Cao-Thang Dinh

List of Publications by Year
in descending order

96 papers	24,389 citations	18436 62 h-index	39575 94 g-index
103 all docs	103 docs citations	103 times ranked	16527 citing authors

#	Article	IF	Citations
1	Homogeneously dispersed multimetal oxygen-evolving catalysts. Science, 2016, 352, 333-337.	6.0	1,948
2	CO ₂ electroreduction to ethylene via hydroxide-mediated copper catalysis at an abrupt interface. Science, 2018, 360, 783-787.	6.0	1,638
3	Enhanced electrocatalytic CO2 reduction via field-induced reagent concentration. Nature, 2016, 537, 382-386.	13.7	1,429
4	What Should We Make with CO2 and How Can We Make It?. Joule, 2018, 2, 825-832.	11.7	975
5	CO ₂ electrolysis to multicarbon products at activities greater than 1 A cm ^{â^'2}. Science, 2020, 367, 661-666.	6.0	860
6	Designing materials for electrochemical carbon dioxide recycling. Nature Catalysis, 2019, 2, 648-658.	16.1	838
7	Accelerated discovery of CO2 electrocatalysts using active machine learning. Nature, 2020, 581, 178-183.	13.7	807
8	Electrochemical CO₂ Reduction into Chemical Feedstocks: From Mechanistic Electrocatalysis Models to System Design. Advanced Materials, 2019, 31, e1807166.	11.1	769
9	Catalyst electro-redeposition controls morphology and oxidation state for selective carbon dioxide reduction. Nature Catalysis, 2018, 1, 103-110.	16.1	737
10	Molecular tuning of CO2-to-ethylene conversion. Nature, 2020, 577, 509-513.	13.7	682
11	Enhanced Nitrate-to-Ammonia Activity on Copperâ€"Nickel Alloys via Tuning of Intermediate Adsorption. Journal of the American Chemical Society, 2020, 142, 5702-5708.	6.6	638
12	CO ₂ electrolysis to multicarbon products in strong acid. Science, 2021, 372, 1074-1078.	6.0	541
13	Steering post-Câ€"C coupling selectivity enables high efficiency electroreduction of carbon dioxide to multi-carbon alcohols. Nature Catalysis, 2018, 1, 421-428.	16.1	537
14	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.	6.6	476
15	Multi-site electrocatalysts for hydrogen evolution in neutral media by destabilization of water molecules. Nature Energy, 2019, 4, 107-114.	19.8	470
16	Nanocomposite heterojunctions as sunlight-driven photocatalysts for hydrogen production from water splitting. Nanoscale, 2015, 7, 8187-8208.	2.8	418
17	Shape-Controlled Synthesis of Highly Crystalline Titania Nanocrystals. ACS Nano, 2009, 3, 3737-3743.	7.3	399
18	Sulfur-Modulated Tin Sites Enable Highly Selective Electrochemical Reduction of CO2 to Formate. Joule, 2017, 1, 794-805.	11.7	390

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19	High-valence metals improve oxygen evolution reaction performance by modulating 3d metal oxidation cycle energetics. Nature Catalysis, 2020, 3, 985-992.	16.1	390
20	Cooperative CO2-to-ethanol conversion via enriched intermediates at moleculeâ€“metal catalyst interfaces. Nature Catalysis, 2020, 3, 75-82.	16.1	390
21	Efficient electrically powered CO2-to-ethanol via suppression of deoxygenation. Nature Energy, 2020, 5, 478-486.	19.8	363
22	Copper nanocavities confine intermediates for efficient electrosynthesis of C3 alcohol fuels from carbon monoxide. Nature Catalysis, 2018, 1, 946-951.	16.1	354
23	Continuous Carbon Dioxide Electroreduction to Concentrated Multi-carbon Products Using a Membrane Electrode Assembly. Joule, 2019, 3, 2777-2791.	11.7	350
24	Binding Site Diversity Promotes CO₂ Electroreduction to Ethanol. Journal of the American Chemical Society, 2019, 141, 8584-8591.	6.6	338
25	N-heterocyclic carbene-functionalized magic-number gold nanoclusters. Nature Chemistry, 2019, 11, 419-425.	6.6	333
26	Metalâ€“Organic Frameworks Mediate Cu Coordination for Selective CO₂ Electroreduction. Journal of the American Chemical Society, 2018, 140, 11378-11386.	6.6	326
27	Catalyst synthesis under CO2 electroreduction favours faceting and promotes renewable fuels electrosynthesis. Nature Catalysis, 2020, 3, 98-106.	16.1	325
28	Copper-on-nitride enhances the stable electrosynthesis of multi-carbon products from CO2. Nature Communications, 2018, 9, 3828.	5.8	279
29	Rational Design of Efficient Palladium Catalysts for Electroreduction of Carbon Dioxide to Formate. ACS Catalysis, 2016, 6, 8115-8120.	5.5	277
30	Tunable Cu Enrichment Enables Designer Syngas Electrosynthesis from CO₂. Journal of the American Chemical Society, 2017, 139, 9359-9363.	6.6	260
31	High Rate, Selective, and Stable Electroreduction of CO₂ to CO in Basic and Neutral Media. ACS Energy Letters, 2018, 3, 2835-2840.	8.8	230
32	Constraining CO coverage on copper promotes high-efficiency ethylene electroproduction. Nature Catalysis, 2019, 2, 1124-1131.	16.1	214
33	Combined high alkalinity and pressurization enable efficient CO₂ electroreduction to CO. Energy and Environmental Science, 2018, 11, 2531-2539.	15.6	214
34	Gas diffusion electrode design for electrochemical carbon dioxide reduction. Chemical Society Reviews, 2020, 49, 7488-7504.	18.7	213
35	Stabilizing Highly Active Ru Sites by Suppressing Lattice Oxygen Participation in Acidic Water Oxidation. Journal of the American Chemical Society, 2021, 143, 6482-6490.	6.6	204
36	Threeâ€Dimensional Ordered Assembly of Thinâ€Shell Au/TiO₂ Hollow Nanospheres for Enhanced Visibleâ€Lightâ€Driven Photocatalysis. Angewandte Chemie - International Edition, 2014, 53, 6618-6623.	7.2	202

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37	Hydroxide promotes carbon dioxide electroreduction to ethanol on copper via tuning of adsorbed hydrogen. Nature Communications, 2019, 10, 5814.	5.8	201
38	Photon management for augmented photosynthesis. Nature Communications, 2016, 7, 12699.	5.8	200
39	A Surface Reconstruction Route to High Productivity and Selectivity in CO₂ Electroreduction toward C₂₊ Hydrocarbons. Advanced Materials, 2018, 30, e1804867.	11.1	200
40	2D Metal Oxyhalideâ€Derived Catalysts for Efficient CO₂ Electroreduction. Advanced Materials, 2018, 30, e1802858.	11.1	200
41	Efficient electrocatalytic conversion of carbon monoxide to propanol using fragmented copper. Nature Catalysis, 2019, 2, 251-258.	16.1	188
42	Can sustainable ammonia synthesis pathways compete with fossil-fuel based Haberâ€“Bosch processes?. Energy and Environmental Science, 2021, 14, 2535-2548.	15.6	162
43	Fundamentals of Electrochemical CO₂ Reduction on Single-Metal-Atom Catalysts. ACS Catalysis, 2020, 10, 10068-10095.	5.5	161
44	Large-scale synthesis of uniform silver orthophosphate colloidal nanocrystals exhibiting high visible light photocatalytic activity. Chemical Communications, 2011, 47, 7797.	2.2	160
45	High-Density Nanosharp Microstructures Enable Efficient CO₂ Electroreduction. Nano Letters, 2016, 16, 7224-7228.	4.5	158
46	Single Pass CO₂ Conversion Exceeding 85% in the Electrosynthesis of Multicarbon Products via Local CO₂ Regeneration. ACS Energy Letters, 2021, 6, 2952-2959.	8.8	155
47	Copper adparticle enabled selective electrosynthesis of n-propanol. Nature Communications, 2018, 9, 4614.	5.8	153
48	Hydronium-Induced Switching between CO₂ Electroreduction Pathways. Journal of the American Chemical Society, 2018, 140, 3833-3837.	6.6	144
49	CO₂ Electroreduction from Carbonate Electrolyte. ACS Energy Letters, 2019, 4, 1427-1431.	8.8	141
50	Nanomorphology-Enhanced Gas-Evolution Intensifies CO₂ Reduction Electrochemistry. ACS Sustainable Chemistry and Engineering, 2017, 5, 4031-4040.	3.2	135
51	Ethylene Electrosynthesis: A Comparative Techno-economic Analysis of Alkaline vs Membrane Electrode Assembly vs CO₂â€“COâ€“C₂H₄ Tandems. ACS Energy Letters, 2021, 6, 997-1002.	8.8	129
52	Efficient upgrading of CO to C3 fuel using asymmetric C-C coupling active sites. Nature Communications, 2019, 10, 5186.	5.8	127
53	Tuning OH binding energy enables selective electrochemical oxidation of ethylene to ethylene glycol. Nature Catalysis, 2020, 3, 14-22.	16.1	120
54	Oxygen-tolerant electroproduction of C₂ products from simulated flue gas. Energy and Environmental Science, 2020, 13, 554-561.	15.6	113

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55	Quantum-Dot-Derived Catalysts for CO2 Reduction Reaction. Joule, 2019, 3, 1703-1718.	11.7	106
56	0Dâ€“2D Quantum Dot: Metal Dichalcogenide Nanocomposite Photocatalyst Achieves Efficient Hydrogen Generation. Advanced Materials, 2017, 29, 1605646.	11.1	89
57	Visible light induced hydrogen generation using a hollow photocatalyst with two cocatalysts separated on two surface sides. Physical Chemistry Chemical Physics, 2014, 16, 5937.	1.3	88
58	Bipolar membrane electrolyzers enable high single-pass CO2 electroreduction to multicarbon products. Nature Communications, 2022, 13, .	5.8	81
59	Shape- and Size-Controlled Synthesis of Monoclinic ErOOH and Cubic Er₂O₃ from Micro- to Nanostructures and Their Upconversion Luminescence. ACS Nano, 2010, 4, 2263-2273.	7.3	76
60	N-Heterocyclic Carbene-Stabilized Hydrido Au₂₄ Nanoclusters: Synthesis, Structure, and Electrocatalytic Reduction of CO₂. Journal of the American Chemical Society, 2022, 144, 9000-9006.	6.6	74
61	Monodisperse Samarium and Cerium Orthovanadate Nanocrystals and Metal Oxidation States on the Nanocrystal Surface. Langmuir, 2009, 25, 11142-11148.	1.6	71
62	Design of water-soluble CdSâ€“titanateâ€“nickel nanocomposites for photocatalytic hydrogen production under sunlight. Journal of Materials Chemistry A, 2013, 1, 13308.	5.2	71
63	Efficient electrocatalytic conversion of carbon dioxide in a low-resistance pressurized alkaline electrolyzer. Applied Energy, 2020, 261, 114305.	5.1	65
64	Biomolecule-assisted route for shape-controlled synthesis of single-crystalline MnWO₄nanoparticles and spontaneous assembly of polypeptide-stabilized mesocrystal microspheres. CrystEngComm, 2011, 13, 1450-1460.	1.3	62
65	Hydrationâ€Effectâ€Promoting Niâ€“Fe Oxyhydroxide Catalysts for Neutral Water Oxidation. Advanced Materials, 2020, 32, e1906806.	11.1	62
66	Joint tuning of nanostructured Cu-oxide morphology and local electrolyte programs high-rate CO₂ reduction to C₂H₄. Green Chemistry, 2017, 19, 4023-4030.	4.6	58
67	ZnFe₂O₄ Leaves Grown on TiO₂ Trees Enhance Photoelectrochemical Water Splitting. Small, 2016, 12, 3181-3188.	5.2	56
68	A general procedure to synthesize highly crystalline metal oxide and mixed oxide nanocrystals in aqueous medium and photocatalytic activity of metal/oxide nanohybrids. Nanoscale, 2011, 3, 1861.	2.8	54
69	Single-step colloidal quantum dot films for infrared solar harvesting. Applied Physics Letters, 2016, 109, .	1.5	52
70	Boosting the Single-Pass Conversion for Renewable Chemical Electrosynthesis. Joule, 2019, 3, 13-15.	11.7	51
71	A New Route to Size and Population Control of Silver Clusters on Colloidal TiO₂ Nanocrystals. ACS Applied Materials & Interfaces, 2011, 3, 2228-2234.	4.0	49
72	Chemicalâ€toâ€Electricity Carbon: Water Device. Advanced Materials, 2018, 30, e1707635.	11.1	45

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73	A Novel Approach for Monodisperse Samarium Orthovanadate Nanocrystals: Controlled Synthesis and Characterization. Journal of Physical Chemistry C, 2009, 113, 18584-18595.	1.5	43
74	Tailoring the assembly, interfaces, and porosity of nanostructures toward enhanced catalytic activity. Chemical Communications, 2015, 51, 624-635.	2.2	41
75	CO₂ Electroreduction to Methane at Production Rates Exceeding 100 mA/cm². ACS Sustainable Chemistry and Engineering, 2020, 8, 14668-14673.	3.2	41
76	Enhanced Solarâ€toâ€Hydrogen Generation with Broadband Epsilonâ€Nearâ€Zero Nanostructured Photocatalysts. Advanced Materials, 2017, 29, 1701165.	11.1	39
77	Two-Phase Synthesis of Colloidal Annular-Shaped CexLa1â^'xCO3OH Nanoarchitectures Assembled from Small Particles and Their Thermal Conversion to Derived Mixed Oxides. Inorganic Chemistry, 2011, 50, 1309-1320.	1.9	37
78	Electrochemical CO₂reduction to ethanol: from mechanistic understanding to catalyst design. Journal of Materials Chemistry A, 2021, 9, 12474-12494.	5.2	36
79	Catalyst Regeneration via Chemical Oxidation Enables Long-Term Electrochemical Carbon Dioxide Reduction. Journal of the American Chemical Society, 2022, 144, 13254-13265.	6.6	30
80	Controlled Synthesis of Titanate Nanodisks as Versatile Building Blocks for the Design of Hybrid Nanostructures. Angewandte Chemie - International Edition, 2012, 51, 6608-6612.	7.2	28
81	Design of multicomponent photocatalysts for hydrogen production under visible light using water-soluble titanate nanodisks. Nanoscale, 2014, 6, 4819-4829.	2.8	24
82	Ga doping disrupts C-C coupling and promotes methane electroproduction on CuAl catalysts. Chem Catalysis, 2022, 2, 908-916.	2.9	24
83	Controlled synthesis of ceria nanoparticles for the design of nanohybrids. Journal of Colloid and Interface Science, 2013, 394, 100-107.	5.0	23
84	Self-assembled nanoparticle-stabilized photocatalytic reactors. Nanoscale, 2016, 8, 2107-2115.	2.8	22
85	A solvothermal singleâ€step route towards shapeâ€controlled titanium dioxide nanocrystals. Canadian Journal of Chemical Engineering, 2012, 90, 8-17.	0.9	20
86	Hollow Sr/Rh-codoped TiO₂ photocatalyst for efficient sunlight-driven organic compound degradation. RSC Advances, 2017, 7, 3480-3487.	1.7	20
87	Gold Adparticles on Silver Combine Low Overpotential and High Selectivity in Electrochemical CO₂ Conversion. ACS Applied Energy Materials, 2021, 4, 7504-7512.	2.5	18
88	Freestanding nano-photoelectrode as a highly efficient and visible-light-driven photocatalyst for water-splitting. Journal of Materials Chemistry A, 2017, 5, 10651-10657.	5.2	15
89	Toward efficient catalysts for electrochemical CO2 conversion to C2 products. Current Opinion in Electrochemistry, 2021, 30, 100807.	2.5	11
90	Spontaneous and Light-Driven Conversion of NO_{<i>x</i>} on Oxide-Modified TiO₂ Surfaces. Industrial & Engineering Chemistry Research, 2015, 54, 12750-12756.	1.8	4

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91	Boosting chemical and fuel production. Nature Catalysis, 2020, 3, 474-475.	16.1	3
92	Back Cover: Controlled Synthesis of Titanate Nanodisks as Versatile Building Blocks for the Design of Hybrid Nanostructures (Angew. Chem. Int. Ed. 27/2012). Angewandte Chemie - International Edition, 2012, 51, 6794-6794.	7.2	1
93	Frontispiece: Three-Dimensional Ordered Assembly of Thin-Shell Au/TiO2Hollow Nanospheres for Enhanced Visible-Light-Driven Photocatalysis. Angewandte Chemie - International Edition, 2014, 53, n/a-n/a.	7.2	0
94	Efficient Electroreduction of CO2 in an Ultra-Slim Pressurized Electrolyzer. ECS Meeting Abstracts, 2019, , .	0.0	0
95	Carbon Dioxide Electroreduction to Multi-Carbon Products Using a Large-Scale Membrane Electrode Assembly. ECS Meeting Abstracts, 2019, , .	0.0	0
96	Stable, High-Rate CO2 Electroreduction to Multi-Carbon Products in a Membrane Electrode Assembly System. ECS Meeting Abstracts, 2019, , .	0.0	0