Matthew L Davies

List of Publications by Year
in descending order

60 papers	2,062 citations	304368 22 h-index	233125 45 g-index
60 all docs	60 docs citations	60 times ranked	3566 citing authors

#	Article	IF	Citations
1	A one-step low temperature processing route for organolead halide perovskite solar cells. Chemical Communications, 2013, 49, 7893.	2.2	212
2	A Transparent Conductive Adhesive Laminate Electrode for Highâ€Efficiency Organicâ€Inorganic Lead Halide Perovskite Solar Cells. Advanced Materials, 2014, 26, 7499-7504.	11.1	169
3	An effective approach of vapour assisted morphological tailoring for reducing metal defect sites in lead-free, (CH3NH3)3Bi2I9 bismuth-based perovskite solar cells for improved performance and long-term stability. Nano Energy, 2018, 49, 614-624.	8.2	169
4	Green-Synthesis-Derived CdS Quantum Dots Using Tea Leaf Extract: Antimicrobial, Bioimaging, and Therapeutic Applications in Lung Cancer Cells. ACS Applied Nano Materials, 2018, 1, 1683-1693.	2.4	126
5	Perovskite processing for photovoltaics: a spectro-thermal evaluation. Journal of Materials Chemistry A, 2014, 2, 19338-19346.	5.2	99
6	Photonic flash-annealing of lead halide perovskite solar cells in 1 ms. Journal of Materials Chemistry A, 2016, 4, 3471-3476.	5.2	95
7	Interpreting time-resolved photoluminescence of perovskite materials. Physical Chemistry Chemical Physics, 2020, 22, 28345-28358.	1.3	94
8	Ultra-fast dye sensitisation and co-sensitisation for dye sensitized solar cells. Chemical Communications, 2010, 46, 7256.	2.2	91
9	Ultra-fast co-sensitization and tri-sensitization of dye-sensitized solar cells with N719, SQ1 and triarylamine dyes. Journal of Materials Chemistry, 2012, 22, 13318.	6.7	79
10	Rapid processing of perovskite solar cells in under 2.5 seconds. Journal of Materials Chemistry A, 2015, 3, 9123-9127.	5.2	67
11	Roll-to-roll slot-die coated Pâ€“Iâ€“N perovskite solar cells using acetonitrile based single step perovskite solvent system. Sustainable Energy and Fuels, 2020, 4, 3340-3351.	2.5	53
12	Sustainable energy storage for solar home systems in rural Sub-Saharan Africa â€“ A comparative examination of lifecycle aspects of battery technologies for circular economy, with emphasis on the South African context. Energy, 2019, 166, 1207-1215.	4.5	51
13	Towards Increased Recovery of Critical Raw Materials from WEEEâ€“ evaluation of CRMs at a component level and pre-processing methods for interface optimisation with recovery processes. Resources, Conservation and Recycling, 2020, 161, 104923.	5.3	48
14	Sustainable solvent selection for the manufacture of methylammonium lead triiodide (MAPbI₃) perovskite solar cells. Green Chemistry, 2021, 23, 2471-2486.	4.6	45
15	A study of dye anchoring points in half-squarylium dyes for dye-sensitized solar cells. Journal of Materials Chemistry A, 2014, 2, 4055-4066.	5.2	40
16	Multiphoton Absorption Stimulated Metal Chalcogenide Quantum Dot Solar Cells under Ambient and Concentrated Irradiance. Advanced Functional Materials, 2020, 30, 2004563.	7.8	40
17	Ultra-fast sintered TiO2films in dye-sensitized solar cells: phase variation, electron transport and recombination. Journal of Materials Chemistry A, 2013, 1, 2225-2230.	5.2	36
18	Development of selective, ultra-fast multiple co-sensitization to control dye loading in dye-sensitized solar cells. RSC Advances, 2014, 4, 2515-2522.	1.7	35

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19	Nitrogen/Carbon-Coated Zero-Valent Copper as Highly Efficient Co-catalysts for TiO₂ Applied in Photocatalytic and Photoelectrocatalytic Hydrogen Production. ACS Applied Materials & Interfaces, 2020, 12, 30365-30380.	4.0	35
20	Performance enhancement of solution processed perovskite solar cells incorporating functionalized silica nanoparticles. Journal of Materials Chemistry A, 2014, 2, 17077-17084.	5.2	32
21	Investigating the Superoxide Formation and Stability in Mesoporous Carbon Perovskite Solar Cells with an Aminovaleric Acid Additive. Advanced Functional Materials, 2020, 30, 1909839.	7.8	30
22	Impact of Aggregation on the Photochemistry of Fullerene Films: Correlating Stability to Triplet Exciton Kinetics. ACS Applied Materials & Interfaces, 2017, 9, 22739-22747.	4.0	27
23	Multiple linker half-squarylium dyes for dye-sensitized solar cells; are two linkers better than one?. Journal of Materials Chemistry A, 2015, 3, 2883-2894.	5.2	22
24	Utilization of waste tea leaves as bio-surfactant in CdS quantum dots synthesis and their cytotoxicity effect in breast cancer cells. Applied Surface Science, 2019, 487, 159-170.	3.1	22
25	Addressing the Stability of Lead Halide Perovskites. Joule, 2020, 4, 1626-1627.	11.7	22
26	Î³â€Valerolactone: A Nontoxic Green Solvent for Highly Stable Printed Mesoporous Perovskite Solar Cells. Energy Technology, 2021, 9, 2100312.	1.8	21
27	Effect of Aggregation on the Photophysical Properties of Three Fluoreneâ€“Phenylene-Based Cationic Conjugated Polyelectrolytes. Journal of Physical Chemistry B, 2011, 115, 6885-6892.	1.2	20
28	A review of graphene derivative enhancers for perovskite solar cells. Nanoscale Advances, 2022, 4, 2057-2076.	2.2	20
29	A novel dimethylformamide (DMF) free bar-cast method to deposit organolead perovskite thin films with improved stability. Chemical Communications, 2016, 52, 4301-4304.	2.2	19
30	A facile approach towards increasing the nitrogen-content in nitrogen-doped carbon nanotubes via halogenated catalysts. Journal of Solid State Chemistry, 2016, 235, 202-211.	1.4	18
31	Cationic Fluorene-Based Conjugated Polyelectrolytes Induce Compaction and Bridging in DNA. Biomacromolecules, 2009, 10, 2987-2997.	2.6	17
32	Low temperature sintering of binder-containing TiO₂/metal peroxide pastes for dye-sensitized solar cells. Journal of Materials Chemistry A, 2014, 2, 11134-11143.	5.2	16
33	Improving the light harvesting and colour range of methyl ammonium lead tri-bromide (MAPbBr₃) perovskite solar cells through co-sensitisation with organic dyes. Chemical Communications, 2019, 55, 35-38.	2.2	16
34	Shining a light on the photoluminescence behaviour of methylammonium lead iodide perovskite: investigating the competing photobrightening and photodarkening processes. Materials Letters, 2019, 243, 191-194.	1.3	16
35	Convenient synthesis of EDOT-based dyes by CH-activation and their application as dyes in dye-sensitized solar cells. Journal of Materials Chemistry A, 2016, 4, 15655-15661.	5.2	15
36	Cholesterol-rich naked mole-rat brain lipid membranes are susceptible to amyloid beta-induced damage in vitro. Aging, 2020, 12, 22266-22290.	1.4	15

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37	Synthesis, spectroscopy, photophysics and thermal behaviour of stilbene-based triarylamines with dehydroabietic acid methyl ester moieties. New Journal of Chemistry, 2009, 33, 877.	1.4	12
38	On the Use of Carbon Cables from Plastic Solvent Combinations of Polystyrene and Toluene in Carbon Nanotube Synthesis. Nanomaterials, 2022, 12, 9.	1.9	12
39	In Depth Analysis of the Quenching of Three Fluoreneâ€“Phenylene-Based Cationic Conjugated Polyelectrolytes by DNA and DNA Bases. Journal of Physical Chemistry B, 2014, 118, 460-469.	1.2	11
40	Low temperature sintering of aqueous TiO2 colloids for flexible, co-sensitized dye-sensitized solar cells. Materials Letters, 2019, 236, 289-291.	1.3	11
41	Photocatalytic H2 production and degradation of aqueous 2-chlorophenol over B/N-graphene-coated Cu0/TiO2: A DFT, experimental and mechanistic investigation. Journal of Environmental Management, 2022, 311, 114822.	3.8	11
42	Facile self-assembly and stabilization of metal oxide nanoparticles. Journal of Colloid and Interface Science, 2015, 442, 110-119.	5.0	9
43	Control of the distance between porphyrin sensitizers and the TiO2 surface in solar cells by designed anchoring groups. Journal of Molecular Structure, 2019, 1196, 444-454.	1.8	9
44	Compositions, colours and efficiencies of organicâ€“inorganic lead iodide/bromide perovskites for solar cells. Materials Research Innovations, 2014, 18, 482-485.	1.0	8
45	In situ monitoring and optimization of room temperature ultra-fast sensitization for dye-sensitized solar cells. Chemical Communications, 2014, 50, 12512-12514.	2.2	8
46	Third generation photovoltaics â€" Early intervention for circular economy and a sustainable future. , 2016, , .		8
47	Effect of TiO₂Photoanode Porosity on Dye Diffusion Kinetics and Performance of Standard Dye-Sensitized Solar Cells. Journal of Nanomaterials, 2016, 2016, 1-10.	1.5	5
48	Sustainable Solar Energy Collection and Storage for Rural Sub-Saharan Africa. , 2018, , 81-107.		5
49	Factors leading to low cost dye sensitised solar cells with â€˜go fasterâ€™ stripes. Materials Research Innovations, 2014, 18, 91-94.	1.0	4
50	Pyrene and nile red fluorescence probes for <i>inâ€situ</i> study of polarity and viscosity of soil organic coatings implicated in soil water repellency. European Journal of Soil Science, 2020, 71, 868-879.	1.8	4
51	Do DNA and Guanine Quench Fluorescence of Conjugated Cationic Polymers by Induced Aggregation?. Portugaliae Electrochimica Acta, 2009, 27, 525-531.	0.4	4
52	Performance-Enhancing Sulfur-Doped TiO2 Photoanodes for Perovskite Solar Cells. Applied Sciences (Switzerland), 2022, 12, 429.	1.3	3
53	Surface interactions of half-squaraine dyes in dye-sensitized solar cells. Materials Research Innovations, 2015, 19, 494-496.	1.0	2
54	Photoinduced Charge Transfer: From Photography to Solar Energy. Science Progress, 2017, 100, 212-230.	1.0	2

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55	Photochemical Materials: Absorbers, Emitters, Displays, Sensitisers, Acceptors, Traps and Photochromics. , 2013, , 149-216.		1
56	Photovoltaic product form and importance of colour. Materials Research Innovations, 2014, 18, 486-489.	1.0	1
57	Study of optical losses in mechanically stacked dye-sensitized/CdTe tandem solar cells. Materials Research Society Symposia Proceedings, 2013, 1538, 221-226.	0.1	0
58	TiO2 Film Morphology, Electron Transport and Electron Lifetime in Ultra-fast Sintered Dye-sensitized Solar Cells. Materials Research Society Symposia Proceedings, 2013, 1493, 121-126.	0.1	0
59	Surfactant-Induced Soil Strengthening (SISS)â€"A Potential New Method for Temporary Stabilization along Beaches and Coastal Waterways. , 2022, , .		0
60	Molecular Orientation and Femtosecond Electron Transfer Dynamics in Halogenated and Nonhalogenated, Eco-Friendly Processed PTB7-Th, ITIC, PTB7-Th:ITIC, and PTB7-Th:PCBM Films. Journal of Physical Chemistry C, 0, , .	1.5	0