Ajay Kumar Jena

List of Publications by Year
in descending order

50 papers	4,902 citations	201674 27 h-index	233421 45 g-index
54 all docs	54 docs citations	54 times ranked	6182 citing authors

#	Article	IF	Citations
1	Halide Perovskite Photovoltaics: Background, Status, and Future Prospects. Chemical Reviews, 2019, 119, 3036-3103.	47.7	2,009
2	Role of spiro-OMeTAD in performance deterioration of perovskite solar cells at high temperature and reuse of the perovskite films to avoid Pb-waste. Journal of Materials Chemistry A, 2018, 6, 2219-2230.	10.3	229
3	Stabilization of Î±-CsPbI₃ in Ambient Room Temperature Conditions by Incorporating Eu into CsPbI₃. Chemistry of Materials, 2018, 30, 6668-6674.	6.7	199
4	Perovskite Solar Cells: Can We Go Organicâ€Free, Leadâ€Free, and Dopantâ€Free?. Advanced Energy Materials, 2020, 10, 1902500.	19.5	198
5	The high open-circuit voltage of perovskite solar cells: a review. Energy and Environmental Science, 2022, 15, 3171-3222.	30.8	181
6	SnO₂â€"Ti₃C₂ MXene electron transport layers for perovskite solar cells. Journal of Materials Chemistry A, 2019, 7, 5635-5642.	10.3	173
7	<i>V</i>_{OC} Over 1.4 V for Amorphous Tin-Oxide-Based Dopant-Free CsPbI₂Br Perovskite Solar Cells. Journal of the American Chemical Society, 2020, 142, 9725-9734.	13.7	162
8	Poly(4â€Vinylpyridine)â€Based Interfacial Passivation to Enhance Voltage and Moisture Stability of Lead Halide Perovskite Solar Cells. ChemSusChem, 2017, 10, 2473-2479.	6.8	157
9	Severe Morphological Deformation of Spiro-OMeTAD in (CH₃NH₃)PbI₃ Solar Cells at High Temperature. ACS Energy Letters, 2017, 2, 1760-1761.	17.4	155
10	Chlorophyll Derivative-Sensitized TiO₂ Electron Transport Layer for Record Efficiency of Cs₂AgBiBr₆ Double Perovskite Solar Cells. Journal of the American Chemical Society, 2021, 143, 2207-2211.	13.7	154
11	The Interface between FTO and the TiO₂ Compact Layer Can Be One of the Origins to Hysteresis in Planar Heterojunction Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2015, 7, 9817-9823.	8.0	131
12	Surfaceâ€Modified Metallic Ti₃C₂T_x MXene as Electron Transport Layer for Planar Heterojunction Perovskite Solar Cells. Advanced Functional Materials, 2019, 29, 1905694.	14.9	125
13	Dye Sensitized Solar Cells: A Review. Transactions of the Indian Ceramic Society, 2012, 71, 1-16.	1.0	97
14	Lead(II) Propionate Additive and a Dopant-Free Polymer Hole Transport Material for CsPbI₂Br Perovskite Solar Cells. ACS Energy Letters, 2020, 5, 1292-1299.	17.4	81
15	Performance improvement of MXene-based perovskite solar cells upon property transition from metallic to semiconductive by oxidation of Ti₃C₂T_xin air. Journal of Materials Chemistry A, 2021, 9, 5016-5025.	10.3	77
16	Organic Dye/Cs₂AgBiBr₆ Double Perovskite Heterojunction Solar Cells. Journal of the American Chemical Society, 2021, 143, 14877-14883.	13.7	74
17	A Switchable High-Sensitivity Photodetecting and Photovoltaic Device with Perovskite Absorber. Journal of Physical Chemistry Letters, 2015, 6, 1773-1779.	4.6	69
18	Dopantâ€Free Polymer HTMâ€Based CsPbI₂Br Solar Cells with Efficiency Over 17% in Sunlight and 34% in Indoor Light. Advanced Functional Materials, 2021, 31, 2103614.	14.9	60

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19	Photoactive Znâ€Chlorophyll Hole Transporterâ€Sensitized Leadâ€Free Cs₂AgBiBr₆ Perovskite Solar Cells. Solar Rrl, 2020, 4, 2000166.	5.8	58
20	Performance enhancement of AgBi₂I₇ solar cells by modulating a solvent-mediated adduct and tuning remnant BiI₃ in one-step crystallization. Chemical Communications, 2019, 55, 4031-4034.	4.1	54
21	Steady state performance, photo-induced performance degradation and their relation to transient hysteresis in perovskite solar cells. Journal of Power Sources, 2016, 309, 1-10.	7.8	49
22	Revealing and reducing the possible recombination loss within TiO2 compact layer by incorporating MgO layer in perovskite solar cells. Solar Energy, 2016, 136, 379-384.	6.1	48
23	Vapor Annealing Controlled Crystal Growth and Photovoltaic Performance of Bismuth Triiodide Embedded in Mesostructured Configurations. ACS Applied Materials & Interfaces, 2018, 10, 9547-9554.	8.0	45
24	Plasma modified flexible bucky paper as an efficient counter electrode in dye sensitized solar cells. Energy and Environmental Science, 2012, 5, 7001.	30.8	42
25	Fully crystalline perovskite-perylene hybrid photovoltaic cell capable of 1.2 V output with a minimized voltage loss. APL Materials, 2014, 2, .	5.1	37
26	Determination of Chloride Content in Planar CH3NH3PbI3â^'<i>x</i>Cl<i>x</i> Solar Cells by Chemical Analysis. Chemistry Letters, 2015, 44, 1089-1091.	1.3	33
27	Concerted Ion Migration and Diffusionâ€Induced Degradation in Leadâ€Free Ag₃BiI₆ Rudorffite Solar Cells under Ambient Conditions. Solar Rrl, 2021, 5, 2100077.	5.8	28
28	Single- or double A-site cations in A3Bi2I9 bismuth perovskites: What is the suitable choice?. Journal of Materials Research, 2021, 36, 1794-1804.	2.6	20
29	Effect of amount of dye in the TiO₂photoanode on electron transport, recombination, J_{sc}and V_{oc}of dye-sensitized solar cells. RSC Advances, 2013, 3, 2655-2661.	3.6	19
30	Cesium Acetate-Induced Interfacial Compositional Change and Graded Band Level in MAPbI₃ Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 33631-33637.	8.0	18
31	Benzodithiophene-thienopyrroledione-thienothiophene-based random copolymeric hole transporting material for perovskite solar cell. Chemical Engineering Journal, 2020, 382, 122830.	12.7	16
32	Hybridization of SnO₂ and an In-Situ-Oxidized Ti₃C₂T_{<i>x</i>} MXene Electron Transport Bilayer for High-Performance Planar Perovskite Solar Cells. ACS Sustainable Chemistry and Engineering, 2021, 9, 13672-13680.	6.7	13
33	Influence of Ethanol Amount During Washing on Deagglomeration of Coâ€Precipitated Calcined Nanocrystalline 3<scp><scp>YSZ</scp></scp> Powders. International Journal of Applied Ceramic Technology, 2013, 10, E247.	2.1	12
34	Photomultiplying Visible Light Detection by Halide Perovskite Nanoparticles Hybridized with an Organo Eu Complex. Journal of Physical Chemistry Letters, 2019, 10, 5935-5942.	4.6	11
35	Outâ€ofâ€Glovebox Integration of Recyclable Europiumâ€Doped CsPbI₃ in Tripleâ€Mesoscopic Carbonâ€Based Solar Cells Exceeding 9% Efficiency. Solar Rrl, 2022, 6, .	5.8	9
36	Full Efficiency Recovery in Hole-Transporting Layer-Free Perovskite Solar Cells With Free-Standing Dry-Carbon Top-Contacts. Frontiers in Chemistry, 2020, 8, 200.	3.6	8

#	Article	IF	Citations
37	Formation of CsPbI₃ Î³â€Phase at 80â€‰Â°C by Europiumâ€Assisted Snowplow Effect. Advanced Energy and Sustainability Research, 2021, 2, 2100091.	5.8	8
38	Blackâ€Yellow Bandgap Tradeâ€Off During Thermal Stability Tests in Lowâ€Temperature Euâ€Doped CsPbI₃. Solar Rrl, 2022, 6, .	5.8	8
39	Improved Electrical and Structural Stability in HTL-Free Perovskite Solar Cells by Vacuum Curing Treatment. Energies, 2020, 13, 3953.	3.1	7
40	Tetrahydrofuran as an Oxygen Donor Additive to Enhance Stability and Reproducibility of Perovskite Solar Cells Fabricated in High Relative Humidity (50%) Atmosphere. Energy Technology, 2020, 8, 1900990.	3.8	6
41	Optical behaviour of Î³-black CsPbI₃ phases formed by quenching from 80 Â°C and 325 Â°C. JPhys Materials, 2021, 4, 034011.	4.2	6
42	Analysis of light harvest in terms of current per mole of dye in dye-sensitized solar cells made with opaque and transparent photoanodes. Renewable Energy, 2013, 53, 265-270.	8.9	5
43	Hysteresis Characteristics and Device Stability. , 2016, , 255-284.		3
44	Effect of Sintering Profiles on Titania Interparticle Connectivity, Electron Transport and Interfacial Resistance in Dye-Sensitized Solar Cells. Materials Science Forum, 2013, 771, 143-157.	0.3	2
45	Sensitivity of mixed cation/halide perovskites to evaporation kinetics of DMSO at early stage. Journal of Materials Chemistry A, 0, , .	10.3	2
46	MAPbI3 Deposition by LV-PSE on TiO2 for Photovoltaic Application. Frontiers in Electronics, 2021, 2, .	3.2	1
47	Isolated case of mucosal histoid Hansen's disease of the nasal cavity in a post-global elimination era. Journal of Infection and Public Health, 2015, 8, 630-633.	4.1	0
48	Examining Impact of Particle Deagglomeration Techniques on Microstructure and Properties of Oxide Materials Through Nanoindentation. Solid Mechanics and Its Applications, 2014, , 231-250.	0.2	0
49	Why the gamma-phase of CsPbI3 can be formed at 80 C by adding Europium. , 0, , .		0
50	Black-Yellow Bandgap Trade-off during Thermal Stability Tests in Low-Temperature Eu-doped CsPbI3. , 0, , .		0