Brian J Seger

List of Publications by Citations

72 papers	10,044 citations	39 h-index	97 g-index
97 ext. papers	11,525 ext. citations	14.6 avg, IF	6.65 L-index

#	Paper	IF	Citations
72	TiO2-graphene nanocomposites. UV-assisted photocatalytic reduction of graphene oxide. *ACS Nano* , **2008**, 2, 1487-91	16.7	2230
71	Progress and Perspectives of Electrochemical CO Reduction on Copper in Aqueous Electrolyte. *Chemical Reviews*, **2019**, 119, 7610-7672	68.1	1244
70	Electrocatalytically Active Graphene-Platinum Nanocomposites. Role of 2-D Carbon Support in PEM Fuel Cells. *Journal of Physical Chemistry C*, **2009**, 113, 7990-7995	3.8	846
69	Decorating Graphene Sheets with Gold Nanoparticles. *Journal of Physical Chemistry C*, **2008**, 112, 5263-5266	3.8	808
68	Recent Development in Hydrogen Evolution Reaction Catalysts and Their Practical Implementation. *Journal of Physical Chemistry Letters*, **2015**, 6, 951-7	6.4	526
67	Using TiO2 as a conductive protective layer for photocathodic H2 evolution. *Journal of the American Chemical Society*, **2013**, 135, 1057-64	16.4	392
66	Strategies for stable water splitting via protected photoelectrodes. *Chemical Society Reviews*, **2017**, 46, 1933-1954	58.5	331
65	Nitrogen doped Sr[illegible]Ta[illegible]O[illegible] coupled with graphene sheets as photocatalysts for increased photocatalytic hydrogen production. *ACS Nano*, **2011**, 5, 3483-92	16.7	292
64	Hydrogen production using a molybdenum sulfide catalyst on a titanium-protected n(+)p-silicon photocathode. *Angewandte Chemie - International Edition*, **2012**, 51, 9128-31	16.4	270
63	Understanding cation effects in electrochemical CO2 reduction. *Energy and Environmental Science*, **2019**, 12, 3001-3014	35.4	231
62	Anchoring ZnO Particles on Functionalized Single Wall Carbon Nanotubes. Excited State Interactions and Charge Collection. *Advanced Materials*, **2007**, 19, 2935-2940	24	171
61	Pathways to electrochemical solar-hydrogen technologies. *Energy and Environmental Science*, **2018**, 11, 2768-2783	35.4	165
60	Insights into the carbon balance for CO2 electroreduction on Cu using gas diffusion electrode reactor designs. *Energy and Environmental Science*, **2020**, 13, 977-985	35.4	133
59	Scalability and feasibility of photoelectrochemical H2 evolution: the ultimate limit of Pt nanoparticle as an HER catalyst. *Energy and Environmental Science*, **2015**, 8, 2991-2999	35.4	127
58	2-Photon tandem device for water splitting: comparing photocathode first versus photoanode first designs. *Energy and Environmental Science*, **2014**, 7, 2397-2413	35.4	112
57	New Light-Harvesting Materials Using Accurate and Efficient Bandgap Calculations. *Advanced Energy Materials*, **2015**, 5, 1400915	21.8	105
56	Fuel Cell Geared in Reverse: Photocatalytic Hydrogen Production Using a TiO2/Nafion/Pt Membrane Assembly with No Applied Bias. *Journal of Physical Chemistry C*, **2009**, 113, 18946-18952	3.8	105

55	Integrating a dual-silicon photoelectrochemical cell into a redox flow battery for unassisted photocharging. *Nature Communications*, **2016**, 7, 11474	17.4	100
54	Silicon protected with atomic layer deposited TiO2: durability studies of photocathodic H2 evolution. *RSC Advances*, **2013**, 3, 25902	3.7	95
53	Analysis of Mass Flows and Membrane Cross-over in CO Reduction at High Current Densities in an MEA-Type Electrolyzer. *ACS Applied Materials & Interfaces*, **2019**, 11, 41281-41288	9.5	90
52	Iron-Treated NiO as a Highly Transparent p-Type Protection Layer for Efficient Si-Based Photoanodes. *Journal of Physical Chemistry Letters*, **2014**, 5, 3456-61	6.4	88
51	Protection of p(+)-n-Si Photoanodes by Sputter-Deposited Ir/IrOx Thin Films. *Journal of Physical Chemistry Letters*, **2014**, 5, 1948-52	6.4	84
50	MoS2-an integrated protective and active layer on n(+)p-Si for solar H2 evolution. *Physical Chemistry Chemical Physics*, **2013**, 15, 20000-4	3.6	79
49	How Interplay between Photo and Thermal Activation Dictates Halide Ion Segregation in Mixed Halide Perovskites. *ACS Energy Letters*, **2020**, 5, 56-63	20.1	75
48	Crystalline TiO2: A Generic and Effective Electron-Conducting Protection Layer for Photoanodes and -cathodes. *Journal of Physical Chemistry C*, **2015**, 119, 15019-15027	3.8	73
47	Platinum dispersed on silica nanoparticle as electrocatalyst for PEM fuel cell. *Journal of Electroanalytical Chemistry*, **2008**, 621, 198-204	4.1	71
46	Formation of a p□ heterojunction on GaP photocathodes for H2 production providing an open-circuit voltage of 710 mV. *Journal of Materials Chemistry A*, **2014**, 2, 6847-6853	13	66
45	An integrated photoelectrochemical-chemical loop for solar-driven overall splitting of hydrogen sulfide. *Angewandte Chemie - International Edition*, **2014**, 53, 4399-403	16.4	65
44	Absence of Oxidized Phases in Cu under CO Reduction Conditions. *ACS Energy Letters*, **2019**, 4, 803-804	20.1	64
43	Back-illuminated Si photocathode: a combined experimental and theoretical study for photocatalytic hydrogen evolution. *Energy and Environmental Science*, **2015**, 8, 650-660	35.4	63
42	Structure Sensitivity in the Electrocatalytic Reduction of CO with Gold Catalysts. *Angewandte Chemie - International Edition*, **2019**, 58, 3774-3778	16.4	62
41	Sulfide perovskites for solar energy conversion applications: computational screening and synthesis of the selected compound LaYS3. *Energy and Environmental Science*, **2017**, 10, 2579-2593	35.4	61
40	Comparison of the Performance of CoP-Coated and Pt-Coated Radial Junction n(+)p-Silicon Microwire-Array Photocathodes for the Sunlight-Driven Reduction of Water to H2(g). *Journal of Physical Chemistry Letters*, **2015**, 6, 1679-83	6.4	56
39	Bidirectional Halide Ion Exchange in Paired Lead Halide Perovskite Films with Thermal Activation. *ACS Energy Letters*, **2019**, 4, 1961-1969	20.1	47
38	Protection of Si photocathode using TiO2 deposited by high power impulse magnetron sputtering for H2 evolution in alkaline media. *Solar Energy Materials and Solar Cells*, **2016**, 144, 758-765	6.4	45

37	Silicon protected with atomic layer deposited TiO2: conducting versus tunnelling through TiO2. *Journal of Materials Chemistry A*, **2013**, 1, 15089	13	45
36	Selective production of hydrogen peroxide and oxidation of hydrogen sulfide in an unbiased solar photoelectrochemical cell. *Energy and Environmental Science*, **2014**, 7, 3347-3351	35.4	44
35	Electrical power and hydrogen production from a photo-fuel cell using formic acid and other single-carbon organics. *Journal of Materials Chemistry*, **2012**, 22, 10709		40
34	Proton activity in nafion films: probing exchangeable protons with methylene blue. *Langmuir*, **2007**, 23, 5471-6	4	40
33	Beyond Water Splitting: Efficiencies of Photo-Electrochemical Devices Producing Hydrogen and Valuable Oxidation Products. *Advanced Sustainable Systems*, **2017**, 1, 1600035	5.9	38
32	Role of ion-selective membranes in the carbon balance for CO electroreduction gas diffusion electrode reactor designs. *Chemical Science*, **2020**, 11, 8854-8861	9.4	34
31	Hydrogen Production Using a Molybdenum Sulfide Catalyst on a Titanium-Protected n+p-Silicon Photocathode. *Angewandte Chemie*, **2012**, 124, 9262-9265	3.6	32
30	Carrier-selective p- and n-contacts for efficient and stable photocatalytic water reduction. *Catalysis Today*, **2017**, 290, 59-64	5.3	29
29	An n-type to p-type switchable photoelectrode assembled from alternating exfoliated titania nanosheets and polyaniline layers. *Angewandte Chemie - International Edition*, **2013**, 52, 6400-3	16.4	29
28	Performance Limits of Photoelectrochemical CO2 Reduction Based on Known Electrocatalysts and the Case for Two-Electron Reduction Products. *Chemistry of Materials*, **2016**, 28, 8844-8850	9.6	27
27	Faradaic efficiency of O2 evolution on metal nanoparticle sensitized hematite photoanodes. *Physical Chemistry Chemical Physics*, **2014**, 16, 1271-5	3.6	27
26	A Flexible Web-Based Approach to Modeling Tandem Photocatalytic Devices. *Solar Rrl*, **2017**, 1, e201600013	7.1	21
25	Shining Light on Sulfide Perovskites: LaYS3 Material Properties and Solar Cells. *Chemistry of Materials*, **2019**, 31, 3359-3369	9.6	20
24	Mo3S4Clusters as an Effective H2Evolution Catalyst on Protected Si Photocathodes. *Journal of the Electrochemical Society*, **2014**, 161, H722-H724	3.9	20
23	Towards an atomistic understanding of electrocatalytic partial hydrocarbon oxidation: propene on palladium. *Energy and Environmental Science*, **2019**, 12, 1055-1067	35.4	20
22	Back-Illuminated Si-Based Photoanode with Nickel Cobalt Oxide Catalytic Protection Layer. *ChemElectroChem*, **2016**, 3, 1546-1552	4.3	19
21	Structure Sensitivity in the Electrocatalytic Reduction of CO2 with Gold Catalysts. *Angewandte Chemie*, **2019**, 131, 3814-3818	3.6	18
20	Parallel Evaluation of the BiI3, BiOI, and Ag3BiI6 Layered Photoabsorbers. *Chemistry of Materials*, **2020**, 32, 3385-3395	9.6	18

19	Durability Testing of Photoelectrochemical Hydrogen Production under Day/Night Light Cycled Conditions. *ChemElectroChem*, **2019**, 6, 106-109	4.3	18
18	Photoelectrocatalysis and electrocatalysis on silicon electrodes decorated with cubane-like clusters. *Journal of Photonics for Energy*, **2012**, 2, 026001	1.2	16
17	An Integrated Photoelectrochemical–Chemical Loop for Solar-Driven Overall Splitting of Hydrogen Sulfide. *Angewandte Chemie*, **2014**, 126, 4488-4492	3.6	14
16	Wide Band Gap Cu_2SrSnS_4 Solar Cells from Oxide Precursors. *ACS Applied Energy Materials*, **2019**, 2, 7340-7344	6.1	13
15	A Comprehensive Approach to Investigate CO_2 Reduction Electrocatalysts at High Current Densities. *Accounts of Materials Research*, **2021**, 2, 220-229	7.5	11
14	TaS_2 Back Contact Improving Oxide-Converted Cu_2BaSnS_4 Solar Cells. *ACS Applied Energy Materials* , **2020**, 3, 1190-1198	6.1	9
13	Unraveling the rate-limiting step of two-electron transfer electrochemical reduction of carbon dioxide.. *Nature Communications*, **2022**, 13, 803	17.4	8
12	SOLAR FUELS. A quick look at how photoelectrodes work. *Science*, **2015**, 350, 1030-1	33.3	7
11	Back-Illuminated Si-Based Photoanode with Nickel Cobalt Oxide Catalytic Protection Layer. *ChemElectroChem*, **2016**, 3, 1517-1517	4.3	7
10	Wireless Photoelectrochemical Water Splitting Using Triple-Junction Solar Cell Protected by TiO_2. *Cell Reports Physical Science*, **2020**, 1, 100261	6.1	4
9	Semitransparent Selenium Solar Cells as a Top Cell for Tandem Photovoltaics. *Solar Rrl*, **2021**, 5, 2100111	7.1	4
8	CO as a Probe Molecule to Study Surface Adsorbates during Electrochemical Oxidation of Propene. *ChemElectroChem*, **2021**, 8, 250-256	4.3	4
7	Copper-indium hydroxides derived electrocatalysts with tunable compositions for electrochemical CO_2 reduction. *Journal of Energy Chemistry*, **2021**, 63, 278-278	12	4
6	Two-phase model of hydrogen transport to optimize nanoparticle catalyst loading for hydrogen evolution reaction. *International Journal of Hydrogen Energy*, **2016**, 41, 7568-7581	6.7	3
5	Interaction of CO with Gold in an Electrochemical Environment. *Journal of Physical Chemistry C*, **2021**, 125, 17684-17689	3.8	3
4	An n-Type to p-Type Switchable Photoelectrode Assembled from Alternating Exfoliated Titania Nanosheets and Polyaniline Layers. *Angewandte Chemie*, **2013**, 125, 6528-6531	3.6	2
3	Analysis of the Facets of Cu-Based Electrocatalysts in Alkaline Media Using Pb Underpotential Deposition.. *Langmuir*, **2022**,	4	2
2	Bio-inspired co-catalysts bonded to a silicon photocathode for solar hydrogen evolution **2011**,		1

1	How to extract adsorption energies, adsorbate-adsorbate interaction parameters and saturation coverages from temperature programmed desorption experiments. *Physical Chemistry Chemical Physics*, **2021**, 23, 24396-24402	3.6	1