

S David Tilley

List of Publications by Year in descending order

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68
papers

9,714
citations

81900

39
h-index

106344

65
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86
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86
docs citations

86
times ranked

11665
citing authors

#	ARTICLE	IF	CITATIONS
1	Photovoltaic powered solar hydrogen production coupled with waste SO ₂ valorization enabled by MoP electrocatalysts. <i>Applied Catalysis B: Environmental</i> , 2022, 305, 121045.	20.2	11
2	Electrochemical ruthenium-catalysed C-H activation in water through heterogenization of a molecular catalyst. <i>Catalysis Science and Technology</i> , 2022, 12, 1512-1519.	4.1	4
3	Crystal orientation-dependent etching and trapping in thermally-oxidised Cu ₂ O photocathodes for water splitting. <i>Energy and Environmental Science</i> , 2022, 15, 2002-2010.	30.8	20
4	Interfacial Dipole Layer Enables High-Performance Heterojunctions for Photoelectrochemical Water Splitting. <i>ACS Energy Letters</i> , 2022, 7, 1392-1402.	17.4	11
5	Sulfur Treatment Passivates Bulk Defects in Sb ₂ Se ₃ Photocathodes for Water Splitting. <i>Advanced Functional Materials</i> , 2022, 32, .	14.9	18
6	Metal-like molecules. <i>Nature Catalysis</i> , 2022, 5, 359-360.	34.4	2
7	Flexible to rigid: IR spectroscopic investigation of a rhenium-tricarbonyl-complex at a buried interface. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 4311-4316.	2.8	5
8	Improved water oxidation with metal oxide catalysts via a regenerable and redox-inactive ZnOxHy overlayer. <i>Chemical Communications</i> , 2021, 57, 10230-10233.	4.1	1
9	Immobilization of molecular catalysts on electrode surfaces using host-guest interactions. <i>Nature Chemistry</i> , 2021, 13, 523-529.	13.6	49
10	Emerging Binary Chalcogenide Light Absorbers: Material Specific Promises and Challenges. <i>Chemistry of Materials</i> , 2021, 33, 3467-3489.	6.7	30
11	Thiol-Amine-Based Solution Processing of Cu ₂ S Thin Films for Photoelectrochemical Water Splitting. <i>ChemSusChem</i> , 2021, 14, 3967-3974.	6.8	10
12	Operando Analysis of Semiconductor Junctions in Multi-Layered Photocathodes for Solar Water Splitting by Impedance Spectroscopy. <i>Advanced Energy Materials</i> , 2021, 11, 2003569.	19.5	36
13	Tuning the selectivity of biomass oxidation over oxygen evolution on NiO-OH electrodes. <i>Green Chemistry</i> , 2021, 23, 8061-8068.	9.0	20
14	A combinatorial guide to phase formation and surface passivation of tungsten titanium oxide prepared by thermal oxidation. <i>Acta Materialia</i> , 2020, 186, 95-104.	7.9	12
15	Solar water splitting exceeding 10% efficiency via low-cost Sb ₂ Se ₃ photocathodes coupled with semitransparent perovskite photovoltaics. <i>Energy and Environmental Science</i> , 2020, 13, 4362-4370.	30.8	47
16	Sb ₂ S ₃ /TiO ₂ Heterojunction Photocathodes: Band Alignment and Water Splitting Properties. <i>Chemistry of Materials</i> , 2020, 32, 7247-7253.	6.7	34
17	Mechanistic insights into photocatalysis and over two days of stable H ₂ generation in electrocatalysis by a molecular cobalt catalyst immobilized on TiO ₂ . <i>Catalysis Science and Technology</i> , 2020, 10, 2549-2560.	4.1	7
18	Tandem Cuprous Oxide/Silicon Microwire Hydrogen-Evolving Photocathode with Photovoltage Exceeding 1.3 V. <i>ACS Energy Letters</i> , 2019, 4, 2287-2294.	17.4	25

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19	Strategies for enhancing the photocurrent, photovoltage, and stability of photoelectrodes for photoelectrochemical water splitting. <i>Chemical Society Reviews</i> , 2019, 48, 4979-5015.	38.1	429
20	<i>Operando</i> electrochemical study of charge carrier processes in water splitting photoanodes protected by atomic layer deposited TiO ₂ . <i>Sustainable Energy and Fuels</i> , 2019, 3, 3085-3092.	4.9	11
21	Resistance-based analysis of limiting interfaces in multilayer water splitting photocathodes by impedance spectroscopy. <i>Sustainable Energy and Fuels</i> , 2019, 3, 2067-2075.	4.9	12
22	Preface to Special Issue of <i>ChemSusChem</i> "Water Splitting: From Theory to Practice. <i>ChemSusChem</i> , 2019, 12, 1771-1774.	6.8	7
23	Stable and tunable phosphonic acid dipole layer for band edge engineering of photoelectrochemical and photovoltaic heterojunction devices. <i>Energy and Environmental Science</i> , 2019, 12, 1901-1909.	30.8	41
24	Anodizing of Self-Passivating W _x Ti _{1-x} Precursors for W _x Ti _{1-x} O _n Oxide Alloys with Tailored Stability. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 9510-9518.	8.0	8
25	Recent Advances and Emerging Trends in Photoelectrochemical Solar Energy Conversion. <i>Advanced Energy Materials</i> , 2019, 9, 1802877.	19.5	220
26	Extended Light Harvesting with Dual Cu ₂ O-Based Photocathodes for High Efficiency Water Splitting. <i>Advanced Energy Materials</i> , 2018, 8, 1702323.	19.5	93
27	Plasmonic Substrates Do Not Promote Vibrational Energy Transfer at Solid-Liquid Interfaces. <i>Journal of Physical Chemistry Letters</i> , 2018, 9, 49-56.	4.6	11
28	Design of Molecular Water Oxidation Catalysts Stabilized by Ultrathin Inorganic Overlayers: Is Active Site Protection Necessary?. <i>Inorganics</i> , 2018, 6, 105.	2.7	9
29	<i>Operando</i> deconvolution of photovoltaic and electrocatalytic performance in ALD TiO ₂ protected water splitting photocathodes. <i>Chemical Science</i> , 2018, 9, 6062-6067.	7.4	22
30	Stabilized Solar Hydrogen Production with CuO/CdS Heterojunction Thin Film Photocathodes. <i>Chemistry of Materials</i> , 2017, 29, 1735-1743.	6.7	140
31	Spectroelectrochemical analysis of the mechanism of (photo)electrochemical hydrogen evolution at a catalytic interface. <i>Nature Communications</i> , 2017, 8, 14280.	12.8	83
32	Emerging Earth-abundant materials for scalable solar water splitting. <i>Current Opinion in Electrochemistry</i> , 2017, 2, 120-127.	4.8	17
33	Gradient Self-Doped CuBi ₂ O ₄ with Highly Improved Charge Separation Efficiency. <i>Journal of the American Chemical Society</i> , 2017, 139, 15094-15103.	13.7	187
34	Photocorrosion-resistant Sb ₂ Se ₃ photocathodes with earth abundant Mo _x hydrogen evolution catalyst. <i>Journal of Materials Chemistry A</i> , 2017, 5, 23139-23145.	10.3	83
35	Investigation of (Leaky) ALD TiO ₂ Protection Layers for Water-Splitting Photoelectrodes. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 43614-43622.	8.0	84
36	Tin oxide as stable protective layer for composite cuprous oxide water-splitting photocathodes. <i>Nano Energy</i> , 2016, 24, 10-16.	16.0	84

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37	Band Alignment Engineering at Cu ₂ O/ZnO Heterointerfaces. ACS Applied Materials & Interfaces, 2016, 8, 21824-21831.	8.0	101
38	Photoelectrochemical Hydrogen Production in Alkaline Solutions Using Cu ₂ O Coated with Earth-Abundant Hydrogen Evolution Catalysts. Angewandte Chemie - International Edition, 2015, 54, 664-667.	13.8	134
39	Targeting Ideal Dual-Absorber Tandem Water Splitting Using Perovskite Photovoltaics and CuInGaSe ₂ Photocathodes. Advanced Energy Materials, 2015, 5, 1501520.	19.5	109
40	Transparent Cuprous Oxide Photocathode Enabling a Stacked Tandem Cell for Unbiased Water Splitting. Advanced Energy Materials, 2015, 5, 1501537.	19.5	149
41	Solution Transformation of Cu ₂ O into CuInS ₂ for Solar Water Splitting. Nano Letters, 2015, 15, 1395-1402.	9.1	108
42	An Optically Transparent Iron Nickel Oxide Catalyst for Solar Water Splitting. Journal of the American Chemical Society, 2015, 137, 9927-9936.	13.7	247
43	Rate Law Analysis of Water Oxidation on a Hematite Surface. Journal of the American Chemical Society, 2015, 137, 6629-6637.	13.7	273
44	Photovoltaic and Photoelectrochemical Solar Energy Conversion with Cu ₂ O. Journal of Physical Chemistry C, 2015, 119, 26243-26257.	3.1	160
45	Efficient and selective carbon dioxide reduction on low cost protected Cu ₂ O photocathodes using a molecular catalyst. Energy and Environmental Science, 2015, 8, 855-861.	30.8	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.	30.8	121
47	Ruthenium Oxide Hydrogen Evolution Catalysis on Composite Cuprous Oxide Water-Splitting Photocathodes. Advanced Functional Materials, 2014, 24, 303-311.	14.9	253
48	Hydrogen evolution from a copper(I) oxide photocathode coated with an amorphous molybdenum sulphide catalyst. Nature Communications, 2014, 5, 3059.	12.8	418
49	Calculation of the Energy Band Diagram of a Photoelectrochemical Water Splitting Cell. Journal of Physical Chemistry C, 2014, 118, 29599-29607.	3.1	56
50	A Bismuth Vanadate-Cuprous Oxide Tandem Cell for Overall Solar Water Splitting. Journal of Physical Chemistry C, 2014, 118, 16959-16966.	3.1	226
51	Understanding the Role of Underlayers and Overlayers in Thin Film Hematite Photoanodes. Advanced Functional Materials, 2014, 24, 7681-7688.	14.9	289
52	Water photolysis at 12.3% efficiency via perovskite photovoltaics and Earth-abundant catalysts. Science, 2014, 345, 1593-1596.	12.6	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.	13.7	238
54	Back Electron-Hole Recombination in Hematite Photoanodes for Water Splitting. Journal of the American Chemical Society, 2014, 136, 2564-2574.	13.7	393

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55	Optimization and Stabilization of Electrodeposited Cu ₂ ZnSnS ₄ Photocathodes for Solar Water Reduction. ACS Applied Materials & Interfaces, 2013, 5, 8018-8024.	8.0	144
56	Toward a Synthesis of Hirsutellone B by the Concept of Double Cyclization. Journal of Organic Chemistry, 2013, 78, 9584-9607.	3.2	24
57	Silicon protected with atomic layer deposited TiO ₂ : conducting versus tunnelling through TiO ₂ . Journal of Materials Chemistry A, 2013, 1, 15089.	10.3	51
58	Silicon protected with atomic layer deposited TiO ₂ : durability studies of photocathodic H ₂ evolution. RSC Advances, 2013, 3, 25902.	3.6	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.	30.8	401
61	Light-Induced Water Splitting with Hematite: Improved Nanostructure and Iridium Oxide Catalysis. Angewandte Chemie - International Edition, 2010, 49, 6405-6408.	13.8	966
62	Bond formations by intermolecular and intramolecular trappings of acylketenes and their applications in natural product synthesis. Chemical Society Reviews, 2009, 38, 3022.	38.1	95
63	A Rapid, Asymmetric Synthesis of the Decahydrofluorene Core of the Hirsutellones. Organic Letters, 2009, 11, 701-703.	4.6	50
64	Tyrosine-Selective Protein Alkylation Using η^3 -Allylpalladium Complexes. Journal of the American Chemical Society, 2006, 128, 1080-1081.	13.7	270
65	Tin Sulfide/Gallium Oxide Heterojunctions for Solar Water Splitting. Energy Technology, 0, , 2100461.	3.8	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