Phil De Luna

List of Publications by Citations

46 papers	10,074 citations	34 h-index	52 g-index
52 ext. papers	13,363 ext. citations	21.9 avg, IF	6.28 L-index

#	Paper	IF	Citations
46	Homogeneously dispersed multimetal oxygen-evolving catalysts. *Science*, **2016**, 352, 333-7	33.3	1459
45	Enhanced electrocatalytic CO reduction via field-induced reagent concentration. *Nature*, **2016**, 537, 382-386	50.4	997
44	CO electroreduction to ethylene via hydroxide-mediated copper catalysis at an abrupt interface. *Science*, **2018**, 360, 783-787	33.3	980
43	What would it take for renewably powered electrosynthesis to displace petrochemical processes?. *Science*, **2019**, 364,	33.3	749
42	What Should We Make with CO2 and How Can We Make It?. *Joule*, **2018**, 2, 825-832	27.8	546
41	Catalyst electro-redeposition controls morphology and oxidation state for selective carbon dioxide reduction. *Nature Catalysis*, **2018**, 1, 103-110	36.5	479
40	Designing materials for electrochemical carbon dioxide recycling. *Nature Catalysis*, **2019**, 2, 648-658	36.5	442
39	Dopant-induced electron localization drives CO reduction to C hydrocarbons. *Nature Chemistry*, **2018**, 10, 974-980	17.6	435
38	Steering post-C□ coupling selectivity enables high efficiency electroreduction of carbon dioxide to multi-carbon alcohols. *Nature Catalysis*, **2018**, 1, 421-428	36.5	348
37	Accelerated discovery of CO electrocatalysts using active machine learning. *Nature*, **2020**, 581, 178-183	50.4	328
36	Theory-driven design of high-valence metal sites for water oxidation confirmed using in situ soft X-ray absorption. *Nature Chemistry*, **2018**, 10, 149-154	17.6	328
35	Multi-site electrocatalysts for hydrogen evolution in neutral media by destabilization of water molecules. *Nature Energy*, **2019**, 4, 107-114	62.3	264
34	Sulfur-Modulated Tin Sites Enable Highly Selective Electrochemical Reduction of CO2 to Formate. *Joule*, **2017**, 1, 794-805	27.8	263
33	Rational Design of Efficient Palladium Catalysts for Electroreduction of Carbon Dioxide to Formate. *ACS Catalysis*, **2016**, 6, 8115-8120	13.1	212
32	Copper nanocavities confine intermediates for efficient electrosynthesis of C3 alcohol fuels from carbon monoxide. *Nature Catalysis*, **2018**, 1, 946-951	36.5	205
31	Molecular enhancement of heterogeneous CO reduction. *Nature Materials*, **2020**, 19, 266-276	27	195
30	Metal-Organic Frameworks Mediate Cu Coordination for Selective CO Electroreduction. *Journal of the American Chemical Society*, **2018**, 140, 11378-11386	16.4	188

29	Tunable Cu Enrichment Enables Designer Syngas Electrosynthesis from CO. *Journal of the American Chemical Society*, **2017**, 139, 9359-9363	16.4	183
28	Copper-on-nitride enhances the stable electrosynthesis of multi-carbon products from CO. *Nature Communications*, **2018**, 9, 3828	17.4	164
27	High-valence metals improve oxygen evolution reaction performance by modulating 3d metal oxidation cycle energetics. *Nature Catalysis*, **2020**, 3, 985-992	36.5	149
26	A Surface Reconstruction Route to High Productivity and Selectivity in CO Electroreduction toward C Hydrocarbons. *Advanced Materials*, **2018**, 30, e1804867	24	131
25	2D Metal Oxyhalide-Derived Catalysts for Efficient CO Electroreduction. *Advanced Materials*, **2018**, 30, e1802858	24	123
24	Efficient electrocatalytic conversion of carbon monoxide to propanol using fragmented copper. *Nature Catalysis*, **2019**, 2, 251-258	36.5	111
23	A single-ligand ultra-microporous MOF for precombustion CO2 capture and hydrogen purification. *Science Advances*, **2015**, 1, e1500421	14.3	97
22	Copper adparticle enabled selective electrosynthesis of n-propanol. *Nature Communications*, **2018**, 9, 4614	17.4	86
21	Quantum-Dot-Derived Catalysts for CO2 Reduction Reaction. *Joule*, **2019**, 3, 1703-1718	27.8	78
20	Use machine learning to find energy materials. *Nature*, **2017**, 552, 23-27	50.4	63
19	Biofunctionalized conductive polymers enable efficient CO electroreduction. *Science Advances*, **2017**, 3, e1700686	14.3	61
18	High-Curvature Nanostructuring Enhances Probe Display for Biomolecular Detection. *Nano Letters*, **2017**, 17, 1289-1295	11.5	49
17	Enhanced electrocatalytic performance of palladium nanoparticles with high energy surfaces in formic acid oxidation. *Journal of Materials Chemistry A*, **2017**, 5, 11582-11585	13	42
16	Electrocatalytic Rate Alignment Enhances Syngas Generation. *Joule*, **2019**, 3, 257-264	27.8	40
15	Robust Antibacterial Activity of Tungsten Oxide (WO) Nanodots. *Chemical Research in Toxicology*, **2019**, 32, 1357-1366	4	39
14	Stabilizing Highly Active Ru Sites by Suppressing Lattice Oxygen Participation in Acidic Water Oxidation. *Journal of the American Chemical Society*, **2021**, 143, 6482-6490	16.4	38
13	Structural influence of proteins upon adsorption to MoS nanomaterials: comparison of MoS force field parameters. *Physical Chemistry Chemical Physics*, **2017**, 19, 3039-3045	3.6	36
12	Chemical-to-Electricity Carbon: Water Device. *Advanced Materials*, **2018**, 30, e1707635	24	32

11	Metal-Organic Framework Thin Films on High-Curvature Nanostructures Toward Tandem Electrocatalysis. *ACS Applied Materials & Interfaces*, **2018**, 10, 31225-31232	9.5	30
10	A density functional theory investigation into the binding of the antioxidants ergothioneine and ovothiol to copper. *Journal of Physical Chemistry A*, **2013**, 117, 4057-65	2.8	17
9	Three-Dimensional Cathodes for Electrochemical Reduction of CO: From Macro- to Nano-Engineering. *Nanomaterials*, **2020**, 10,	5.4	13
8	QSAR Accelerated Discovery of Potent Ice Recrystallization Inhibitors. *Scientific Reports*, **2016**, 6, 26403	4.9	12
7	A molecular dynamics examination on mutation-induced catalase activity in coral allene oxide synthase. *Journal of Physical Chemistry B*, **2013**, 117, 14635-41	3.4	11
6	Snatching the Ligand or Destroying the Structure: Disruption of WW Domain by Phosphorene. *Journal of Physical Chemistry C*, **2017**, 121, 1362-1370	3.8	10
5	Imparting gas selective and pressure dependent porosity into a non-porous solid via coordination flexibility. *Materials Horizons*, **2019**, 6, 1883-1891	14.4	10
4	Metal-Free Hydrogen-Bonded Polymers Mimic Noble Metal Electrocatalysts. *Advanced Materials*, **2020**, 32, e1902177	24	10
3	A Molecular Dynamics (MD) and Quantum Mechanics/Molecular Mechanics (QM/MM) study on Ornithine Cyclodeaminase (OCD): a tale of two iminiums. *International Journal of Molecular Sciences* , **2012**, 13, 12994-3011	6.3	9
2	How increasing proton and electron conduction benefits electrocatalytic CO2 reduction. *Matter*, **2021**, 4, 1555-1577	12.7	4
1	How CO2-to-Diesel Technology Could Help Reach Net-Zero Emissions Targets: A Canadian Case Study. *Energies*, **2021**, 14, 6957	3.1	3