Benjamin D Sherman

List of Publications by Year
in descending order

54 papers	2,745 citations	159585 30 h-index	175258 52 g-index
55 all docs	55 docs citations	55 times ranked	2820 citing authors

#	Article	IF	Citations
1	Improving the efficiency of water splitting in dye-sensitized solar cells by using a biomimetic electron transfer mediator. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 15612-15616.	7.1	280
2	Mechanisms of molecular water oxidation in solution and on oxide surfaces. Chemical Society Reviews, 2017, 46, 6148-6169.	38.1	160
3	Artificial photosynthesis: Where are we now? Where can we go?. Journal of Photochemistry and Photobiology C: Photochemistry Reviews, 2015, 25, 32-45.	11.6	158
4	Visible photoelectrochemical water splitting into H ₂ and O ₂ in a dye-sensitized photoelectrosynthesis cell. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 5899-5902.	7.1	136
5	Mimicking the electron transfer chain in photosystem II with a molecular triad thermodynamically capable of water oxidation. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 15578-15583.	7.1	110
6	A Dye-Sensitized Photoelectrochemical Tandem Cell for Light Driven Hydrogen Production from Water. Journal of the American Chemical Society, 2016, 138, 16745-16753.	13.7	100
7	Light-Driven Water Splitting with a Molecular Electroassembly-Based Core/Shell Photoanode. Journal of Physical Chemistry Letters, 2015, 6, 3213-3217.	4.6	94
8	An aqueous, organic dye derivatized SnO₂/TiO₂ core/shell photoanode. Journal of Materials Chemistry A, 2016, 4, 2969-2975.	10.3	89
9	Electroâ€assembly of a Chromophoreâ€"Catalyst Bilayer for Water Oxidation and Photocatalytic Water Splitting. Angewandte Chemie - International Edition, 2015, 54, 4778-4781.	13.8	88
10	Light-Driven Water Splitting by a Covalently Linked Ruthenium-Based Chromophoreâ€"Catalyst Assembly. ACS Energy Letters, 2017, 2, 124-128.	17.4	75
11	Photocatalytic hydrogen evolution from biomass conversion. Nano Convergence, 2021, 8, 6.	12.1	75
12	Interfacial Deposition of Ru(II) Bipyridine-Dicarboxylate Complexes by Ligand Substitution for Applications in Water Oxidation Catalysis. Journal of the American Chemical Society, 2018, 140, 719-726.	13.7	72
13	Stabilization of Ruthenium(II) Polypyridyl Chromophores on Nanoparticle Metal-Oxide Electrodes in Water by Hydrophobic PMMA Overlayers. Journal of the American Chemical Society, 2014, 136, 13514-13517.	13.7	70
14	Two Electrode Collectorâ€"Generator Method for the Detection of Electrochemically or Photoelectrochemically Produced O₂. Analytical Chemistry, 2016, 88, 7076-7082.	6.5	67
15	Evolution of reaction center mimics to systems capable of generating solar fuel. Photosynthesis Research, 2014, 120, 59-70.	2.9	64
16	Evaluation of Chromophore and Assembly Design in Light-Driven Water Splitting with a Molecular Water Oxidation Catalyst. ACS Energy Letters, 2016, 1, 231-236.	17.4	62
17	Electron Transfer Mediator Effects in the Oxidative Activation of a Ruthenium Dicarboxylate Water Oxidation Catalyst. ACS Catalysis, 2015, 5, 4404-4409.	11.2	59
18	Solar-Driven Lignin Oxidation via Hydrogen Atom Transfer with a Dye-Sensitized TiO₂ Photoanode. ACS Energy Letters, 2020, 5, 777-784.	17.4	56

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19	Layer-by-Layer Molecular Assemblies for Dye-Sensitized Photoelectrosynthesis Cells Prepared by Atomic Layer Deposition. Journal of the American Chemical Society, 2017, 139, 14518-14525.	13.7	55
20	Molecular Photoelectrode for Water Oxidation Inspired by Photosystem II. Journal of the American Chemical Society, 2019, 141, 7926-7933.	13.7	55
21	All-in-One Derivatized Tandem p⁺n-Siliconâ€“SnO₂/TiO₂ Water Splitting Photoelectrochemical Cell. Nano Letters, 2017, 17, 2440-2446.	9.1	53
22	A tandem dye-sensitized photoelectrochemical cell for light driven hydrogen production. Energy and Environmental Science, 2016, 9, 1812-1817.	30.8	51
23	Modulating Hole Transport in Multilayered Photocathodes with Derivatized p-Type Nickel Oxide and Molecular Assemblies for Solar-Driven Water Splitting. Journal of Physical Chemistry Letters, 2017, 8, 4374-4379.	4.6	47
24	Light-Driven Water Oxidation Using Polyelectrolyte Layer-by-Layer Chromophoreâ€“Catalyst Assemblies. ACS Energy Letters, 2016, 1, 339-343.	17.4	40
25	Stabilized photoanodes for water oxidation by integration of organic dyes, water oxidation catalysts, and electron-transfer mediators. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 8523-8528.	7.1	37
26	Visible Photoelectrochemical Water Splitting Based on a Ru(II) Polypyridyl Chromophore and Iridium Oxide Nanoparticle Catalyst. Journal of Physical Chemistry C, 2015, 119, 17023-17027.	3.1	35
27	Photocatalytic Chemoselective Câ€“C Bond Cleavage at Room Temperature in Dye-Sensitized Photoelectrochemical Cells. ACS Catalysis, 2021, 11, 3771-3781.	11.2	35
28	Efficient Light-Driven Oxidation of Alcohols Using an Organic Chromophoreâ€“Catalyst Assembly Anchored to TiO₂. ACS Applied Materials & Interfaces, 2016, 8, 9125-9133.	8.0	34
29	Electron Transfer Mediator Effects in Water Oxidation Catalysis by Solution and Surface-Bound Ruthenium Bpy-Dicarboxylate Complexes. Journal of Physical Chemistry C, 2015, 119, 25420-25428.	3.1	33
30	A stable dye-sensitized photoelectrosynthesis cell mediated by a NiO overlayer for water oxidation. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 12564-12571.	7.1	32
31	Polymer Chromophore-Catalyst Assembly for Solar Fuel Generation. ACS Applied Materials & Interfaces, 2017, 9, 19529-19534.	8.0	31
32	Lightâ€Driven Water Splitting Mediated by Photogenerated Bromine. Angewandte Chemie - International Edition, 2018, 57, 3449-3453.	13.8	31
33	Visible-Light-Driven Photocatalytic Water Oxidation by a Ï€-Conjugated Donorâ€“Acceptorâ€“Donor Chromophore/Catalyst Assembly. ACS Energy Letters, 2018, 3, 2114-2119.	17.4	30
34	Phosphonate-Derivatized Porphyrins for Photoelectrochemical Applications. ACS Applied Materials & Interfaces, 2016, 8, 3853-3860.	8.0	29
35	A molecular tandem cell for efficient solar water splitting. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 13256-13260.	7.1	28
36	Polymer-based chromophoreâ€“catalyst assemblies for solar energy conversion. Nano Convergence, 2017, 4, 37.	12.1	24

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37	Plasmon-enhanced light-driven water oxidation by a dye-sensitized photoanode. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 9809-9813.	7.1	23
38	A donor-chromophore-catalyst assembly for solar CO₂ reduction. Chemical Science, 2019, 10, 4436-4444.	7.4	23
39	Sustainable hydrogen production from water using tandem dye-sensitized photoelectrochemical cells. Nano Convergence, 2021, 8, 7.	12.1	19
40	A porphyrin-stabilized iridium oxide water oxidation catalyst. Canadian Journal of Chemistry, 2011, 89, 152-157.	1.1	18
41	Analysis of Homogeneous Water Oxidation Catalysis with Collectorâ€“Generator Cells. Inorganic Chemistry, 2016, 55, 512-517.	4.0	16
42	Inner Layer Control of Performance in a Dye-Sensitized Photoelectrosynthesis Cell. ACS Applied Materials & Interfaces, 2017, 9, 33533-33538.	8.0	16
43	Enhanced Photocatalytic Alcohol Oxidation at the Interface of RuC-Coated TiO₂ Nanorod Arrays. ACS Applied Materials & Interfaces, 2022, 14, 22799-22809.	8.0	13
44	Nonaqueous electrocatalytic water oxidation by a surface-bound Ru(bda)(L)₂ complex. Dalton Transactions, 2016, 45, 6324-6328.	3.3	11
45	The role of layer-by-layer, compact TiO₂ films in dye-sensitized photoelectrosynthesis cells. Sustainable Energy and Fuels, 2017, 1, 112-118.	4.9	11
46	Lightâ€Driven Water Splitting Mediated by Photogenerated Bromine. Angewandte Chemie, 2018, 130, 3507-3511.	2.0	11
47	Charge-Transfer Dynamics of Fluorescent Dye-Sensitized Electrodes under Applied Biases. Journal of Physical Chemistry Letters, 2015, 6, 2688-2693.	4.6	10
48	Spectroscopic Analysis of a Biomimetic Model of Tyr_Z Function in PSII. Journal of Physical Chemistry B, 2015, 119, 12156-12163.	2.6	10
49	Green Catalysts: Applied and Synthetic Photosynthesis. Catalysts, 2020, 10, 1016.	3.5	10
50	Hydrogen peroxide disproportionation with manganese macrocyclic complexes of cyclen and pyclen. Inorganic Chemistry Frontiers, 2020, 7, 1573-1582.	6.0	9
51	Ru(II) Polypyridyl-Modified TiO₂ Nanoparticles for Photocatalytic Câ€“C/Câ€“O Bond Cleavage at Room Temperature. ACS Applied Nano Materials, 2022, 5, 948-956.	5.0	9
52	Heterogeneous Water Oxidation Catalysts for Molecular Anodes and Photoanodes. Solar Rrl, 2021, 5, 2000565.	5.8	6
53	Light-driven water oxidation by a dye-sensitized photoanode with a chromophore/catalyst assembly on a mesoporous double-shell electrode. Journal of Chemical Physics, 2019, 150, 041727.	3.0	5
54	Tin(IV) oxide nanoparticulate films for aqueous dye-sensitized solar cells. Solar Energy, 2021, 224, 984-991.	6.1	4