

Brian J Seger

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

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	Analysis of the Facets of Cu-Based Electrocatalysts in Alkaline Media Using Pb Underpotential Deposition.. <i>Langmuir</i> , 2022 ,	4	2
71	Unraveling the rate-limiting step of two-electron transfer electrochemical reduction of carbon dioxide.. <i>Nature Communications</i> , 2022 , 13, 803	17.4	8
70	How to extract adsorption energies, adsorbate-adsorbate interaction parameters and saturation coverages from temperature programmed desorption experiments. <i>Physical Chemistry Chemical Physics</i> , 2021 , 23, 24396-24402	3.6	1
69	A Comprehensive Approach to Investigate CO ₂ Reduction Electrocatalysts at High Current Densities. <i>Accounts of Materials Research</i> , 2021 , 2, 220-229	7.5	11
68	Semitransparent Selenium Solar Cells as a Top Cell for Tandem Photovoltaics. <i>Solar Rrl</i> , 2021 , 5, 21001117.1	7.1	4
67	CO as a Probe Molecule to Study Surface Adsorbates during Electrochemical Oxidation of Propene. <i>ChemElectroChem</i> , 2021 , 8, 250-256	4.3	4
66	Interaction of CO with Gold in an Electrochemical Environment. <i>Journal of Physical Chemistry C</i> , 2021 , 125, 17684-17689	3.8	3
65	Copper-indium hydroxides derived electrocatalysts with tunable compositions for electrochemical CO ₂ reduction. <i>Journal of Energy Chemistry</i> , 2021 , 63, 278-278	12	4
64	Parallel Evaluation of the BiI ₃ , BiOI, and Ag ₃ BiI ₆ Layered Photoabsorbers. <i>Chemistry of Materials</i> , 2020 , 32, 3385-3395	9.6	18
63	Insights into the carbon balance for CO ₂ electroreduction on Cu using gas diffusion electrode reactor designs. <i>Energy and Environmental Science</i> , 2020 , 13, 977-985	35.4	133
62	TaS ₂ Back Contact Improving Oxide-Converted Cu ₂ BaSnS ₄ Solar Cells. <i>ACS Applied Energy Materials</i> , 2020 , 3, 1190-1198	6.1	9
61	How Interplay between Photo and Thermal Activation Dictates Halide Ion Segregation in Mixed Halide Perovskites. <i>ACS Energy Letters</i> , 2020 , 5, 56-63	20.1	75
60	Wireless Photoelectrochemical Water Splitting Using Triple-Junction Solar Cell Protected by TiO ₂ . <i>Cell Reports Physical Science</i> , 2020 , 1, 100261	6.1	4
59	Role of ion-selective membranes in the carbon balance for CO electroreduction gas diffusion electrode reactor designs. <i>Chemical Science</i> , 2020 , 11, 8854-8861	9.4	34
58	Wide Band Gap Cu ₂ SrSnS ₄ Solar Cells from Oxide Precursors. <i>ACS Applied Energy Materials</i> , 2019 , 2, 7340-7344.13	6.7	13
57	Structure Sensitivity in the Electrocatalytic Reduction of CO with Gold Catalysts. <i>Angewandte Chemie - International Edition</i> , 2019 , 58, 3774-3778	16.4	62
56	Structure Sensitivity in the Electrocatalytic Reduction of CO ₂ with Gold Catalysts. <i>Angewandte Chemie</i> , 2019 , 131, 3814-3818	3.6	18

55	Progress and Perspectives of Electrochemical CO Reduction on Copper in Aqueous Electrolyte. <i>Chemical Reviews</i> , 2019 , 119, 7610-7672	68.1	1244
54	Shining Light on Sulfide Perovskites: LaYS3 Material Properties and Solar Cells. <i>Chemistry of Materials</i> , 2019 , 31, 3359-3369	9.6	20
53	Durability Testing of Photoelectrochemical Hydrogen Production under Day/Night Light Cycled Conditions. <i>ChemElectroChem</i> , 2019 , 6, 106-109	4.3	18
52	Bidirectional Halide Ion Exchange in Paired Lead Halide Perovskite Films with Thermal Activation. <i>ACS Energy Letters</i> , 2019 , 4, 1961-1969	20.1	47
51	Understanding cation effects in electrochemical CO ₂ reduction. <i>Energy and Environmental Science</i> , 2019 , 12, 3001-3014	35.4	231
50	Analysis of Mass Flows and Membrane Cross-over in CO Reduction at High Current Densities in an MEA-Type Electrolyzer. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 41281-41288	9.5	90
49	Towards an atomistic understanding of electrocatalytic partial hydrocarbon oxidation: propene on palladium. <i>Energy and Environmental Science</i> , 2019 , 12, 1055-1067	35.4	20
48	Absence of Oxidized Phases in Cu under CO Reduction Conditions. <i>ACS Energy Letters</i> , 2019 , 4, 803-804	20.1	64
47	Pathways to electrochemical solar-hydrogen technologies. <i>Energy and Environmental Science</i> , 2018 , 11, 2768-2783	35.4	165
46	Beyond Water Splitting: Efficiencies of Photo-Electrochemical Devices Producing Hydrogen and Valuable Oxidation Products. <i>Advanced Sustainable Systems</i> , 2017 , 1, 1600035	5.9	38
45	Strategies for stable water splitting via protected photoelectrodes. <i>Chemical Society Reviews</i> , 2017 , 46, 1933-1954	58.5	331
44	A Flexible Web-Based Approach to Modeling Tandem Photocatalytic Devices. <i>Solar Rrl</i> , 2017 , 1, e201600013	0.13	21
43	Sulfide perovskites for solar energy conversion applications: computational screening and synthesis of the selected compound LaYS3. <i>Energy and Environmental Science</i> , 2017 , 10, 2579-2593	35.4	61
42	Carrier-selective p- and n-contacts for efficient and stable photocatalytic water reduction. <i>Catalysis Today</i> , 2017 , 290, 59-64	5.3	29
41	Performance Limits of Photoelectrochemical CO ₂ Reduction Based on Known Electrocatalysts and the Case for Two-Electron Reduction Products. <i>Chemistry of Materials</i> , 2016 , 28, 8844-8850	9.6	27
40	Integrating a dual-silicon photoelectrochemical cell into a redox flow battery for unassisted photocharging. <i>Nature Communications</i> , 2016 , 7, 11474	17.4	100
39	Back-Illuminated Si-Based Photoanode with Nickel Cobalt Oxide Catalytic Protection Layer. <i>ChemElectroChem</i> , 2016 , 3, 1546-1552	4.3	19
38	Protection of Si photocathode using TiO ₂ deposited by high power impulse magnetron sputtering for H ₂ evolution in alkaline media. <i>Solar Energy Materials and Solar Cells</i> , 2016 , 144, 758-765	6.4	45

37	Two-phase model of hydrogen transport to optimize nanoparticle catalyst loading for hydrogen evolution reaction. <i>International Journal of Hydrogen Energy</i> , 2016 , 41, 7568-7581	6.7	3
36	Back-Illuminated Si-Based Photoanode with Nickel Cobalt Oxide Catalytic Protection Layer. <i>ChemElectroChem</i> , 2016 , 3, 1517-1517	4.3	7
35	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 H ₂ (g). <i>Journal of Physical Chemistry Letters</i> , 2015 , 6, 1679-83	6.4	56
34	Recent Development in Hydrogen Evolution Reaction Catalysts and Their Practical Implementation. <i>Journal of Physical Chemistry Letters</i> , 2015 , 6, 951-7	6.4	526
33	Scalability and feasibility of photoelectrochemical H ₂ evolution: the ultimate limit of Pt nanoparticle as an HER catalyst. <i>Energy and Environmental Science</i> , 2015 , 8, 2991-2999	35.4	127
32	SOLAR FUELS. A quick look at how photoelectrodes work. <i>Science</i> , 2015 , 350, 1030-1	33.3	7
31	Back-illuminated Si photocathode: a combined experimental and theoretical study for photocatalytic hydrogen evolution. <i>Energy and Environmental Science</i> , 2015 , 8, 650-660	35.4	63
30	New Light-Harvesting Materials Using Accurate and Efficient Bandgap Calculations. <i>Advanced Energy Materials</i> , 2015 , 5, 1400915	21.8	105
29	Crystalline TiO ₂ : A Generic and Effective Electron-Conducting Protection Layer for Photoanodes and -cathodes. <i>Journal of Physical Chemistry C</i> , 2015 , 119, 15019-15027	3.8	73
28	Formation of a pB heterojunction on GaP photocathodes for H ₂ production providing an open-circuit voltage of 710 mV. <i>Journal of Materials Chemistry A</i> , 2014 , 2, 6847-6853	13	66
27	Selective production of hydrogen peroxide and oxidation of hydrogen sulfide in an unbiased solar photoelectrochemical cell. <i>Energy and Environmental Science</i> , 2014 , 7, 3347-3351	35.4	44
26	Iron-Treated NiO as a Highly Transparent p-Type Protection Layer for Efficient Si-Based Photoanodes. <i>Journal of Physical Chemistry Letters</i> , 2014 , 5, 3456-61	6.4	88
25	Faradaic efficiency of O ₂ evolution on metal nanoparticle sensitized hematite photoanodes. <i>Physical Chemistry Chemical Physics</i> , 2014 , 16, 1271-5	3.6	27
24	Protection of p(+)n-Si Photoanodes by Sputter-Deposited Ir/IrO _x Thin Films. <i>Journal of Physical Chemistry Letters</i> , 2014 , 5, 1948-52	6.4	84
23	2-Photon tandem device for water splitting: comparing photocathode first versus photoanode first designs. <i>Energy and Environmental Science</i> , 2014 , 7, 2397-2413	35.4	112
22	An Integrated Photoelectrochemical-Chemical Loop for Solar-Driven Overall Splitting of Hydrogen Sulfide. <i>Angewandte Chemie</i> , 2014 , 126, 4488-4492	3.6	14
21	Mo ₃ S ₄ Clusters as an Effective H ₂ Evolution Catalyst on Protected Si Photocathodes. <i>Journal of the Electrochemical Society</i> , 2014 , 161, H722-H724	3.9	20
20	An integrated photoelectrochemical-chemical loop for solar-driven overall splitting of hydrogen sulfide. <i>Angewandte Chemie - International Edition</i> , 2014 , 53, 4399-403	16.4	65

19	MoS ₂ -an integrated protective and active layer on n(+)p-Si for solar H ₂ evolution. <i>Physical Chemistry Chemical Physics</i> , 2013 , 15, 20000-4	3.6	79
18	Silicon protected with atomic layer deposited TiO ₂ : conducting versus tunnelling through TiO ₂ . <i>Journal of Materials Chemistry A</i> , 2013 , 1, 15089	13	45
17	Silicon protected with atomic layer deposited TiO ₂ : durability studies of photocathodic H ₂ evolution. <i>RSC Advances</i> , 2013 , 3, 25902	3.7	95
16	An n-type to p-type switchable photoelectrode assembled from alternating exfoliated titania nanosheets and polyaniline layers. <i>Angewandte Chemie - International Edition</i> , 2013 , 52, 6400-3	16.4	29
15	Using TiO ₂ as a conductive protective layer for photocathodic H ₂ evolution. <i>Journal of the American Chemical Society</i> , 2013 , 135, 1057-64	16.4	392
14	An n-Type to p-Type Switchable Photoelectrode Assembled from Alternating Exfoliated Titania Nanosheets and Polyaniline Layers. <i>Angewandte Chemie</i> , 2013 , 125, 6528-6531	3.6	2
13	Hydrogen Production Using a Molybdenum Sulfide Catalyst on a Titanium-Protected n+p-Silicon Photocathode. <i>Angewandte Chemie</i> , 2012 , 124, 9262-9265	3.6	32
12	Hydrogen production using a molybdenum sulfide catalyst on a titanium-protected n(+)p-silicon photocathode. <i>Angewandte Chemie - International Edition</i> , 2012 , 51, 9128-31	16.4	270
11	Photoelectrocatalysis and electrocatalysis on silicon electrodes decorated with cubane-like clusters. <i>Journal of Photonics for Energy</i> , 2012 , 2, 026001	1.2	16
10	Electrical power and hydrogen production from a photo-fuel cell using formic acid and other single-carbon organics. <i>Journal of Materials Chemistry</i> , 2012 , 22, 10709		40
9	Nitrogen doped SrTiO ₃ coupled with graphene sheets as photocatalysts for increased photocatalytic hydrogen production. <i>ACS Nano</i> , 2011 , 5, 3483-92	16.7	292
8	Bio-inspired co-catalysts bonded to a silicon photocathode for solar hydrogen evolution 2011 ,		1
7	Fuel Cell Geared in Reverse: Photocatalytic Hydrogen Production Using a TiO ₂ /Nafion/Pt Membrane Assembly with No Applied Bias. <i>Journal of Physical Chemistry C</i> , 2009 , 113, 18946-18952	3.8	105
6	Electrocatalytically Active Graphene-Platinum Nanocomposites. Role of 2-D Carbon Support in PEM Fuel Cells. <i>Journal of Physical Chemistry C</i> , 2009 , 113, 7990-7995	3.8	846
5	Platinum dispersed on silica nanoparticle as electrocatalyst for PEM fuel cell. <i>Journal of Electroanalytical Chemistry</i> , 2008 , 621, 198-204	4.1	71
4	Decorating Graphene Sheets with Gold Nanoparticles. <i>Journal of Physical Chemistry C</i> , 2008 , 112, 5263-5266	3.6	808
3	TiO ₂ -graphene nanocomposites. UV-assisted photocatalytic reduction of graphene oxide. <i>ACS Nano</i> , 2008 , 2, 1487-91	16.7	2230
2	Proton activity in nafion films: probing exchangeable protons with methylene blue. <i>Langmuir</i> , 2007 , 23, 5471-6	4	40

- 1 Anchoring ZnO Particles on Functionalized Single Wall Carbon Nanotubes. Excited State Interactions and Charge Collection. *Advanced Materials*, **2007**, 19, 2935-2940

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