of Materials Chemistry C, 2017, 5, 2771-2780.	5.5	196
38	Rutile TiO2-based perovskite solar cells. Journal of Materials Chemistry A, 2014, 2, 9251.	10.3	188
39	Rational Design: A High-Throughput Computational Screening and Experimental Validation Methodology for Lead-Free and Emergent Hybrid Perovskites. ACS Energy Letters, 2017, 2, 837-845.	17.4	187
40	High efficiency electrospun TiO₂nanofiber based hybrid organicâ€“inorganic perovskite solar cell. Nanoscale, 2014, 6, 1675-1679.	5.6	185
41	Highly Spin-Polarized Carrier Dynamics and Ultralarge Photoinduced Magnetization in CH₃NH₃PbI₃ Perovskite Thin Films. Nano Letters, 2015, 15, 1553-1558.	9.1	183
42	Giant five-photon absorption from multidimensional core-shell halide perovskite colloidal nanocrystals. Nature Communications, 2017, 8, 15198.	12.8	177
43	A swivel-cruciform thiophene based hole-transporting material for efficient perovskite solar cells. Journal of Materials Chemistry A, 2014, 2, 6305-6309.	10.3	167
44	Enhancing moisture tolerance in efficient hybrid 3D/2D perovskite photovoltaics. Journal of Materials Chemistry A, 2018, 6, 2122-2128.	10.3	163
45	Spectral Features and Charge Dynamics of Lead Halide Perovskites: Origins and Interpretations. Accounts of Chemical Research, 2016, 49, 294-302.	15.6	159
46	Flexible Ionicâ€Electronic Hybrid Oxide Synaptic TFTs with Programmable Dynamic Plasticity for Brainâ€Inspired Neuromorphic Computing. Small, 2017, 13, 1701193.	10.0	152
47	Ionotronic Halide Perovskite Driftâ€Diffusive Synapses for Lowâ€Power Neuromorphic Computation. Advanced Materials, 2018, 30, e1805454.	21.0	146
48	Characteristics of the Electrical Percolation in Carbon Nanotubes/Polymer Nanocomposites. Journal of Physical Chemistry C, 2011, 115, 21685-21690.	3.1	142
49	Interfacial Charge Transfer Anisotropy in Polycrystalline Lead Iodide Perovskite Films. Journal of Physical Chemistry Letters, 2015, 6, 1396-1402.	4.6	141
50	CdSe-sensitized mesoscopic TiO2 solar cells exhibiting >5% efficiency: redundancy of CdS buffer layer. Journal of Materials Chemistry, 2012, 22, 16235.	6.7	140
51	Iron Pyrite Thin Film Counter Electrodes for Dye-Sensitized Solar Cells: High Efficiency for Iodine and Cobalt Redox Electrolyte Cells. ACS Nano, 2014, 8, 10597-10605.	14.6	138
52	Highly stable, luminescent coreâ€“shell type methylammoniumâ€“octylammonium lead bromide layered perovskite nanoparticles. Chemical Communications, 2016, 52, 7118-7121.	4.1	138
53	Over 20% Efficient CIGSâ€“Perovskite Tandem Solar Cells. ACS Energy Letters, 2017, 2, 807-812.	17.4	135
54	Self-assembled hierarchical nanostructured perovskites enable highly efficient LEDs via an energy cascade. Energy and Environmental Science, 2018, 11, 1770-1778.	30.8	135

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55	Towards printable organic thin film transistor based flash memory devices. Journal of Materials Chemistry, 2011, 21, 5203.	6.7	133
56	In situ photo-assisted deposition of MoS2 electrocatalyst onto zinc cadmium sulphide nanoparticle surfaces to construct an efficient photocatalyst for hydrogen generation. Nanoscale, 2013, 5, 1479.	5.6	133
57	Limitations of Cs₃Bi₂I₉ as Lead-Free Photovoltaic Absorber Materials. ACS Applied Materials & Interfaces, 2018, 10, 35000-35007.	8.0	133
58	Effect of Cation Composition on the Mechanical Stability of Perovskite Solar Cells. Advanced Energy Materials, 2018, 8, 1702116.	19.5	130
59	Identifying Fundamental Limitations in Halide Perovskite Solar Cells. Advanced Materials, 2016, 28, 2439-2445.	21.0	129
60	On the Solar to Hydrogen Conversion Efficiency of Photoelectrodes for Water Splitting. Journal of Physical Chemistry Letters, 2014, 5, 3330-3334.	4.6	128
61	Transparent, Conducting Nb:SnO₂ for Hostâ€“Guest Photoelectrochemistry. Nano Letters, 2012, 12, 5431-5435.	9.1	122
62	Solution processed transition metal sulfides: application as counter electrodes in dye sensitized solar cells (DSCs). Physical Chemistry Chemical Physics, 2011, 13, 19307.	2.8	121
63	Poor Photovoltaic Performance of Cs₃Bi₂I₉: An Insight through First-Principles Calculations. Journal of Physical Chemistry C, 2017, 121, 17062-17067.	3.1	121
64	Uncovering loss mechanisms in silver nanoparticle-blended plasmonic organic solar cells. Nature Communications, 2013, 4, 2004.	12.8	118
65	Ultrathin MnO2 nanoflakes as efficient catalysts for oxygen reduction reaction. Chemical Communications, 2014, 50, 7885.	4.1	113
66	Tunable room-temperature spin-selective optical Stark effect in solution-processed layered halide perovskites. Science Advances, 2016, 2, e1600477.	10.3	112
67	Cesium Copper Iodide Tailored Nanoplates and Nanorods for Blue, Yellow, and White Emission. Chemistry of Materials, 2019, 31, 9003-9011.	6.7	111
68	Low threshold and efficient multiple exciton generation in halide perovskite nanocrystals. Nature Communications, 2018, 9, 4197.	12.8	110
69	Halide perovskite memristors as flexible and reconfigurable physical unclonable functions. Nature Communications, 2021, 12, 3681.	12.8	107
70	Spinel Co₃O₄ nanomaterials for efficient and stable large area carbon-based printed perovskite solar cells. Nanoscale, 2018, 10, 2341-2350.	5.6	106
71	High-throughput Computational Study of Halide Double Perovskite Inorganic Compounds. Chemistry of Materials, 2019, 31, 5392-5401.	6.7	102
72	Enhanced Exciton and Photon Confinement in Ruddlesdenâ€“Popper Perovskite Microplatelets for Highly Stable Lowâ€Threshold Polarized Lasing. Advanced Materials, 2018, 30, e1707235.	21.0	101

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73	Benzyl Alcohol-Treated CH₃NH₃PbBr₃ Nanocrystals Exhibiting High Luminescence, Stability, and Ultralow Amplified Spontaneous Emission Thresholds. Nano Letters, 2017, 17, 7424-7432.	9.1	100
74	Micellar poly(styrene-b-4-vinylpyridine)-nanoparticle hybrid system for non-volatile organic transistor memory. Journal of Materials Chemistry, 2009, 19, 7354.	6.7	99
75	Efficient multispectral photodetection using Mn doped ZnO nanowires. Journal of Materials Chemistry, 2012, 22, 9678.	6.7	97
76	Unravelling the Effects of Cl Addition in Single Step CH₃NH₃PbI₃ Perovskite Solar Cells. Chemistry of Materials, 2015, 27, 2309-2314.	6.7	96
77	Hybrid grapheneâ€“metal nanoparticle systems: electronic properties and gas interaction. Journal of Materials Chemistry, 2011, 21, 15593.	6.7	94
78	Si photocathode with Ag-supported dendritic Cu catalyst for CO₂reduction. Energy and Environmental Science, 2019, 12, 1068-1077.	30.8	93
79	Crown Ethers Enable Room-Temperature Synthesis of CsPbBr₃ Quantum Dots for Light-Emitting Diodes. ACS Energy Letters, 2018, 3, 526-531.	17.4	92
80	Oneâ€Step Inkjet Printed Perovskite in Air for Efficient Light Harvesting. Solar Rrl, 2018, 2, 1700217.	5.8	90
81	Multidimensional Perovskites: A Mixed Cation Approach Towards Ambient Stable and Tunable Perovskite Photovoltaics. ChemSusChem, 2016, 9, 2541-2558.	6.8	88
82	Carbon nanotubes as an efficient hole collector for high voltage methylammonium lead bromide perovskite solar cells. Nanoscale, 2016, 8, 6352-6360.	5.6	88
83	Indirect tail states formation by thermal-induced polar fluctuations in halide perovskites. Nature Communications, 2019, 10, 484.	12.8	88
84	Facile Photochemical Synthesis of Graphene-Pt Nanoparticle Composite for Counter Electrode in Dye Sensitized Solar Cell. ACS Applied Materials & Interfaces, 2012, 4, 3447-3452.	8.0	85
85	Highly efficient Cs-based perovskite light-emitting diodes enabled by energy funnelling. Chemical Communications, 2017, 53, 12004-12007.	4.1	85
86	Designing Efficient Energy Funneling Kinetics in Ruddlesdenâ€“Popper Perovskites for Highâ€Performance Lightâ€Emitting Diodes. Advanced Materials, 2018, 30, e1800818.	21.0	85
87	Superior Performance of Silver Bismuth Iodide Photovoltaics Fabricated via Dynamic Hotâ€Casting Method under Ambient Conditions. Advanced Energy Materials, 2018, 8, 1802051.	19.5	84
88	Effect of the Ionic Conductivity on the Performance of Polyelectroliteâ€Based Supercapacitors. Advanced Functional Materials, 2010, 20, 4344-4350.	14.9	83
89	Diffusive and Drift Halide Perovskite Memristive Barristors as Nociceptive and Synaptic Emulators for Neuromorphic Computing. Advanced Materials, 2021, 33, 2007851.	21.0	83
90	Energy level alignment at the methylammonium lead iodide/copper phthalocyanine interface. APL Materials, 2014, 2, .	5.1	80

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91	Completely Solvent-free Protocols to Access Phase-Pure, Metastable Metal Halide Perovskites and Functional Photodetectors from the Precursor Salts. IScience, 2019, 16, 312-325.	4.1	80
92	Bifacial, Color-Tunable Semitransparent Perovskite Solar Cells for Building-Integrated Photovoltaics. ACS Applied Materials & Interfaces, 2020, 12, 484-493.	8.0	80
93	Synthesis of gold nanoshells based on the depositionprecipitation process. Gold Bulletin, 2008, 41, 23-36.	2.7	78
94	Perovskite Nanoparticles: Synthesis, Properties, and Novel Applications in Photovoltaics and LEDs. Small Methods, 2019, 3, 1800231.	8.6	77
95	Incorporation of Cl into sequentially deposited lead halide perovskite films for highly efficient mesoporous solar cells. Nanoscale, 2014, 6, 13854-13860.	5.6	76
96	Novel Plasma-Assisted Low-Temperature-Processed SnO₂ Thin Films for Efficient Flexible Perovskite Photovoltaics. ACS Energy Letters, 2018, 3, 1482-1491.	17.4	75
97	Dominant factors limiting the optical gain in layered two-dimensional halide perovskite thin films. Physical Chemistry Chemical Physics, 2016, 18, 14701-14708.	2.8	73
98	Broadbandâ€Emitting 2â€‰D Hybrid Organicâ€“Inorganic Perovskite Based on Cyclohexaneâ€bis(methylamonium) Cation. ChemSusChem, 2017, 10, 3765-3772.	6.8	72
99	Directed Assembly of Liquid Metalâ€“Elastomer Conductors for Stretchable and Selfâ€Healing Electronics. Advanced Materials, 2020, 32, e2001642.	21.0	72
100	Facile Method to Reduce Surface Defects and Trap Densities in Perovskite Photovoltaics. ACS Applied Materials & Interfaces, 2017, 9, 21292-21297.	8.0	71
101	Atomically Altered Hematite for Highly Efficient Perovskite Tandem Waterâ€Splitting Devices. ChemSusChem, 2017, 10, 2449-2456.	6.8	71
102	Additive Selection Strategy for High Performance Perovskite Photovoltaics. Journal of Physical Chemistry C, 2018, 122, 13884-13893.	3.1	71
103	Highly Efficient Semitransparent Perovskite Solar Cells for Four Terminal Perovskite-Silicon Tandems. ACS Applied Materials & Interfaces, 2019, 11, 34178-34187.	8.0	71
104	Designing the Perovskite Structural Landscape for Efficient Blue Emission. ACS Energy Letters, 2020, 5, 1593-1600.	17.4	71
105	Ultralow Power Dual-Gated Subthreshold Oxide Neuristors: An Enabler for Higher Order Neuronal Temporal Correlations. ACS Nano, 2018, 12, 11263-11273.	14.6	70
106	Ultrafine Gold Nanowire Networks as Plasmonic Antennae in Organic Photovoltaics. Journal of Physical Chemistry C, 2012, 116, 6453-6458.	3.1	69
107	Self-assembly of a robust hydrogen-bonded octylphosphonate network on cesium lead bromide perovskite nanocrystals for light-emitting diodes. Nanoscale, 2019, 11, 12370-12380.	5.6	67
108	Coherent Spin and Quasiparticle Dynamics in Solutionâ€Processed Layered 2D Lead Halide Perovskites. Advanced Science, 2018, 5, 1800664.	11.2	66

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109	Loading of mesoporous titania films by CH₃NH₃PbI₃ perovskite, single step vs. sequential deposition. Chemical Communications, 2015, 51, 4603-4606.	4.1	64
110	Al₂O₃ Surface Complexation for Photocatalytic Organic Transformations. Journal of the American Chemical Society, 2017, 139, 269-276.	13.7	64
111	Lead Halide Perovskite Nanocrystals: Room Temperature Syntheses toward Commercial Viability. Advanced Energy Materials, 2020, 10, 2001349.	19.5	63
112	Self healable neuromorphic memtransistor elements for decentralized sensory signal processing in robotics. Nature Communications, 2020, 11, 4030.	12.8	63
113	Low-Temperature Chemical Transformations for High-Performance Solution-Processed Oxide Transistors. Chemistry of Materials, 2016, 28, 8305-8313.	6.7	61
114	Recovery of Shallow Charge-Trapping Defects in CsPbX₃ Nanocrystals through Specific Binding and Encapsulation with Amino-Functionalized Silanes. ACS Energy Letters, 2018, 3, 1409-1414.	17.4	60
115	Organic neuromorphic devices: Past, present, and future challenges. MRS Bulletin, 2020, 45, 619-630.	3.5	59
116	Oxide nanowire networks and their electronic and optoelectronic characteristics. Nanoscale, 2010, 2, 1984.	5.6	58
117	Zinc Tin Oxide (ZTO) electron transporting buffer layer in inverted organic solar cell. Organic Electronics, 2012, 13, 870-874.	2.6	58
118	Transparent Flexible Multifunctional Nanostructured Architectures for Non-optical Readout, Proximity, and Pressure Sensing. ACS Applied Materials & Interfaces, 2017, 9, 15015-15021.	8.0	58
119	Cu-doped nickel oxide interface layer with nanoscale thickness for efficient and highly stable printable carbon-based perovskite solar cell. Solar Energy, 2019, 182, 225-236.	6.1	58
120	Tuning Electrical Properties in Amorphous Zinc Tin Oxide Thin Films for Solution Processed Electronics. ACS Applied Materials & Interfaces, 2014, 6, 773-777.	8.0	56
121	Origin of Photocarrier Losses in Iron Pyrite (FeS₂) Nanocubes. ACS Nano, 2016, 10, 4431-4440.	14.6	56
122	Hot carrier extraction in CH ₃ NH ₃ PbI ₃ unveiled by pump-push-probe spectroscopy. Science Advances, 2019, 5, eaax3620.	10.3	56
123	2D black phosphorous nanosheets as a hole transporting material in perovskite solar cells. Journal of Power Sources, 2017, 371, 156-161.	7.8	52
124	High-k, Ultrastretchable Self-Enclosed Ionic Liquid-Elastomer Composites for Soft Robotics and Flexible Electronics. ACS Applied Materials & Interfaces, 2020, 12, 37561-37570.	8.0	51
125	Light scattering enhancement from sub-micrometer cavities in the photoanode for dye-sensitized solar cells. Journal of Materials Chemistry, 2012, 22, 16201.	6.7	50
126	Cobalt Dopant with Deep Redox Potential for Organometal Halide Hybrid Solar Cells. ChemSusChem, 2014, 7, 1909-1914.	6.8	50

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127	Realizing Reduced Imperfections via Quantum Dots Interdiffusion in High Efficiency Perovskite Solar Cells. Advanced Materials, 2020, 32, e2003296.	21.0	50
128	Band engineered ternary solid solution CdSxSe1â^'x-sensitized mesoscopic TiO2 solar cells. Physical Chemistry Chemical Physics, 2012, 14, 7154.	2.8	47
129	Efficiency Enhancement in Bulk-Heterojunction Solar Cells Integrated with Large-Area Ag Nanotriangle Arrays. Journal of Physical Chemistry C, 2012, 116, 14820-14825.	3.1	46
130	Evolution of hydrogen by few-layered black phosphorus under visible illumination. Journal of Materials Chemistry A, 2017, 5, 24874-24879.	10.3	45
131	Aligned Tin Oxide Nanonets for High-Performance Transistors. Journal of Physical Chemistry C, 2010, 114, 1331-1336.	3.1	44
132	Extended Absorption Window and Improved Stability of Cesium-Based Triple-Cation Perovskite Solar Cells Passivated with Perfluorinated Organics. ACS Energy Letters, 2018, 3, 1068-1076.	17.4	44
133	Influence of 4-tert-Butylpyridine in DSCs with CoII/III Redox Mediator. Journal of Physical Chemistry C, 2013, 117, 15515-15522.	3.1	42
134	Metal Coordination Sphere Deformation Induced Highly Stokesâ€Shifted, Ultra Broadband Emission in 2D Hybrid Leadâ€Bromide Perovskites and Investigation of Its Origin. Angewandte Chemie - International Edition, 2020, 59, 10791-10796.	13.8	42
135	Stabilizing the Electroluminescence of Halide Perovskites with Potassium Passivation. ACS Energy Letters, 2020, 5, 1804-1813.	17.4	41
136	Hot Carriers in Halide Perovskites: How Hot Truly?. Journal of Physical Chemistry Letters, 2020, 11, 2743-2750.	4.6	41
137	Inducing formation of a corrugated, white-light emitting 2D lead-bromide perovskite via subtle changes in templating cation. Journal of Materials Chemistry C, 2020, 8, 889-893.	5.5	40
138	Enabling high performance n-type metal oxide semiconductors at low temperatures for thin film transistors. Inorganic Chemistry Frontiers, 2020, 7, 1822-1844.	6.0	40
139	Precise Control of CsPbBr₃ Perovskite Nanocrystal Growth at Room Temperature: Size Tunability and Synthetic Insights. Chemistry of Materials, 2021, 33, 2387-2397.	6.7	40
140	Coâ€Evaporated MAPbI₃ with Graded Fermi Levels Enables Highly Performing, Scalable, and Flexible pâ€iâ€n Perovskite Solar Cells. Advanced Functional Materials, 2021, 31, 2103252.	14.9	40
141	Mixed-Dimensional Naphthylmethylammonium-Methylammonium Lead Iodide Perovskites with Improved Thermal Stability. Scientific Reports, 2020, 10, 429.	3.3	39
142	Colorful Perovskite Solar Cells: Progress, Strategies, and Potentials. Journal of Physical Chemistry Letters, 2021, 12, 1321-1329.	4.6	39
143	Alkali Additives Enable Efficient Large Area (>55 cm²) Slotâ€Die Coated Perovskite Solar Modules. Advanced Functional Materials, 2022, 32, .	14.9	39
144	Improving Photocatalytic H₂ Evolution of TiO₂ via Formation of {001}â€“{010} Quasi-Heterojunctions. Journal of Physical Chemistry C, 2013, 117, 22894-22902.	3.1	38

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145	Indium Tungsten Oxide Thin Films for Flexible High-Performance Transistors and Neuromorphic Electronics. ACS Applied Materials & Interfaces, 2018, 10, 30506-30513.	8.0	38
146	Ultrafast long-range spin-funneling in solution-processed Ruddlesdenâ€“Popper halide perovskites. Nature Communications, 2019, 10, 3456.	12.8	38
147	Halide Perovskite Quantum Dots Photosensitizedâ€Amorphous Oxide Transistors for Multimodal Synapses. Advanced Materials Technologies, 2020, 5, 2000514.	5.8	38
148	Halide Perovskite Solar Cells for Building Integrated Photovoltaics: Transforming Building FaÃ§ades into Power Generators. Advanced Materials, 2022, 34, e2104661.	21.0	37
149	Facile synthesis of a hole transporting material with a silafluorene core for efficient mesoscopic CH₃NH₃PbI₃ perovskite solar cells. Journal of Materials Chemistry A, 2016, 4, 8750-8754.	10.3	36
150	Healable and flexible transparent heaters. Nanoscale, 2017, 9, 14990-14997.	5.6	36
151	Improved photovoltaic performance of triple-cation mixed-halide perovskite solar cells with binary trivalent metals incorporated into the titanium dioxide electron transport layer. Journal of Materials Chemistry C, 2019, 7, 5028-5036.	5.5	36
152	Optogenetics inspired transition metal dichalcogenide neuristors for in-memory deep recurrent neural networks. Nature Communications, 2020, 11, 3211.	12.8	36
153	Excellent Intrinsic Longâ€Term Thermal Stability of Coâ€Evaporated MAPbI₃ Solar Cells at 85 Â°C. Advanced Functional Materials, 2021, 31, 2100557.	14.9	36
154	Solution processed non-volatile top-gate polymer field-effect transistors. Journal of Materials Chemistry, 2011, 21, 8971.	6.7	34
155	Uncovering alternate charge transfer mechanisms in Escherichia coli chemically functionalized with conjugated oligoelectrolytes. Chemical Communications, 2014, 50, 8223-8226.	4.1	34
156	Cubic NaSbS₂ as an Ionicâ€“Electronic Coupled Semiconductor for Switchable Photovoltaic and Neuromorphic Device Applications. Advanced Materials, 2020, 32, e1906976.	21.0	34
157	Elucidating the Localized Plasmonic Enhancement Effects from a Single Ag Nanowire in Organic Solar Cells. ACS Nano, 2014, 8, 10101-10110.	14.6	33
158	Modulating carrier dynamics through perovskite film engineering. Physical Chemistry Chemical Physics, 2016, 18, 27119-27123.	2.8	33
159	Role of Water in Suppressing Recombination Pathways in CH₃NH₃PbI₃ Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2019, 11, 25474-25482.	8.0	33
160	Effect of TiO₂Mesoporous Layer and Surface Treatments in Determining Efficiencies in Antimony Sulfide-(Sb₂S₃) Sensitized Solar Cells. Journal of the Electrochemical Society, 2012, 159, B247-B250.	2.9	32
161	Ruddlesden-Popper Perovskite Solar Cells. CheM, 2017, 2, 326-327.	11.7	31
162	Simplified Architecture of a Fully Printable Perovskite Solar Cell Using a Thick Zirconia Layer. Energy Technology, 2017, 5, 1866-1872.	3.8	31

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163	Highly Transparent and Integrable Surface Texture Change Device for Localized Tactile Feedback. Small, 2018, 14, 1702312.	10.0	31
164	Broadband emission from zero-dimensional Cs₄PbI₆ perovskite nanocrystals. RSC Advances, 2020, 10, 13431-13436.	3.6	31
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