M Ibrahim Dar

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/2150259/publications.pdf

Version: 2024-02-01

82 papers	12,399 citations	57631 44 h-index	64668 79 g-index
83 all docs	83 docs citations	83 times ranked	12997 citing authors

#	Article	IF	Citations
1	Efficient luminescent solar cells based on tailored mixed-cation perovskites. Science Advances, 2016, 2, e1501170.	4.7	1,669
2	Perovskite solar cells with CuSCN hole extraction layers yield stabilized efficiencies greater than 20%. Science, 2017, 358, 768-771.	6.0	1,285
3	Improved performance and stability of perovskite solar cells by crystal crosslinking with alkylphosphonic acid Ï‰-ammonium chlorides. Nature Chemistry, 2015, 7, 703-711.	6.6	1,033
4	Thermodynamically stabilized Î²-CsPbI ₃ â€“based perovskite solar cells with efficiencies >18%. Science, 2019, 365, 591-595.	6.0	963
5	Bication lead iodide 2D perovskite component to stabilize inorganic Î±-CsPbI ₃ perovskite phase for high-efficiency solar cells. Science Advances, 2017, 3, e1700841.	4.7	557
6	Ultrahydrophobic 3D/2D fluoroarene bilayer-based water-resistant perovskite solar cells with efficiencies exceeding 22%. Science Advances, 2019, 5, eaaw2543.	4.7	524
7	Flexible high efficiency perovskite solar cells. Energy and Environmental Science, 2014, 7, 994.	15.6	409
8	Triazatruxene-Based Hole Transporting Materials for Highly Efficient Perovskite Solar Cells. Journal of the American Chemical Society, 2015, 137, 16172-16178.	6.6	321
9	Origin of unusual bandgap shift and dual emission in organic-inorganic lead halide perovskites. Science Advances, 2016, 2, e1601156.	4.7	307
10	Tailored Amphiphilic Molecular Mitigators for Stable Perovskite Solar Cells with 23.5% Efficiency. Advanced Materials, 2020, 32, e1907757.	11.1	303
11	Perovskite Solar Cells with 12.8% Efficiency by Using Conjugated Quinolizino Acridine Based Hole Transporting Material. Journal of the American Chemical Society, 2014, 136, 8516-8519.	6.6	243
12	New Strategies for Defect Passivation in Highâ€Efficiency Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 1903090.	10.2	237
13	Bifunctional Organic Spacers for Formamidinium-Based Hybrid Dionâ€“Jacobson Two-Dimensional Perovskite Solar Cells. Nano Letters, 2019, 19, 150-157.	4.5	218
14	Light Harvesting and Charge Recombination in CH₃NH₃PbI₃ Perovskite Solar Cells Studied by Hole Transport Layer Thickness Variation. ACS Nano, 2015, 9, 4200-4209.	7.3	205
15	Stabilization of Highly Efficient and Stable Phaseâ€Pure FAPbI₃ Perovskite Solar Cells by Molecularly Tailored 2Dâ€Overlayers. Angewandte Chemie - International Edition, 2020, 59, 15688-15694.	7.2	201
16	Impact of Monovalent Cation Halide Additives on the Structural and Optoelectronic Properties of CH₃NH₃PbI₃ Perovskite. Advanced Energy Materials, 2016, 6, 1502472.	10.2	196
17	Investigation Regarding the Role of Chloride in Organicâ€“Inorganic Halide Perovskites Obtained from Chloride Containing Precursors. Nano Letters, 2014, 14, 6991-6996.	4.5	185
18	Single crystalline magnetite, maghemite, and hematite nanoparticles with rich coercivity. RSC Advances, 2014, 4, 4105-4113.	1.7	173

#	Article	IF	Citations
19	Yttrium-substituted nanocrystalline TiO₂photoanodes for perovskite based heterojunction solar cells. Nanoscale, 2014, 6, 1508-1514.	2.8	162
20	Recent progress in morphology optimization in perovskite solar cell. Journal of Materials Chemistry A, 2020, 8, 21356-21386.	5.2	159
21	Air Processed Inkjet Infiltrated Carbon Based Printed Perovskite Solar Cells with High Stability and Reproducibility. Advanced Materials Technologies, 2017, 2, 1600183.	3.0	137
22	An open-access database and analysis tool for perovskite solar cells based on the FAIR data principles. Nature Energy, 2022, 7, 107-115.	19.8	136
23	The Role of Rubidium in Multipleâ€Cationâ€Based Highâ€Efficiency Perovskite Solar Cells. Advanced Materials, 2017, 29, 1701077.	11.1	120
24	Charge extraction via graded doping of hole transport layers gives highly luminescent and stable metal halide perovskite devices. Science Advances, 2019, 5, eaav2012.	4.7	116
25	High Open-Circuit Voltage: Fabrication of Formamidinium Lead Bromide Perovskite Solar Cells Using Fluoreneâ€“Dithiophene Derivatives as Hole-Transporting Materials. ACS Energy Letters, 2016, 1, 107-112.	8.8	105
26	Strong Photocurrent Amplification in Perovskite Solar Cells with a Porous TiO₂ Blocking Layer under Reverse Bias. Journal of Physical Chemistry Letters, 2014, 5, 3931-3936.	2.1	104
27	Intrinsic and Extrinsic Stability of Formamidinium Lead Bromide Perovskite Solar Cells Yielding High Photovoltage. Nano Letters, 2016, 16, 7155-7162.	4.5	104
28	Dedoping of Lead Halide Perovskites Incorporating Monovalent Cations. ACS Nano, 2018, 12, 7301-7311.	7.3	101
29	High performance carbon-based printed perovskite solar cells with humidity assisted thermal treatment. Journal of Materials Chemistry A, 2017, 5, 12060-12067.	5.2	90
30	Supramolecular Engineering for Formamidiniumâ€Based Layered 2D Perovskite Solar Cells: Structural Complexity and Dynamics Revealed by Solidâ€State NMR Spectroscopy. Advanced Energy Materials, 2019, 9, 1900284.	10.2	89
31	Impact of a Mesoporous Titaniaâ€“Perovskite Interface on the Performance of Hybrid Organicâ€“Inorganic Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2016, 7, 3264-3269.	2.1	85
32	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.	5.2	85
33	Lowâ€Cost and Highly Efficient Carbonâ€Based Perovskite Solar Cells Exhibiting Excellent Longâ€Term Operational and UV Stability. Small, 2019, 15, e1904746.	5.2	83
34	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.	5.2	80
35	Stable and Efficient Perovskite Solar Cells Based on Titania Nanotube Arrays. Small, 2015, 11, 5533-5539.	5.2	80
36	A Novel Oligomer as a Hole Transporting Material for Efficient Perovskite Solar Cells. Advanced Energy Materials, 2015, 5, 1400980.	10.2	80

#	Article	IF	Citations
37	Dual effect of humidity on cesium lead bromide: enhancement and degradation of perovskite films. Journal of Materials Chemistry A, 2019, 7, 12292-12302.	5.2	74
38	Understanding the Impact of Bromide on the Photovoltaic Performance of CH₃NH₃PbI₃ Solar Cells. Advanced Materials, 2015, 27, 7221-7228.	11.1	73
39	Advances in Lead-Free Perovskite Single Crystals: Fundamentals and Applications. , 2021, 3, 1025-1080.		70
40	Photovoltaic and Amplified Spontaneous Emission Studies of Highâ€Quality Formamidinium Lead Bromide Perovskite Films. Advanced Functional Materials, 2016, 26, 2846-2854.	7.8	66
41	Microwave-assisted, surfactant-free synthesis of air-stable copper nanostructures and their SERS study. Journal of Materials Chemistry, 2012, 22, 22418.	6.7	61
42	Formamidiniumâ€Based Dionâ€Jacobson Layered Hybrid Perovskites: Structural Complexity and Optoelectronic Properties. Advanced Functional Materials, 2020, 30, 2003428.	7.8	61
43	Influence of the Nature of A Cation on Dynamics of Charge Transfer Processes in Perovskite Solar Cells. Advanced Functional Materials, 2018, 28, 1706073.	7.8	58
44	Electronâ€Affinityâ€Triggered Variations on the Optical and Electrical Properties of Dye Molecules Enabling Highly Efficient Dyeâ€Sensitized Solar Cells. Angewandte Chemie - International Edition, 2018, 57, 14125-14128.	7.2	56
45	A combined molecular dynamics and experimental study of two-step process enabling low-temperature formation of phase-pure Î±-FAPbI ₃. Science Advances, 2021, 7, .	4.7	49
46	Reduced Graphene Oxide as a Stabilizing Agent in Perovskite Solar Cells. Advanced Materials Interfaces, 2018, 5, 1800416.	1.9	45
47	Atomistic Mechanism of the Nucleation of Methylammonium Lead Iodide Perovskite from Solution. Chemistry of Materials, 2020, 32, 529-536.	3.2	45
48	Quantum-Confined ZnO Nanoshell Photoanodes for Mesoscopic Solar Cells. Nano Letters, 2014, 14, 1190-1195.	4.5	42
49	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.	1.5	42
50	Hill climbing hysteresis of perovskiteâ€based solar cells: a maximum power point tracking investigation. Progress in Photovoltaics: Research and Applications, 2017, 25, 942-950.	4.4	40
51	Photoanode Based on (001)-Oriented Anatase Nanoplatelets for Organicâ€"Inorganic Lead Iodide Perovskite Solar Cell. Chemistry of Materials, 2014, 26, 4675-4678.	3.2	39
52	Growth Engineering of CH₃NH₃PbI₃ Structures for Highâ€Efficiency Solar Cells. Advanced Energy Materials, 2016, 6, 1501358.	10.2	36
53	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.	2.1	36
54	Ruddlesdenâ€"Popper Phases of Methylammonium-Based Two-Dimensional Perovskites with 5-Ammonium Valeric Acid AVA₂MA_{<i>n</i>â€"1}Pb_{<i>n</i>}I_{3<i>n</i>+1} with <i>n</i> = 1, 2, and 3. Journal of Physical Chemistry Letters, 2019, 10, 3543-3549.	2.1	35

#	Article	IF	Citations
55	Weakly Conjugated Hybrid Zinc Porphyrin Sensitizers for Solidâ€State Dyeâ€Sensitized Solar Cells. Advanced Functional Materials, 2016, 26, 5550-5559.	7.8	31
56	High photovoltage in perovskite solar cells: New physical insights from the ultrafast transient absorption spectroscopy. Chemical Physics Letters, 2017, 683, 211-215.	1.2	31
57	Donorâ€“Acceptor-Type <i>S</i>,<i>N</i>-Heteroacene-Based Hole-Transporting Materials for Efficient Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2017, 9, 44423-44428.	4.0	31
58	Asymmetric Cathodoluminescence Emission in CH₃NH₃PbI_{3â€“<i>x</i>}Br_{<i>x</i>} Perovskite Single Crystals. ACS Photonics, 2016, 3, 947-952.	3.2	30
59	Kinetics of Ion-Exchange Reactions in Hybrid Organicâ€“Inorganic Perovskite Thin Films Studied by In Situ Real-Time X-ray Scattering. Journal of Physical Chemistry Letters, 2018, 9, 6750-6754.	2.1	28
60	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.	7.8	26
61	Electronâ€Affinityâ€Triggered Variations on the Optical and Electrical Properties of Dye Molecules Enabling Highly Efficient Dyeâ€Sensitized Solar Cells. Angewandte Chemie, 2018, 130, 14321-14324.	1.6	26
62	Cyclopentadithiophene-Based Hole-Transporting Material for Highly Stable Perovskite Solar Cells with Stabilized Efficiencies Approaching 21%. ACS Applied Energy Materials, 2020, 3, 7456-7463.	2.5	26
63	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.	5.2	24
64	Crystal crosslinking. Nature Chemistry, 2015, 7, 684-685.	6.6	23
65	Perovskite Solar Cells Yielding Reproducible Photovoltage of 1.20 V. Research, 2019, 2019, 8474698.	2.8	22
66	Role of spectator ions in influencing the properties of dopant-free ZnO nanocrystals. New Journal of Chemistry, 2014, 38, 4783-4790.	1.4	21
67	Monovalent Cation Doping of CH₃NH₃PbI₃ for Efficient Perovskite Solar Cells. Journal of Visualized Experiments, 2017, , .	0.2	20
68	Electrochemical Characterization of CuSCN Hole-Extracting Thin Films for Perovskite Photovoltaics. ACS Applied Energy Materials, 2019, 2, 4264-4273.	2.5	20
69	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.	3.1	19
70	Role of Morphology and FÃ¶rster Resonance Energy Transfer in Ternary Blend Organic Solar Cells. ACS Applied Energy Materials, 2020, 3, 12025-12036.	2.5	17
71	Stabilization of Highly Efficient and Stable Phaseâ€Pure FAPbI₃ Perovskite Solar Cells by Molecularly Tailored 2Dâ€Overlayers. Angewandte Chemie, 2020, 132, 15818-15824.	1.6	17
72	Exploiting oriented attachment in stabilizing La³⁺-doped gallium oxide nano-spindles. RSC Advances, 2014, 4, 49360-49366.	1.7	15

#	Article	IF	Citations
73	Perovskite Solar Cells Yielding Reproducible Photovoltage of 1.20 V. Research, 2019, 2019, 1-9.	2.8	15
74	Unravelling the structural complexity and photophysical properties of adamantyl-based layered hybrid perovskites. Journal of Materials Chemistry A, 2020, 8, 17732-17740.	5.2	14
75	Quantifying Stabilized Phase Purity in Formamidinium-Based Multiple-Cation Hybrid Perovskites. Chemistry of Materials, 2021, 33, 2769-2776.	3.2	13
76	Molecular Origin of the Asymmetric Photoluminescence Spectra of CsPbBr₃ at Low Temperature. Journal of Physical Chemistry Letters, 2021, 12, 2699-2704.	2.1	12
77	Kinetics and energeticsÂof metal halide perovskite conversion reactions at the nanoscale. Communications Materials, 2022, 3, .	2.9	12
78	High Open Circuit Voltage for Perovskite Solar Cells with S,Siâ€Heteropentaceneâ€Based Hole Conductors. European Journal of Inorganic Chemistry, 2018, 2018, 4573-4578.	1.0	10
79	Optical absorption and photoluminescence spectroscopy. , 2020, , 49-79.		9
80	Tailoring of growth and properties: a benign approach to synthesise ZnO nanostructures without growth-directing agents. Materials Research Express, 2014, 1, 015025.	0.8	8
81	A Fully Printable Holeâ€Transporterâ€Free Semiâ€Transparent Perovskite Solar Cell. European Journal of Inorganic Chemistry, 2021, 2021, 3752-3760.	1.0	6
82	Extraordinary Stability of Perovskite Solar Cells Yielding Photovoltage above 1.5V. , 0, , .		0