S David Tilley

List of Publications by Year
in descending order

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Version: 2024-02-01

68 papers	9,714 citations	81743 39 h-index	106150 65 g-index
86 all docs	86 docs citations	86 times ranked	11665 citing authors

#	Article	IF	Citations
1	Photovoltaic powered solar hydrogen production coupled with waste SO2 valorization enabled by MoP electrocatalysts. Applied Catalysis B: Environmental, 2022, 305, 121045.	10.8	11
2	Electrochemical ruthenium-catalysed Câ€“H activation in water through heterogenization of a molecular catalyst. Catalysis Science and Technology, 2022, 12, 1512-1519.	2.1	4
3	Crystal orientation-dependent etching and trapping in thermally-oxidised Cu₂O photocathodes for water splitting. Energy and Environmental Science, 2022, 15, 2002-2010.	15.6	20
4	Interfacial Dipole Layer Enables High-Performance Heterojunctions for Photoelectrochemical Water Splitting. ACS Energy Letters, 2022, 7, 1392-1402.	8.8	11
5	Sulfur Treatment Passivates Bulk Defects in Sb₂Se₃ Photocathodes for Water Splitting. Advanced Functional Materials, 2022, 32, .	7.8	18
6	Metal-like molecules. Nature Catalysis, 2022, 5, 359-360.	16.1	2
7	Flexible to rigid: IR spectroscopic investigation of a rhenium-tricarbonyl-complex at a buried interface. Physical Chemistry Chemical Physics, 2021, 23, 4311-4316.	1.3	5
8	Improved water oxidation with metal oxide catalysts via a regenerable and redox-inactive ZnOxHy overlayer. Chemical Communications, 2021, 57, 10230-10233.	2.2	1
9	Immobilization of molecular catalysts on electrode surfaces using hostâ€“guest interactions. Nature Chemistry, 2021, 13, 523-529.	6.6	49
10	Emerging Binary Chalcogenide Light Absorbers: Material Specific Promises and Challenges. Chemistry of Materials, 2021, 33, 3467-3489.	3.2	30
11	Thiolâ€Amineâ€Based Solution Processing of Cu₂S Thin Films for Photoelectrochemical Water Splitting. ChemSusChem, 2021, 14, 3967-3974.	3.6	10
12	Operando Analysis of Semiconductor Junctions in Multiâ€Layered Photocathodes for Solar Water Splitting by Impedance Spectroscopy. Advanced Energy Materials, 2021, 11, 2003569.	10.2	36
13	Tuning the selectivity of biomass oxidation over oxygen evolution on NiOâ€“OH electrodes. Green Chemistry, 2021, 23, 8061-8068.	4.6	20
14	A combinatorial guide to phase formation and surface passivation of tungsten titanium oxide prepared by thermal oxidation. Acta Materialia, 2020, 186, 95-104.	3.8	12
15	Solar water splitting exceeding 10% efficiencyvialow-cost Sb₂Se₃photocathodes coupled with semitransparent perovskite photovoltaics. Energy and Environmental Science, 2020, 13, 4362-4370.	15.6	47
16	Sb₂S₃/TiO₂ Heterojunction Photocathodes: Band Alignment and Water Splitting Properties. Chemistry of Materials, 2020, 32, 7247-7253.	3.2	34
17	Mechanistic insights into photocatalysis and over two days of stable H₂ generation in electrocatalysis by a molecular cobalt catalyst immobilized on TiO₂. Catalysis Science and Technology, 2020, 10, 2549-2560.	2.1	7
18	Tandem Cuprous Oxide/Silicon Microwire Hydrogen-Evolving Photocathode with Photovoltage Exceeding 1.3 V. ACS Energy Letters, 2019, 4, 2287-2294.	8.8	25

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19	Strategies for enhancing the photocurrent, photovoltage, and stability of photoelectrodes for photoelectrochemical water splitting. Chemical Society Reviews, 2019, 48, 4979-5015.	18.7	429
20	Operandoelectrochemical study of charge carrier processes in water splitting photoanodes protected by atomic layer deposited TiO₂. Sustainable Energy and Fuels, 2019, 3, 3085-3092.	2.5	11
21	Resistance-based analysis of limiting interfaces in multilayer water splitting photocathodes by impedance spectroscopy. Sustainable Energy and Fuels, 2019, 3, 2067-2075.	2.5	12
22	Preface to Special Issue of ChemSusChemâ€"Water Splitting: From Theory to Practice. ChemSusChem, 2019, 12, 1771-1774.	3.6	7
23	Stable and tunable phosphonic acid dipole layer for band edge engineering of photoelectrochemical and photovoltaic heterojunction devices. Energy and Environmental Science, 2019, 12, 1901-1909.	15.6	41
24	Anodizing of Self-Passivating W_xTi_{1â€“x} Precursors for W_xTi_{1â€“x}O_n Oxide Alloys with Tailored Stability. ACS Applied Materials & Interfaces, 2019, 11, 9510-9518.	4.0	8
25	Recent Advances and Emerging Trends in Photoâ€Electrochemical Solar Energy Conversion. Advanced Energy Materials, 2019, 9, 1802877.	10.2	220
26	Extended Light Harvesting with Dual Cu₂Oâ€Based Photocathodes for High Efficiency Water Splitting. Advanced Energy Materials, 2018, 8, 1702323.	10.2	93
27	Plasmonic Substrates Do Not Promote Vibrational Energy Transfer at Solidâ€“Liquid Interfaces. Journal of Physical Chemistry Letters, 2018, 9, 49-56.	2.1	11
28	Design of Molecular Water Oxidation Catalysts Stabilized by Ultrathin Inorganic Overlayersâ€"Is Active Site Protection Necessary?. Inorganics, 2018, 6, 105.	1.2	9
29	Operando deconvolution of photovoltaic and electrocatalytic performance in ALD TiO₂ protected water splitting photocathodes. Chemical Science, 2018, 9, 6062-6067.	3.7	22
30	Stabilized Solar Hydrogen Production with CuO/CdS Heterojunction Thin Film Photocathodes. Chemistry of Materials, 2017, 29, 1735-1743.	3.2	140
31	Spectroelectrochemical analysis of the mechanism of (photo)electrochemical hydrogen evolution at a catalytic interface. Nature Communications, 2017, 8, 14280.	5.8	83
32	Emerging Earth-abundant materials for scalable solar water splitting. Current Opinion in Electrochemistry, 2017, 2, 120-127.	2.5	17
33	Gradient Self-Doped CuBi₂O₄ with Highly Improved Charge Separation Efficiency. Journal of the American Chemical Society, 2017, 139, 15094-15103.	6.6	187
34	Photocorrosion-resistant Sb₂Se₃photocathodes with earth abundant MoS_xhydrogen evolution catalyst. Journal of Materials Chemistry A, 2017, 5, 23139-23145.	5.2	83
35	Investigation of (Leaky) ALD TiO₂ Protection Layers for Water-Splitting Photoelectrodes. ACS Applied Materials & Interfaces, 2017, 9, 43614-43622.	4.0	84
36	Tin oxide as stable protective layer for composite cuprous oxide water-splitting photocathodes. Nano Energy, 2016, 24, 10-16.	8.2	84

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37	Band Alignment Engineering at Cu₂O/ZnO Heterointerfaces. ACS Applied Materials & Interfaces, 2016, 8, 21824-21831.	4.0	101
38	Photoelectrochemical Hydrogen Production in Alkaline Solutions Using Cu₂O Coated with Earthâ€Abundant Hydrogen Evolution Catalysts. Angewandte Chemie - International Edition, 2015, 54, 664-667.	7.2	134
39	Targeting Ideal Dualâ€Absorber Tandem Water Splitting Using Perovskite Photovoltaics and CuIn_xGa_{1â€x}Se₂ Photocathodes. Advanced Energy Materials, 2015, 5, 1501520.	10.2	109
40	Transparent Cuprous Oxide Photocathode Enabling a Stacked Tandem Cell for Unbiased Water Splitting. Advanced Energy Materials, 2015, 5, 1501537.	10.2	149
41	Solution Transformation of Cu₂O into CuInS₂ for Solar Water Splitting. Nano Letters, 2015, 15, 1395-1402.	4.5	108
42	An Optically Transparent Iron Nickel Oxide Catalyst for Solar Water Splitting. Journal of the American Chemical Society, 2015, 137, 9927-9936.	6.6	247
43	Rate Law Analysis of Water Oxidation on a Hematite Surface. Journal of the American Chemical Society, 2015, 137, 6629-6637.	6.6	273
44	Photovoltaic and Photoelectrochemical Solar Energy Conversion with Cu₂O. Journal of Physical Chemistry C, 2015, 119, 26243-26257.	1.5	160
45	Efficient and selective carbon dioxide reduction on low cost protected Cu₂O photocathodes using a molecular catalyst. Energy and Environmental Science, 2015, 8, 855-861.	15.6	142
46	On the stability enhancement of cuprous oxide water splitting photocathodes by low temperature steam annealing. Energy and Environmental Science, 2014, 7, 4044-4052.	15.6	121
47	Ruthenium Oxide Hydrogen Evolution Catalysis on Composite Cuprous Oxide Waterâ€Splitting Photocathodes. Advanced Functional Materials, 2014, 24, 303-311.	7.8	253
48	Hydrogen evolution from a copper(I) oxide photocathode coated with an amorphous molybdenum sulphide catalyst. Nature Communications, 2014, 5, 3059.	5.8	418
49	Calculation of the Energy Band Diagram of a Photoelectrochemical Water Splitting Cell. Journal of Physical Chemistry C, 2014, 118, 29599-29607.	1.5	56
50	A Bismuth Vanadateâ€“Cuprous Oxide Tandem Cell for Overall Solar Water Splitting. Journal of Physical Chemistry C, 2014, 118, 16959-16966.	1.5	226
51	Understanding the Role of Underlayers and Overlayers in Thin Film Hematite Photoanodes. Advanced Functional Materials, 2014, 24, 7681-7688.	7.8	289
52	Water photolysis at 12.3% efficiency via perovskite photovoltaics and Earth-abundant catalysts. Science, 2014, 345, 1593-1596.	6.0	2,260
53	Ultrafast Charge Carrier Recombination and Trapping in Hematite Photoanodes under Applied Bias. Journal of the American Chemical Society, 2014, 136, 9854-9857.	6.6	238
54	Back Electronâ€“Hole Recombination in Hematite Photoanodes for Water Splitting. Journal of the American Chemical Society, 2014, 136, 2564-2574.	6.6	393

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55	Optimization and Stabilization of Electrodeposited Cu₂ZnSnS₄ Photocathodes for Solar Water Reduction. ACS Applied Materials & Interfaces, 2013, 5, 8018-8024.	4.0	144
56	Toward a Synthesis of Hirsutellone B by the Concept of Double Cyclization. Journal of Organic Chemistry, 2013, 78, 9584-9607.	1.7	24
57	Silicon protected with atomic layer deposited TiO2: conducting versus tunnelling through TiO2. Journal of Materials Chemistry A, 2013, 1, 15089.	5.2	51
58	Silicon protected with atomic layer deposited TiO2: durability studies of photocathodic H2 evolution. RSC Advances, 2013, 3, 25902.	1.7	104
59	Great Expectations for Photoelectrochemical Water Splitting. Energy Procedia, 2012, 22, 1-2.	1.8	2
60	Ultrathin films on copper(i) oxide water splitting photocathodes: a study on performance and stability. Energy and Environmental Science, 2012, 5, 8673.	15.6	401
61	Lightâ€Induced Water Splitting with Hematite: Improved Nanostructure and Iridium Oxide Catalysis. Angewandte Chemie - International Edition, 2010, 49, 6405-6408.	7.2	966
62	Bond formations by intermolecular and intramolecular trappings of acylketenes and their applications in natural product synthesis. Chemical Society Reviews, 2009, 38, 3022.	18.7	95
63	A Rapid, Asymmetric Synthesis of the Decahydrofluorene Core of the Hirsutellones. Organic Letters, 2009, 11, 701-703.	2.4	50
64	Tyrosine-Selective Protein Alkylation Using Ï€-Allylpalladium Complexes. Journal of the American Chemical Society, 2006, 128, 1080-1081.	6.6	270
65	Tin Sulfide/Gallium Oxide Heterojunctions for Solar Water Splitting. Energy Technology, 0, , 2100461.	1.8	0
66	Earth-Abundant Materials for Solar Water Splitting. , 0, , .		0
67	Operando Methods for a Deeper Understanding of Photoelectrochemical Water Splitting Systems. , 0, , .		0
68	Operando Methods for a Deeper Understanding of Photoelectrochemical Water Splitting Systems. , 0, , .		0