M Ibrahim Dar

List of Publications by Citations

81 papers	9,670 citations	41 h-index	83 g-index
83 ext. papers	11,037 ext. citations	12.7 avg, IF	6.39 L-index

#	Paper	IF	Citations
81	Efficient luminescent solar cells based on tailored mixed-cation perovskites. *Science Advances*, **2016**, 2, e1501170	14.3	1498
80	Perovskite solar cells with CuSCN hole extraction layers yield stabilized efficiencies greater than 20. *Science*, **2017**, 358, 768-771	33.3	1030
79	Improved performance and stability of perovskite solar cells by crystal crosslinking with alkylphosphonic acid ω-ammonium chlorides. *Nature Chemistry*, **2015**, 7, 703-11	17.6	898
78	Thermodynamically stabilized β-CsPbI3-based perovskite solar cells with efficiencies >18. *Science*, **2019**, 365, 591-595	33.3	644
77	Bication lead iodide 2D perovskite component to stabilize inorganic α-CsPbI3 perovskite phase for high-efficiency solar cells. *Science Advances*, **2017**, 3, e1700841	14.3	450
76	Ultrahydrophobic 3D/2D fluoroarene bilayer-based water-resistant perovskite solar cells with efficiencies exceeding 22. *Science Advances*, **2019**, 5, eaaw2543	14.3	362
75	Flexible high efficiency perovskite solar cells. *Energy and Environmental Science*, **2014**, 7, 994	35.4	357
74	Triazatruxene-Based Hole Transporting Materials for Highly Efficient Perovskite Solar Cells. *Journal of the American Chemical Society*, **2015**, 137, 16172-8	16.4	268
73	Origin of unusual bandgap shift and dual emission in organic-inorganic lead halide perovskites. *Science Advances*, **2016**, 2, e1601156	14.3	238
72	Perovskite solar cells with 12.8% efficiency by using conjugated quinolizino acridine based hole transporting material. *Journal of the American Chemical Society*, **2014**, 136, 8516-9	16.4	228
71	Tailored Amphiphilic Molecular Mitigators for Stable Perovskite Solar Cells with 23.5% Efficiency. *Advanced Materials*, **2020**, 32, e1907757	24	178
70	Investigation regarding the role of chloride in organic-inorganic halide perovskites obtained from chloride containing precursors. *Nano Letters*, **2014**, 14, 6991-6	11.5	176
69	Impact of Monovalent Cation Halide Additives on the Structural and Optoelectronic Properties of CH3NH3PbI3 Perovskite. *Advanced Energy Materials*, **2016**, 6, 1502472	21.8	171
68	Light Harvesting and Charge Recombination in CH3NH3PbI3 Perovskite Solar Cells Studied by Hole Transport Layer Thickness Variation. *ACS Nano*, **2015**, 9, 4200-9	16.7	167
67	New Strategies for Defect Passivation in High-Efficiency Perovskite Solar Cells. *Advanced Energy Materials*, **2020**, 10, 1903090	21.8	152
66	Yttrium-substituted nanocrystalline TiO2 photoanodes for perovskite based heterojunction solar cells. *Nanoscale*, **2014**, 6, 1508-14	7.7	151
65	Bifunctional Organic Spacers for Formamidinium-Based Hybrid Dion-Jacobson Two-Dimensional Perovskite Solar Cells. *Nano Letters*, **2019**, 19, 150-157	11.5	140

64	Single crystalline magnetite, maghemite, and hematite nanoparticles with rich coercivity. *RSC Advances*, **2014**, 4, 4105-4113	3.7	132
63	Stabilization of Highly Efficient and Stable Phase-Pure FAPbI Perovskite Solar Cells by Molecularly Tailored 2D-Overlayers. *Angewandte Chemie - International Edition*, **2020**, 59, 15688-15694	16.4	115
62	Air Processed Inkjet Infiltrated Carbon Based Printed Perovskite Solar Cells with High Stability and Reproducibility. *Advanced Materials Technologies*, **2017**, 2, 1600183	6.8	109
61	The Role of Rubidium in Multiple-Cation-Based High-Efficiency Perovskite Solar Cells. *Advanced Materials*, **2017**, 29, 1701077	24	102
60	Strong Photocurrent Amplification in Perovskite Solar Cells with a Porous TiO2 Blocking Layer under Reverse Bias. *Journal of Physical Chemistry Letters*, **2014**, 5, 3931-6	6.4	96
59	High Open-Circuit Voltage: Fabrication of Formamidinium Lead Bromide Perovskite Solar Cells Using Fluorene□Dithiophene Derivatives as Hole-Transporting Materials. *ACS Energy Letters*, **2016**, 1, 107-112	20.1	92
58	Intrinsic and Extrinsic Stability of Formamidinium Lead Bromide Perovskite Solar Cells Yielding High Photovoltage. *Nano Letters*, **2016**, 16, 7155-7162	11.5	87
57	Charge extraction via graded doping of hole transport layers gives highly luminescent and stable metal halide perovskite devices. *Science Advances*, **2019**, 5, eaav2012	14.3	85
56	A Novel Oligomer as a Hole Transporting Material for Efficient Perovskite Solar Cells. *Advanced Energy Materials*, **2015**, 5, 1400980	21.8	77
55	Recent progress in morphology optimization in perovskite solar cell. *Journal of Materials Chemistry A*, **2020**, 8, 21356-21386	13	76
54	Impact of a Mesoporous Titania-Perovskite Interface on the Performance of Hybrid Organic-Inorganic Perovskite Solar Cells. *Journal of Physical Chemistry Letters*, **2016**, 7, 3264-9	6.4	75
53	High performance carbon-based printed perovskite solar cells with humidity assisted thermal treatment. *Journal of Materials Chemistry A*, **2017**, 5, 12060-12067	13	74
52	Dedoping of Lead Halide Perovskites Incorporating Monovalent Cations. *ACS Nano*, **2018**, 12, 7301-7311	16.7	73
51	Supramolecular Engineering for Formamidinium-Based Layered 2D Perovskite Solar Cells: Structural Complexity and Dynamics Revealed by Solid-State NMR Spectroscopy. *Advanced Energy Materials*, **2019**, 9, 1900284	21.8	71
50	Understanding the Impact of Bromide on the Photovoltaic Performance of CH3 NH3 PbI3 Solar Cells. *Advanced Materials*, **2015**, 27, 7221-8	24	70
49	Controlled synthesis of TiO2 nanoparticles and nanospheres using a microwave assisted approach for their application in dye-sensitized solar cells. *Journal of Materials Chemistry A*, **2014**, 2, 1662-1667	13	69
48	Stable and Efficient Perovskite Solar Cells Based on Titania Nanotube Arrays. *Small*, **2015**, 11, 5533-9	11	69
47	Photovoltaic and Amplified Spontaneous Emission Studies of High-Quality Formamidinium Lead Bromide Perovskite Films. *Advanced Functional Materials*, **2016**, 26, 2846-2854	15.6	57

46	Hydrothermally processed CuCrO2 nanoparticles as an inorganic hole transporting material for low-cost perovskite solar cells with superior stability. *Journal of Materials Chemistry A*, **2018**, 6, 20327-20337	13	55
45	Low-Cost and Highly Efficient Carbon-Based Perovskite Solar Cells Exhibiting Excellent Long-Term Operational and UV Stability. *Small*, **2019**, 15, e1904746	11	53
44	Microwave-assisted, surfactant-free synthesis of air-stable copper nanostructures and their SERS study. *Journal of Materials Chemistry*, **2012**, 22, 22418		53
43	Dual effect of humidity on cesium lead bromide: enhancement and degradation of perovskite films. *Journal of Materials Chemistry A*, **2019**, 7, 12292-12302	13	46
42	Influence of the Nature of A Cation on Dynamics of Charge Transfer Processes in Perovskite Solar Cells. *Advanced Functional Materials*, **2018**, 28, 1706073	15.6	46
41	Electron-Affinity-Triggered Variations on the Optical and Electrical Properties of Dye Molecules Enabling Highly Efficient Dye-Sensitized Solar Cells. *Angewandte Chemie - International Edition*, **2018**, 57, 14125-14128	16.4	42
40	Quantum-confined ZnO nanoshell photoanodes for mesoscopic solar cells. *Nano Letters*, **2014**, 14, 1190-5	11.5	40
39	Photoanode Based on (001)-Oriented Anatase Nanoplatelets for Organic□horganic Lead Iodide Perovskite Solar Cell. *Chemistry of Materials*, **2014**, 26, 4675-4678	9.6	38
38	Growth Engineering of CH3NH3PbI3 Structures for High-Efficiency Solar Cells. *Advanced Energy Materials*, **2016**, 6, 1501358	21.8	35
37	Unraveling the Impact of Rubidium Incorporation on the Transport-Recombination Mechanisms in Highly Efficient Perovskite Solar Cells by Small-Perturbation Techniques. *Journal of Physical Chemistry C*, **2017**, 121, 24903-24908	3.8	34
36	Formamidinium-Based Dion-Jacobson Layered Hybrid Perovskites: Structural Complexity and Optoelectronic Properties. *Advanced Functional Materials*, **2020**, 30, 2003428	15.6	34
35	Reduced Graphene Oxide as a Stabilizing Agent in Perovskite Solar Cells. *Advanced Materials Interfaces*, **2018**, 5, 1800416	4.6	33
34	Hill climbing hysteresis of perovskite-based solar cells: a maximum power point tracking investigation. *Progress in Photovoltaics: Research and Applications*, **2017**, 25, 942-950	6.8	28
33	Ruddlesden-Popper Phases of Methylammonium-Based Two-Dimensional Perovskites with 5-Ammonium Valeric Acid AVAMA Pb I with n = 1, 2, and 3. *Journal of Physical Chemistry Letters*, **2019**, 10, 3543-3549	6.4	28
32	Donor-Acceptor-Type S,N-Heteroacene-Based Hole-Transporting Materials for Efficient Perovskite Solar Cells. *ACS Applied Materials & Interfaces*, **2017**, 9, 44423-44428	9.5	27
31	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
30	Asymmetric Cathodoluminescence Emission in CH3NH3PbI3□Brx Perovskite Single Crystals. *ACS Photonics*, **2016**, 3, 947-952	6.3	25
29	Atomistic Mechanism of the Nucleation of Methylammonium Lead Iodide Perovskite from Solution. *Chemistry of Materials*, **2020**, 32, 529-536	9.6	24

28	Advances in Lead-Free Perovskite Single Crystals: Fundamentals and Applications **2021**, 3, 1025-1080		24
27	Weakly Conjugated Hybrid Zinc Porphyrin Sensitizers for Solid-State Dye-Sensitized Solar Cells. *Advanced Functional Materials*, **2016**, 26, 5550-5559	15.6	23
26	High photovoltage in perovskite solar cells: New physical insights from the ultrafast transient absorption spectroscopy. *Chemical Physics Letters*, **2017**, 683, 211-215	2.5	22
25	Function Follows Form: Correlation between the Growth and Local Emission of Perovskite Structures and the Performance of Solar Cells. *Advanced Functional Materials*, **2017**, 27, 1701433	15.6	22
24	Perovskite solar cells: Crystal crosslinking. *Nature Chemistry*, **2015**, 7, 684-5	17.6	22
23	Minimizing the Trade-Off between Photocurrent and Photovoltage in Triple-Cation Mixed-Halide Perovskite Solar Cells. *Journal of Physical Chemistry Letters*, **2020**, 11, 10188-10195	6.4	20
22	Insights about the Absence of Rb Cation from the 3D Perovskite Lattice: Effect on the Structural, Morphological, and Photophysical Properties and Photovoltaic Performance. *Small*, **2018**, 14, e1802033	11	19
21	Electron-Affinity-Triggered Variations on the Optical and Electrical Properties of Dye Molecules Enabling Highly Efficient Dye-Sensitized Solar Cells. *Angewandte Chemie*, **2018**, 130, 14321-14324	3.6	17
20	Role of spectator ions in influencing the properties of dopant-free ZnO nanocrystals. *New Journal of Chemistry*, **2014**, 38, 4783-4790	3.6	17
19	Perovskite Solar Cells Yielding Reproducible Photovoltage of 1.20 V. *Research*, **2019**, 2019, 8474698	7.8	17
18	A combined molecular dynamics and experimental study of two-step process enabling low-temperature formation of phase-pure □FAPbI. *Science Advances*, **2021**, 7,	14.3	17
17	Kinetics of Ion-Exchange Reactions in Hybrid Organic-Inorganic Perovskite Thin Films Studied by In Situ Real-Time X-ray Scattering. *Journal of Physical Chemistry Letters*, **2018**, 9, 6750-6754	6.4	16
16	Electrochemical Characterization of CuSCN Hole-Extracting Thin Films for Perovskite Photovoltaics. *ACS Applied Energy Materials*, **2019**, 2, 4264-4273	6.1	15
15	Cyclopentadithiophene-Based Hole-Transporting Material for Highly Stable Perovskite Solar Cells with Stabilized Efficiencies Approaching 21%. *ACS Applied Energy Materials*, **2020**, 3, 7456-7463	6.1	14
14	Exploiting oriented attachment in stabilizing La3+-doped gallium oxide nano-spindles. *RSC Advances*, **2014**, 4, 49360-49366	3.7	12
13	Monovalent Cation Doping of CH3NH3PbI3 for Efficient Perovskite Solar Cells. *Journal of Visualized Experiments*, **2017**,	1.6	12
12	Stabilization of Highly Efficient and Stable Phase-Pure FAPbI3 Perovskite Solar Cells by Molecularly Tailored 2D-Overlayers. *Angewandte Chemie*, **2020**, 132, 15818-15824	3.6	11
11	Perovskite Solar Cells Yielding Reproducible Photovoltage of 1.20 V. *Research*, **2019**, 2019, 1-9	7.8	10

10	Halide Versus Nonhalide Salts: The Effects of Guanidinium Salts on the Structural, Morphological, and Photovoltaic Performances of Perovskite Solar Cells. *Solar Rrl*, **2020**, 4, 1900234	7.1	10
9	Role of Morphology and Förster Resonance Energy Transfer in Ternary Blend Organic Solar Cells. *ACS Applied Energy Materials*, **2020**, 3, 12025-12036	6.1	8
8	Tailoring of growth and properties: a benign approach to synthesise ZnO nanostructures without growth-directing agents. *Materials Research Express*, **2014**, 1, 015025	1.7	7
7	Unravelling the structural complexity and photophysical properties of adamantyl-based layered hybrid perovskites. *Journal of Materials Chemistry A*, **2020**, 8, 17732-17740	13	7
6	Molecular Origin of the Asymmetric Photoluminescence Spectra of CsPbBr at Low Temperature. *Journal of Physical Chemistry Letters*, **2021**, 12, 2699-2704	6.4	7
5	High Open Circuit Voltage for Perovskite Solar Cells with S,Si-Heteropentacene-Based Hole Conductors. *European Journal of Inorganic Chemistry*, **2018**, 2018, 4573-4578	2.3	6
4	Optical absorption and photoluminescence spectroscopy **2020**, 49-79		5
3	Quantifying Stabilized Phase Purity in Formamidinium-Based Multiple-Cation Hybrid Perovskites. *Chemistry of Materials*, **2021**, 33, 2769-2776	9.6	4
2	A Fully Printable Hole-Transporter-Free Semi-Transparent Perovskite Solar Cell. *European Journal of Inorganic Chemistry*, **2021**, 2021, 3752-3760	2.3	1
1	Impact of Monovalent Metal Halides on the Structural and Photophysical Properties of Halide Perovskite **2021**, 369-388		