T Jesper Jacobsson

List of Publications by Year
in descending order

41 papers	6,305 citations	172207 29 h-index	301761 39 g-index
41 all docs	41 docs citations	41 times ranked	9193 citing authors

#	Article	IF	Citations
1	Highly efficient planar perovskite solar cells through band alignment engineering. Energy and Environmental Science, 2015, 8, 2928-2934.	15.6	1,097
2	The rapid evolution of highly efficient perovskite solar cells. Energy and Environmental Science, 2017, 10, 710-727.	15.6	942
3	Unreacted PbI₂ as a Double-Edged Sword for Enhancing the Performance of Perovskite Solar Cells. Journal of the American Chemical Society, 2016, 138, 10331-10343.	6.6	696
4	Exploration of the compositional space for mixed lead halogen perovskites for high efficiency solar cells. Energy and Environmental Science, 2016, 9, 1706-1724.	15.6	622
5	Properties of Contact and Bulk Impedances in Hybrid Lead Halide Perovskite Solar Cells Including Inductive Loop Elements. Journal of Physical Chemistry C, 2016, 120, 8023-8032.	1.5	407
6	Unbroken Perovskite: Interplay of Morphology, Electroâ€optical Properties, and Ionic Movement. Advanced Materials, 2016, 28, 5031-5037.	11.1	242
7	Determination of Thermal Expansion Coefficients and Locating the Temperature-Induced Phase Transition in Methylammonium Lead Perovskites Using X-ray Diffraction. Inorganic Chemistry, 2015, 54, 10678-10685.	1.9	213
8	A monolithic device for solar water splitting based on series interconnected thin film absorbers reaching over 10% solar-to-hydrogen efficiency. Energy and Environmental Science, 2013, 6, 3676.	15.6	211
9	Goldschmidtâ€™s Rules and Strontium Replacement in Lead Halogen Perovskite Solar Cells: Theory and Preliminary Experiments on CH₃NH₃SrI₃. Journal of Physical Chemistry C, 2015, 119, 25673-25683.	1.5	211
10	Sustainable solar hydrogen production: from photoelectrochemical cells to PV-electrolyzers and back again. Energy and Environmental Science, 2014, 7, 2056-2070.	15.6	179
11	Effect of metal cation replacement on the electronic structure of metalorganic halide perovskites: Replacement of lead with alkaline-earth metals. Physical Review B, 2016, 93, .	1.1	145
12	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
13	Valence Level Character in a Mixed Perovskite Material and Determination of the Valence Band Maximum from Photoelectron Spectroscopy: Variation with Photon Energy. Journal of Physical Chemistry C, 2017, 121, 26655-26666.	1.5	98
14	Device Performance of Emerging Photovoltaic Materials (Version 1). Advanced Energy Materials, 2021, 11, 2002774.	10.2	93
15	Degradation Mechanism of Silver Metal Deposited on Lead Halide Perovskites. ACS Applied Materials & Interfaces, 2020, 12, 7212-7221.	4.0	85
16	Photoelectrochemical water splitting: an idea heading towards obsolescence?. Energy and Environmental Science, 2018, 11, 1977-1979.	15.6	82
17	Extending the Compositional Space of Mixed Lead Halide Perovskites by Cs, Rb, K, and Na Doping. Journal of Physical Chemistry C, 2018, 122, 13548-13557.	1.5	70
18	Device Performance of Emerging Photovoltaic Materials (Version 2). Advanced Energy Materials, 2021, 11, .	10.2	66

#	Article	IF	Citations
19	Room Temperature as a Goldilocks Environment for CH₃NH₃PbI₃ Perovskite Solar Cells: The Importance of Temperature on Device Performance. Journal of Physical Chemistry C, 2016, 120, 11382-11393.	1.5	58
20	Absorption and Fluorescence Spectroscopy of Growing ZnO Quantum Dots: Size and Band Gap Correlation and Evidence of Mobile Trap States. Inorganic Chemistry, 2011, 50, 9578-9586.	1.9	57
21	Photoelectrochemical Determination of the Absolute Band Edge Positions as a Function of Particle Size for ZnO Quantum Dots. Journal of Physical Chemistry C, 2012, 116, 15692-15701.	1.5	54
22	CuInxGa1âˆ’xSe2 as an efficient photocathode for solar hydrogen generation. International Journal of Hydrogen Energy, 2013, 38, 15027-15035.	3.8	52
23	Photoinduced Stark Effects and Mechanism of Ion Displacement in Perovskite Solar Cell Materials. ACS Nano, 2017, 11, 2823-2834.	7.3	47
24	CIGS based devices for solar hydrogen production spanning from PEC-cells to PV-electrolyzers: A comparison of efficiency, stability and device topology. Solar Energy Materials and Solar Cells, 2015, 134, 185-193.	3.0	44
25	2-Terminal CIGS-perovskite tandem cells: A layer by layer exploration. Solar Energy, 2020, 207, 270-288.	2.9	44
26	Optical quantum confinement in low dimensional hematite. Journal of Materials Chemistry A, 2014, 2, 3352-3363.	5.2	43
27	Investigation of Vibrational Modes and Phonon Density of States in ZnO Quantum Dots. Journal of Physical Chemistry C, 2012, 116, 6893-6901.	1.5	37
28	A size dependent discontinuous decay rate for the exciton emission in ZnO quantum dots. Physical Chemistry Chemical Physics, 2014, 16, 13849-13857.	1.3	36
29	A theoretical analysis of optical absorption limits and performance of tandem devices and series interconnected architectures for solar hydrogen production. Solar Energy Materials and Solar Cells, 2015, 138, 86-95.	3.0	34
30	X-ray stability and degradation mechanism of lead halide perovskites and lead halides. Physical Chemistry Chemical Physics, 2021, 23, 12479-12489.	1.3	33
31	Antireflective coatings of ZnO quantum dots and their photocatalytic activity. RSC Advances, 2012, 2, 10298.	1.7	29
32	Photon Energy-Dependent Hysteresis Effects in Lead Halide Perovskite Materials. Journal of Physical Chemistry C, 2017, 121, 26180-26187.	1.5	26
33	Effect of halide ratio and Cs+ addition on the photochemical stability of lead halide perovskites. Journal of Materials Chemistry A, 2018, 6, 22134-22144.	5.2	26
34	A Spectroelectrochemical Method for Locating Fluorescence Trap States in Nanoparticles and Quantum Dots. Journal of Physical Chemistry C, 2013, 117, 5497-5504.	1.5	23
35	Quantum Confined Stark Effects in ZnO Quantum Dots Investigated with Photoelectrochemical Methods. Journal of Physical Chemistry C, 2014, 118, 12061-12072.	1.5	21
36	SnO_{<i>x</i>} Atomic Layer Deposition on Bare Perovskiteâ€"An Investigation of Initial Growth Dynamics, Interface Chemistry, and Solar Cell Performance. ACS Applied Energy Materials, 2021, 4, 510-522.	2.5	18

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37	The Perovskite Database Project: A Perspective on Collective Data Sharing. ACS Energy Letters, 2022, 7, 1240-1245.	8.8	13
38	The Complex Degradation Mechanism of Copper Electrodes on Lead Halide Perovskites. ACS Materials Au, 2022, 2, 301-312.	2.6	8
39	Phase Formation Behavior in Ultrathin Iron Oxide. Langmuir, 2015, 31, 12372-12381.	1.6	7
40	Temperature effects in lead halide perovskites. , 2020, , 181-196.		0
41	The Power of the Crowd. What Could be Learned by Collective Pooling of all the Worldâ€™s Perovskite Device Data, and How do We Get There?. , 0, , .		0