

Matthew L Davies

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

58
papers

1,516
citations

20
h-index

38
g-index

60
ext. papers

1,755
ext. citations

7.6
avg, IF

4.78
L-index

#	Paper	IF	Citations
58	Performance-Enhancing Sulfur-Doped TiO ₂ Photoanodes for Perovskite Solar Cells. <i>Applied Sciences (Switzerland)</i> , 2022 , 12, 429	2.6	1
57	Photocatalytic H ₂ production and degradation of aqueous 2-chlorophenol over B/N-graphene-coated Cu/TiO ₂ : A DFT, experimental and mechanistic investigation.. <i>Journal of Environmental Management</i> , 2022 , 311, 114822	7.9	1
56	On the Use of Carbon Cables from Plastic Solvent Combinations of Polystyrene and Toluene in Carbon Nanotube Synthesis.. <i>Nanomaterials</i> , 2021 , 12,	5.4	2
55	ε-Valerolactone: A Nontoxic Green Solvent for Highly Stable Printed Mesoporous Perovskite Solar Cells. <i>Energy Technology</i> , 2021 , 9, 2100312	3.5	10
54	Sustainable solvent selection for the manufacture of methylammonium lead triiodide (MAPbI ₃) perovskite solar cells. <i>Green Chemistry</i> , 2021 , 23, 2471-2486	10	18
53	Roll-to-roll slot-die coated PIN perovskite solar cells using acetonitrile based single step perovskite solvent system. <i>Sustainable Energy and Fuels</i> , 2020 , 4, 3340-3351	5.8	31
52	Nitrogen/Carbon-Coated Zero-Valent Copper as Highly Efficient Co-catalysts for TiO ₂ Applied in Photocatalytic and Photoelectrocatalytic Hydrogen Production. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 30365-30380	9.5	23
51	Towards Increased Recovery of Critical Raw Materials from WEEE: Evaluation of CRMs at a component level and pre-processing methods for interface optimisation with recovery processes. <i>Resources, Conservation and Recycling</i> , 2020 , 161, 104923	11.9	23
50	Investigating the Superoxide Formation and Stability in Mesoporous Carbon Perovskite Solar Cells with an Aminovaleric Acid Additive. <i>Advanced Functional Materials</i> , 2020 , 30, 1909839	15.6	25
49	Cholesterol-rich naked mole-rat brain lipid membranes are susceptible to amyloid beta-induced damage. <i>Aging</i> , 2020 , 12, 22266-22290	5.6	6
48	Pyrene and Nile red fluorescence probes for in-situ study of polarity and viscosity of soil organic coatings implicated in soil water repellency. <i>European Journal of Soil Science</i> , 2020 , 71, 868	3.4	1
47	Addressing the Stability of Lead Halide Perovskites. <i>Joule</i> , 2020 , 4, 1626-1627	27.8	11
46	Interpreting time-resolved photoluminescence of perovskite materials. <i>Physical Chemistry Chemical Physics</i> , 2020 , 22, 28345-28358	3.6	22
45	Multiphoton Absorption Stimulated Metal Chalcogenide Quantum Dot Solar Cells under Ambient and Concentrated Irradiance. <i>Advanced Functional Materials</i> , 2020 , 30, 2004563	15.6	21
44	Shining a light on the photoluminescence behaviour of methylammonium lead iodide perovskite: investigating the competing photobrightening and photodarkening processes. <i>Materials Letters</i> , 2019 , 243, 191-194	3.3	12
43	Utilization of waste tea leaves as bio-surfactant in CdS quantum dots synthesis and their cytotoxicity effect in breast cancer cells. <i>Applied Surface Science</i> , 2019 , 487, 159-170	6.7	11
42	Control of the distance between porphyrin sensitizers and the TiO ₂ surface in solar cells by designed anchoring groups. <i>Journal of Molecular Structure</i> , 2019 , 1196, 444-454	3.4	6

41	Low temperature sintering of aqueous TiO ₂ colloids for flexible, co-sensitized dye-sensitized solar cells. <i>Materials Letters</i> , 2019 , 236, 289-291	3.3	4
40	Sustainable energy storage for solar home systems in rural Sub-Saharan Africa A comparative examination of lifecycle aspects of battery technologies for circular economy, with emphasis on the South African context. <i>Energy</i> , 2019 , 166, 1207-1215	7.9	35
39	Improving the light harvesting and colour range of methyl ammonium lead tri-bromide (MAPbBr) perovskite solar cells through co-sensitisation with organic dyes. <i>Chemical Communications</i> , 2018 , 55, 35-38	5.8	11
38	Green-Synthesis-Derived CdS Quantum Dots Using Tea Leaf Extract: Antimicrobial, Bioimaging, and Therapeutic Applications in Lung Cancer Cells. <i>ACS Applied Nano Materials</i> , 2018 , 1, 1683-1693	5.6	80
37	An effective approach of vapour assisted morphological tailoring for reducing metal defect sites in lead-free, (CH ₃ NH ₃) ₃ Bi ₂ I ₉ bismuth-based perovskite solar cells for improved performance and long-term stability. <i>Nano Energy</i> , 2018 , 49, 614-624	17.1	119
36	Sustainable Solar Energy Collection and Storage for Rural Sub-Saharan Africa 2018 , 81-107		1
35	Impact of Aggregation on the Photochemistry of Fullerene Films: Correlating Stability to Triplet Exciton Kinetics. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 22739-22747	9.5	20
34	Photoinduced charge transfer: from photography to solar energy. <i>Science Progress</i> , 2017 , 100, 212-230	1.1	1
33	A facile approach towards increasing the nitrogen-content in nitrogen-doped carbon nanotubes via halogenated catalysts. <i>Journal of Solid State Chemistry</i> , 2016 , 235, 202-211	3.3	15
32	Photonic flash-annealing of lead halide perovskite solar cells in 1 ms. <i>Journal of Materials Chemistry A</i> , 2016 , 4, 3471-3476	13	78
31	A novel dimethylformamide (DMF) free bar-cast method to deposit organolead perovskite thin films with improved stability. <i>Chemical Communications</i> , 2016 , 52, 4301-4	5.8	15
30	Effect of TiO ₂ Photoanode Porosity on Dye Diffusion Kinetics and Performance of Standard Dye-Sensitized Solar Cells. <i>Journal of Nanomaterials</i> , 2016 , 2016, 1-10	3.2	3
29	2016 ,		4
28	Convenient synthesis of EDOT-based dyes by CH-activation and their application as dyes in dye-sensitized solar cells. <i>Journal of Materials Chemistry A</i> , 2016 , 4, 15655-15661	13	11
27	Rapid processing of perovskite solar cells in under 2.5 seconds. <i>Journal of Materials Chemistry A</i> , 2015 , 3, 9123-9127	13	54
26	Facile self-assembly and stabilization of metal oxide nanoparticles. <i>Journal of Colloid and Interface Science</i> , 2015 , 442, 110-9	9.3	8
25	Multiple linker half-squarylium dyes for dye-sensitized solar cells; are two linkers better than one?. <i>Journal of Materials Chemistry A</i> , 2015 , 3, 2883-2894	13	20
24	Surface interactions of half-squaraine dyes in dye-sensitized solar cells. <i>Materials Research Innovations</i> , 2015 , 19, 494-496	1.9	2

23	Perovskite processing for photovoltaics: a spectro-thermal evaluation. <i>Journal of Materials Chemistry A</i> , 2014 , 2, 19338-19346	13	86
22	In situ monitoring and optimization of room temperature ultra-fast sensitization for dye-sensitized solar cells. <i>Chemical Communications</i> , 2014 , 50, 12512-4	5.8	8
21	A study of dye anchoring points in half-squarylium dyes for dye-sensitized solar cells. <i>Journal of Materials Chemistry A</i> , 2014 , 2, 4055-4066	13	36
20	Development of selective, ultra-fast multiple co-sensitization to control dye loading in dye-sensitized solar cells. <i>RSC Advances</i> , 2014 , 4, 2515-2522	3.7	33
19	A transparent conductive adhesive laminate electrode for high-efficiency organic-inorganic lead halide perovskite solar cells. <i>Advanced Materials</i> , 2014 , 26, 7499-504	24	148
18	Performance enhancement of solution processed perovskite solar cells incorporating functionalized silica nanoparticles. <i>Journal of Materials Chemistry A</i> , 2014 , 2, 17077-17084	13	29
17	Low temperature sintering of binder-containing TiO ₂ /metal peroxide pastes for dye-sensitized solar cells. <i>Journal of Materials Chemistry A</i> , 2014 , 2, 11134-11143	13	13
16	In depth analysis of the quenching of three fluorene-phenylene-based cationic conjugated polyelectrolytes by DNA and DNA bases. <i>Journal of Physical Chemistry B</i> , 2014 , 118, 460-9	3.4	10
15	Factors leading to low cost dye sensitised solar cells with go faster stripes. <i>Materials Research Innovations</i> , 2014 , 18, 91-94	1.9	3
14	Photovoltaic product form and importance of colour. <i>Materials Research Innovations</i> , 2014 , 18, 486-489	1.9	0
13	Compositions, colours and efficiencies of organic/inorganic lead iodide/bromide perovskites for solar cells. <i>Materials Research Innovations</i> , 2014 , 18, 482-485	1.9	5
12	A one-step low temperature processing route for organolead halide perovskite solar cells. <i>Chemical Communications</i> , 2013 , 49, 7893-5	5.8	197
11	Ultra-fast sintered TiO ₂ films in dye-sensitized solar cells: phase variation, electron transport and recombination. <i>Journal of Materials Chemistry A</i> , 2013 , 1, 2225-2230	13	33
10	Photochemical Materials: Absorbers, Emitters, Displays, Sensitisers, Acceptors, Traps and Photochromics 2013 , 149-216		
9	Study of optical losses in mechanically stacked dye-sensitized/CdTe tandem solar cells. <i>Materials Research Society Symposia Proceedings</i> , 2013 , 1538, 221-226		
8	TiO ₂ Film Morphology, Electron Transport and Electron Lifetime in Ultra-fast Sintered Dye-sensitized Solar Cells. <i>Materials Research Society Symposia Proceedings</i> , 2013 , 1493, 121-126		
7	Ultra-fast co-sensitization and tri-sensitization of dye-sensitized solar cells with N719, SQ1 and triarylamine dyes. <i>Journal of Materials Chemistry</i> , 2012 , 22, 13318		73
6	Effect of aggregation on the photophysical properties of three fluorene-phenylene-based cationic conjugated polyelectrolytes. <i>Journal of Physical Chemistry B</i> , 2011 , 115, 6885-92	3.4	19

5	Ultra-fast dye sensitisation and co-sensitisation for dye sensitized solar cells. <i>Chemical Communications</i> , 2010 , 46, 7256-8	5.8	88
4	Cationic fluorene-based conjugated polyelectrolytes induce compaction and bridging in DNA. <i>Biomacromolecules</i> , 2009 , 10, 2987-97	6.9	17
3	Synthesis, spectroscopy, photophysics and thermal behaviour of stilbene-based triarylaminines with dehydroabietic acid methyl ester moieties. <i>New Journal of Chemistry</i> , 2009 , 33, 877	3.6	9
2	Do DNA and Guanine Quench Fluorescence of Conjugated Cationic Polymers by Induced Aggregation?. <i>Portugaliae Electrochimica Acta</i> , 2009 , 27, 525-531	2.4	4
1	A review of graphene derivative enhancers for perovskite solar cells. <i>Nanoscale Advances</i> ,	5.1	0