

# Designing materials for electrochemical carbon dioxide

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Citation Report

#	ARTICLE	IF	CITATIONS
1	Carbon Dioxide Recycling Makes Waves. <i>Joule</i> , 2019, 3, 1814-1816.	11.7	14
2	Reduction of carbon dioxide on photoexcited nanoparticles of VIII group metals. <i>Nanoscale</i> , 2019, 11, 16723-16732.	2.8	35
3	Cascade Reactions in Nanozymes: Spatially Separated Active Sites inside Ag-Core@Porous-Cu-Shell Nanoparticles for Multistep Carbon Dioxide Reduction to Higher Organic Molecules. <i>Journal of the American Chemical Society</i> , 2019, 141, 14093-14097.	6.6	139
4	A solid advance in electrolytes. <i>Nature Energy</i> , 2019, 4, 728-729.	19.8	9
5	Co-feeding copper catalysts couple carbon. <i>Nature Nanotechnology</i> , 2019, 14, 1002-1003.	15.6	5
6	Nanostructured Carbon Nitrides for CO <sub>2</sub> Capture and Conversion. <i>Advanced Materials</i> , 2020, 32, e1904635.	11.1	188
7	Two-Dimensional Electrocatalysts for Efficient Reduction of Carbon Dioxide. <i>ChemSusChem</i> , 2020, 13, 59-77.	3.6	31
8	Hierarchically micro- and meso-porous Fe-N <sub>4</sub> O-doped carbon as robust electrocatalyst for CO <sub>2</sub> reduction. <i>Applied Catalysis B: Environmental</i> , 2020, 266, 118630.	10.8	74
9	Electrocatalytic reduction of carbon dioxide: opportunities with heterogeneous molecular catalysts. <i>Energy and Environmental Science</i> , 2020, 13, 374-403.	15.6	303
10	Metal@CO <sub>2</sub> Batteries at the Crossroad to Practical Energy Storage and CO <sub>2</sub> Recycle. <i>Advanced Functional Materials</i> , 2020, 30, 1908285.	7.8	103
11	The Role of CO <sub>2</sub> as a Mild Oxidant in Oxidation and Dehydrogenation over Catalysts: A Review. <i>Catalysts</i> , 2020, 10, 1075.	1.6	14
12	Cu-Ag Tandem Catalysts for High-Rate CO <sub>2</sub> Electrolysis toward Multicarbon. <i>Joule</i> , 2020, 4, 1688-1699.	11.7	239
13	Assessing the Influence of Supercritical Carbon Dioxide on the Electrochemical Reduction to Formic Acid Using Carbon-Supported Copper Catalysts. <i>ACS Catalysis</i> , 2020, 10, 12783-12789.	5.5	22
14	Beyond d Orbitals: Steering the Selectivity of Electrochemical CO <sub>2</sub> Reduction via Hybridized sp Band of Sulfur-Incorporated Porous Cd Architectures with Dual Collaborative Sites. <i>Advanced Energy Materials</i> , 2020, 10, 2002499.	10.2	20
15	Gas diffusion electrode design for electrochemical carbon dioxide reduction. <i>Chemical Society Reviews</i> , 2020, 49, 7488-7504.	18.7	213
16	Recent Progress on Two-dimensional Electrocatalysis. <i>Chemical Research in Chinese Universities</i> , 2020, 36, 611-621.	1.3	140
17	An Artificial Electrode/Electrolyte Interface for CO <sub>2</sub> Electroreduction by Cation Surfactant Self-Assembly. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 19095-19101.	7.2	71
18	An Artificial Electrode/Electrolyte Interface for CO <sub>2</sub> Electroreduction by Cation Surfactant Self-Assembly. <i>Angewandte Chemie</i> , 2020, 132, 19257-19263.	1.6	45

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19	Growth Dynamics and Processes Governing the Stability of Electrodeposited Size-Controlled Cubic Cu Catalysts. <i>Journal of Physical Chemistry C</i> , 2020, 124, 26908-26915.	1.5	24
20	Nanostructured Cobalt-Based Electrocatalysts for CO <sub>2</sub> Reduction: Recent Progress, Challenges, and Perspectives. <i>Small</i> , 2020, 16, e2004158.	5.2	45
21	Atomic-scale evidence for highly selective electrocatalytic N <sub>2</sub> coupling on metallic MoS <sub>2</sub> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 31631-31638.	3.3	18
22	Conversion of Bicarbonate to Formate in an Electrochemical Flow Reactor. <i>ACS Energy Letters</i> , 2020, 5, 2624-2630.	8.8	84
23	Oxygen induced promotion of electrochemical reduction of CO <sub>2</sub> via co-electrolysis. <i>Nature Communications</i> , 2020, 11, 3844.	5.8	102
24	Surface Reconstruction of Ultrathin Palladium Nanosheets during Electrocatalytic CO <sub>2</sub> Reduction. <i>Angewandte Chemie</i> , 2020, 132, 21677-21682.	1.6	37
25	Highly Selective CO <sub>2</sub> Electroreduction to CO on Cu-Co Bimetallic Catalysts. <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 12561-12567.	3.2	33
26	Bi-Based Metal-Organic Framework Derived Leafy Bismuth Nanosheets for Carbon Dioxide Electroreduction. <i>Advanced Energy Materials</i> , 2020, 10, 2001709.	10.2	210
27	Fundamentals of Electrochemical CO <sub>2</sub> Reduction on Single-Metal-Atom Catalysts. <i>ACS Catalysis</i> , 2020, 10, 10068-10095.	5.5	161
28	Synergetic role of charge transfer and strain engineering in improving the catalysis of Pd single-atom-thick motifs stabilized on a defect-free MoS <sub>2</sub> /Ag(Au)(111) heterostructure. <i>Journal of Materials Chemistry A</i> , 2020, 8, 17238-17247.	5.2	13
29	Surface Reconstruction of Ultrathin Palladium Nanosheets during Electrocatalytic CO <sub>2</sub> Reduction. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 21493-21498.	7.2	97
30	An artificial photosynthetic system with CO <sub>2</sub> -reducing solar-to-fuel efficiency exceeding 20%. <i>Journal of Materials Chemistry A</i> , 2020, 8, 18310-18317.	5.2	31
31	Semiconductor nanocrystals for small molecule activation via artificial photosynthesis. <i>Chemical Society Reviews</i> , 2020, 49, 9028-9056.	18.7	127
32	A molten calcium carbonate mediator for the electrochemical conversion and absorption of carbon dioxide. <i>Green Chemistry</i> , 2020, 22, 7946-7954.	4.6	26
33	Evidence of Local Corrosion of Bimetallic Cu-Sn Catalysts and Its Effects on the Selectivity of Electrochemical CO <sub>2</sub> Reduction. <i>ACS Applied Energy Materials</i> , 2020, 3, 10568-10577.	2.5	28
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35	Confinement of Ionic Liquids at Single-Ni-Sites Boost Electroreduction of CO <sub>2</sub> in Aqueous Electrolytes. <i>ACS Catalysis</i> , 2020, 10, 13171-13178.	5.5	54
36	Electrocatalyst design for aprotic Li-CO <sub>2</sub> batteries. <i>Energy and Environmental Science</i> , 2020, 13, 4717-4737.	15.6	65

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37	Enhancing CO <sub>2</sub> Electroreduction to Methane with a Cobalt Phthalocyanine and Zinc–Nitrogen–Carbon Tandem Catalyst. <i>Angewandte Chemie</i> , 2020, 132, 22594-22599.	1.6	12
38	Enhancing CO <sub>2</sub> Electroreduction to Methane with a Cobalt Phthalocyanine and Zinc–Nitrogen–Carbon Tandem Catalyst. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 22408-22413.	7.2	145
39	<i>In situ</i> X-ray diffraction and X-ray absorption spectroscopy of electrocatalysts for energy conversion reactions. <i>Journal of Materials Chemistry A</i> , 2020, 8, 19079-19112.	5.2	98
40	Organocatalytic Trapping of Elusive Carbon Dioxide Based Heterocycles by a Kinetically Controlled Cascade Process. <i>Angewandte Chemie</i> , 2020, 132, 18604-18609.	1.6	7
41	Crystal Phase Control of Gold Nanomaterials by Wet-Chemical Synthesis. <i>Accounts of Chemical Research</i> , 2020, 53, 2106-2118.	7.6	75
42	Thermal Transformation of Molecular Ni <sup>2+</sup> –N <sub>4</sub> Sites for Enhanced CO <sub>2</sub> Electroreduction Activity. <i>ACS Catalysis</i> , 2020, 10, 10920-10931.	5.5	81
43	Density functional theory and 3D-RISM-KH molecular theory of solvation studies of CO <sub>2</sub> reduction on Cu-, Cu <sub>2</sub> O-, Fe-, and Fe <sub>3</sub> O <sub>4</sub> -based nanocatalysts. <i>Journal of Molecular Modeling</i> , 2020, 26, 267.	0.8	4
44	<i>Operando</i> characterization techniques for electrocatalysis. <i>Energy and Environmental Science</i> , 2020, 13, 3748-3779.	15.6	159
45	Anion exchange-induced single-molecule dispersion of cobalt porphyrins in a cationic porous organic polymer for enhanced electrochemical CO <sub>2</sub> reduction <i>via</i> secondary-coordination sphere interactions. <i>Journal of Materials Chemistry A</i> , 2020, 8, 18677-18686.	5.2	20
46	<i>Operando</i> Spectroscopic Investigation of a Boron-Doped CuO Catalyst and Its Role in Selective Electrochemical C–C Coupling. <i>ACS Applied Energy Materials</i> , 2020, 3, 11343-11349.	2.5	28
47	Enhanced Electrochemical CO <sub>2</sub> Reduction of Cu@Cu <sub>x</sub> O Nanoparticles Decorated on 3D Vertical Graphene with Intrinsic sp <sup>3</sup> –type Defect. <i>Advanced Functional Materials</i> , 2020, 30, 1910118.	7.8	54
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51	Efficient CO <sub>2</sub> conversion to formic acid in a novel microbial photoelectrochemical cell using a visible-light responsive Co <sub>3</sub> O <sub>4</sub> nanorod-arrayed photocathode. <i>Applied Catalysis B: Environmental</i> , 2020, 276, 119102.	10.8	33
52	Is More CO <sub>2</sub> Beneficial for Making Multi-carbon Products?. <i>Joule</i> , 2020, 4, 980-982.	11.7	3
53	Metal–Organic Layers Leading to Atomically Thin Bismuthene for Efficient Carbon Dioxide Electroreduction to Liquid Fuel. <i>Angewandte Chemie</i> , 2020, 132, 15124-15130.	1.6	57
54	Metal–Organic Layers Leading to Atomically Thin Bismuthene for Efficient Carbon Dioxide Electroreduction to Liquid Fuel. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 15014-15020.	7.2	276

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55	Ammonia Thermal Treatment toward Topological Defects in Porous Carbon for Enhanced Carbon Dioxide Electroreduction. <i>Advanced Materials</i> , 2020, 32, e2001300.	11.1	130
56	Designing CO <sub>2</sub> reduction electrode materials by morphology and interface engineering. <i>Energy and Environmental Science</i> , 2020, 13, 2275-2309.	15.6	251
57	Simultaneous power generation and CO <sub>2</sub> valorization by aqueous Al <sup>3+</sup> /CO <sub>2</sub> batteries using nanostructured Bi <sub>2</sub> S <sub>3</sub> as the cathode electrocatalyst. <i>Journal of Materials Chemistry A</i> , 2020, 8, 12385-12390.	5.2	27
58	Thermodynamically driven self-formation of copper-embedded nitrogen-doped carbon nanofiber catalysts for a cascade electroreduction of carbon dioxide to ethylene. <i>Journal of Materials Chemistry A</i> , 2020, 8, 11632-11641.	5.2	42
59	P-block metal-based (Sn, In, Bi, Pb) electrocatalysts for selective reduction of CO <sub>2</sub> to formate. <i>APL Materials</i> , 2020, 8, .	2.2	93
60	Mesoporous PdAg Nanospheres for Stable Electrochemical CO <sub>2</sub> Reduction to Formate. <i>Advanced Materials</i> , 2020, 32, e2000992.	11.1	153
61	3D Nanostructures for the Next Generation of High-Performance Nanodevices for Electrochemical Energy Conversion and Storage. <i>Advanced Energy Materials</i> , 2020, 10, 2001460.	10.2	106
62	Metal-free sites with multidimensional structure modifications for selective electrochemical CO <sub>2</sub> reduction. <i>Nano Today</i> , 2020, 33, 100891.	6.2	23
63	Supercritical CO <sub>2</sub> -constructed intralayer [Bi <sub>2</sub> O <sub>2</sub> ] <sup>2+</sup> structural distortion for enhanced CO <sub>2</sub> electroreduction. <i>Journal of Materials Chemistry A</i> , 2020, 8, 13320-13327.	5.2	29
64	Electroreduction of CO <sub>2</sub> in Ionic Liquid-Based Electrolytes. <i>Innovation(China)</i> , 2020, 1, 100016.	5.2	70
65	Rational Design of Nanocatalysts with Nonmetal Species Modification for Electrochemical CO <sub>2</sub> Reduction. <i>Advanced Energy Materials</i> , 2020, 10, 2000588.	10.2	53
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68	Organic-Inorganic Hybrid Nanomaterials for Electrocatalytic CO <sub>2</sub> Reduction. <i>Small</i> , 2020, 16, e2001847.	5.2	79
69	Tuning adsorption strength of CO <sub>2</sub> and its intermediates on tin oxide-based electrocatalyst for efficient CO <sub>2</sub> reduction towards carbonaceous products. <i>Applied Catalysis B: Environmental</i> , 2020, 277, 119252.	10.8	50
70	Covalent Triazine Framework Confined Copper Catalysts for Selective Electrochemical CO <sub>2</sub> Reduction: Operando Diagnosis of Active Sites. <i>ACS Catalysis</i> , 2020, 10, 4534-4542.	5.5	112
71	Photosynthetic semiconductor biohybrids for solar-driven biocatalysis. <i>Nature Catalysis</i> , 2020, 3, 245-255.	16.1	237
72	Strain-Enhanced Metallic Intermixing in Shape-Controlled Multilayered Core-Shell Nanostructures: Toward Shaped Intermetallics. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 10574-10580.	7.2	22

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73	Two-dimensional metal-organic framework nanosheets: synthetic methodologies and electrocatalytic applications. <i>Journal of Materials Chemistry A</i> , 2020, 8, 15271-15301.	5.2	79
74	Electrochemical Conversion of CO <sub>2</sub> to CO into a Microchannel Reactor System in the Case of Aqueous Electrolyte. <i>Industrial &amp; Engineering Chemistry Research</i> , 2020, 59, 5664-5674.	1.8	16
75	Strain-Enhanced Metallic Intermixing in Shape-Controlled Multilayered Core-Shell Nanostructures: Toward Shaped Intermetallics. <i>Angewandte Chemie</i> , 2020, 132, 10661-10667.	1.6	2
76	Efficient Ammonia Electrosynthesis from Nitrate on Strained Ruthenium Nanoclusters. <i>Journal of the American Chemical Society</i> , 2020, 142, 7036-7046.	6.6	542
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80	Heterogeneous Single-Atom Catalysts for Electrochemical CO <sub>2</sub> Reduction Reaction. <i>Advanced Materials</i> , 2020, 32, e2001848.	11.1	366
81	Organocatalytic Trapping of Elusive Carbon Dioxide Based Heterocycles by a Kinetically Controlled Cascade Process. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 18446-18451.	7.2	26
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85	Surface Nitrogen-Injection Engineering for High Formation Rate of CO <sub>2</sub> Reduction to Formate. <i>Nano Letters</i> , 2020, 20, 6097-6103.	4.5	71
86	An overview of Cu-based heterogeneous electrocatalysts for CO <sub>2</sub> reduction. <i>Journal of Materials Chemistry A</i> , 2020, 8, 4700-4734.	5.2	150
87	Manifesto for the routine use of NMR for the liquid product analysis of aqueous CO <sub>2</sub> reduction: from comprehensive chemical shift data to formaldehyde quantification in water. <i>Dalton Transactions</i> , 2020, 49, 4257-4265.	1.6	45
88	Nanoscale Infrared Spectroscopy and Imaging of Catalytic Reactions in Cu <sub>2</sub> O Crystals. <i>ACS Photonics</i> , 2020, 7, 576-580.	3.2	11
89	Cooperation of oxygen vacancies and 2D ultrathin structure promoting CO <sub>2</sub> photoreduction performance of Bi <sub>4</sub> Ti <sub>3</sub> O <sub>12</sub> . <i>Science Bulletin</i> , 2020, 65, 934-943.	4.3	151
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94	Efficient electrochemical reduction of carbon dioxide into ethylene boosted by copper vacancies on stepped cuprous oxide. <i>Journal of CO<sub>2</sub> Utilization</i> , 2020, 38, 125-131.	3.3	19
95	In Situ Reconstruction of a Hierarchical Sn-Cu/SnO <sub>x</sub> Core/Shell Catalyst for High-Performance CO <sub>2</sub> Electroreduction. <i>Angewandte Chemie</i> , 2020, 132, 4844-4851.	1.6	29
96	Single-Atom Iron-Nitrogen Catalytic Site with Graphitic Nitrogen for Efficient Electroreduction of CO <sub>2</sub> . <i>ChemistrySelect</i> , 2020, 5, 1282-1287.	0.7	15
97	Microbial electrosynthesis from CO <sub>2</sub> : Challenges, opportunities and perspectives in the context of circular bioeconomy. <i>Bioresource Technology</i> , 2020, 302, 122863.	4.8	188
98	Hydrogen Stabilized RhPdH <sub>2</sub> D Bimetallic Nanosheets for Efficient Alkaline Hydrogen Evolution. <i>Journal of the American Chemical Society</i> , 2020, 142, 3645-3651.	6.6	152
99	CO <sub>2</sub> transformation to multicarbon products by photocatalysis and electrocatalysis. <i>Materials Today Advances</i> , 2020, 6, 100071.	2.5	55
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104	Photocathode engineering for efficient photoelectrochemical CO <sub>2</sub> reduction. <i>Materials Today Nano</i> , 2020, 10, 100077.	2.3	52
105	Integrated design for electrocatalytic carbon dioxide reduction. <i>Catalysis Science and Technology</i> , 2020, 10, 2711-2720.	2.1	92
106	Electrochemically deposited Sn catalysts with dense tips on a gas diffusion electrode for electrochemical CO <sub>2</sub> reduction. <i>Journal of Materials Chemistry A</i> , 2020, 8, 9032-9038.	5.2	41
107	Atomically Dispersed Iron-Nitrogen Sites on Hierarchically Mesoporous Carbon Nanotube and Graphene Nanoribbon Networks for CO <sub>2</sub> Reduction. <i>ACS Nano</i> , 2020, 14, 5506-5516.	7.3	125
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110	Tuning local carbon active sites saturability of graphitic carbon nitride to boost CO <sub>2</sub> electroreduction towards CH <sub>4</sub> . <i>Nano Energy</i> , 2020, 73, 104833.	8.2	35
111	Construction of cobalt-copper bimetallic oxide heterogeneous nanotubes for high-efficient and low-overpotential electrochemical CO <sub>2</sub> reduction. <i>Journal of Energy Chemistry</i> , 2021, 54, 1-6.	7.1	26
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113	Breaking the Linear Scaling Relationship by Compositional and Structural Crafting of Ternary Cu@Au/Ag Nanoframes for Electrocatalytic Ethylene Production. <i>Angewandte Chemie</i> , 2021, 133, 2538-2548.	1.6	15
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115	First principles studies of mononuclear and dinuclear Pacman complexes for electrocatalytic reduction of CO <sub>2</sub> . <i>Catalysis Science and Technology</i> , 2021, 11, 637-645.	2.1	3
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117	Alloyed Palladium@Silver Nanowires Enabling Ultrastable Carbon Dioxide Reduction to Formate. <i>Advanced Materials</i> , 2021, 33, e2005821.	11.1	73
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123	<i>Operando</i> spectroscopy of nanoscopic metal/covalent organic framework electrocatalysts. <i>Nanoscale</i> , 2021, 13, 1507-1514.	2.8	20
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125	Photocatalytic and electrocatalytic CO <sub>2</sub> conversion: from fundamental principles to design of catalysts. <i>Journal of Chemical Technology and Biotechnology</i> , 2021, 96, 1161-1175.	1.6	32
126	NiSn Atomic Pair on an Integrated Electrode for Synergistic Electrocatalytic CO <sub>2</sub> Reduction. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 7382-7388.	7.2	137



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128	Recent Progress of Sn-Based Derivative Catalysts for Electrochemical Reduction of CO <sub>2</sub> . <i>Energy Technology</i> , 2021, 9, .	1.8	42
129	Recent progress in structural modulation of metal nanomaterials for electrocatalytic CO <sub>2</sub> reduction. <i>Rare Metals</i> , 2021, 40, 1412-1430.	3.6	61
130	Size-Dependent Activity and Selectivity of Atomic-Level Copper Nanoclusters during CO/CO <sub>2</sub> Electroreduction. <i>Angewandte Chemie</i> , 2021, 133, 470-476.	1.6	16
131	Noble-Metal Based Random Alloy and Intermetallic Nanocrystals: Syntheses and Applications. <i>Chemical Reviews</i> , 2021, 121, 736-795.	23.0	269
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267	Low-Valence Zn <sup>+</sup> (0<math>\leq\lambda\leq 2</math>) Single-Atom Material as Highly Efficient Electrocatalyst for CO <sub>2</sub> Reduction. <i>Angewandte Chemie</i> , 2021, 133, 23008-23014.	1.6	12
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565	Promoting CO <sub>2</sub> reduction to formate selectivity on indium-doped tin oxide nanowires. <i>Applied Surface Science</i> , 2023, 613, 155944.	3.1	4
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