Xunyu Lu

List of Publications by Year
in descending order

74 papers	8,002 citations	61984 43 h-index	76900 74 g-index
76 all docs	76 docs citations	76 times ranked	9661 citing authors

#	Article	IF	Citations
1	Highly Selective Metalâ€Free Electrochemical Production of Hydrogen Peroxide on Functionalized Vertical Graphene Edges. Small, 2022, 18, e2105082.	10.0	20
2	Atomic Co decorated free-standing graphene electrode assembly for efficient hydrogen peroxide production in acid. Energy and Environmental Science, 2022, 15, 1172-1182.	30.8	37
3	Reconstructing Cu Nanoparticle Supported on Vertical Graphene Surfaces via Electrochemical Treatment to Tune the Selectivity of CO₂ Reduction toward Valuable Products. ACS Catalysis, 2022, 12, 4792-4805.	11.2	24
4	Electronic Structure Engineering of Singleâ€Atom Ru Sites via Coâ€"N4 Sites for Bifunctional pHâ€Universal Water Splitting. Advanced Materials, 2022, 34, e2110103.	21.0	199
5	A facile approach to tailor electrocatalytic properties of MnO2 through tuning phase transition, surface morphology and band structure. Chemical Engineering Journal, 2022, 438, 135561.	12.7	21
6	Modulating Pt-O-Pt atomic clusters with isolated cobalt atoms for enhanced hydrogen evolution catalysis. Nature Communications, 2022, 13, 2430.	12.8	98
7	Nitrate reduction to ammonium: from CuO defect engineering to waste NO_x-to-NH₃economic feasibility. Energy and Environmental Science, 2021, 14, 3588-3598.	30.8	161
8	Altering the influence of ceria oxygen vacancies in Ni/Ce_xSi_yO₂for photothermal CO₂methanation. Catalysis Science and Technology, 2021, 11, 5297-5309.	4.1	17
9	A hybrid plasma electrocatalytic process for sustainable ammonia production. Energy and Environmental Science, 2021, 14, 865-872.	30.8	164
10	Electronically Modified Atomic Sites Within a Multicomponent Co/Cu Composite for Efficient Oxygen Electroreduction. Advanced Energy Materials, 2021, 11, 2100303.	19.5	61
11	Oxygen Reduction Reaction: Electronically Modified Atomic Sites Within a Multicomponent Co/Cu Composite for Efficient Oxygen Electroreduction (Adv. Energy Mater. 17/2021). Advanced Energy Materials, 2021, 11, 2170067.	19.5	2
12	Designing Undercoordinated Niâ€"N_{<i>x</i>} and Feâ€"N_{<i>x</i>} on Holey Graphene for Electrochemical CO₂ Conversion to Syngas. ACS Nano, 2021, 15, 12006-12018.	14.6	68
13	Intrinsic ORR Activity Enhancement of Pt Atomic Sites by Engineering the d â€Band Center via Local Coordination Tuning. Angewandte Chemie, 2021, 133, 22082-22088.	2.0	4
14	Intrinsic ORR Activity Enhancement of Pt Atomic Sites by Engineering the <i>d</i>â€Band Center via Local Coordination Tuning. Angewandte Chemie - International Edition, 2021, 60, 21911-21917.	13.8	132
15	Anchoring Sites Engineering in Singleâ€Atom Catalysts for Highly Efficient Electrochemical Energy Conversion Reactions. Advanced Materials, 2021, 33, e2102801.	21.0	64
16	Constructing Atomic Heterometallic Sites in Ultrathin Nickel-Incorporated Cobalt Phosphide Nanosheets via a Boron-Assisted Strategy for Highly Efficient Water Splitting. Nano Letters, 2021, 21, 823-832.	9.1	91
17	Two-birds-one-stone: multifunctional supercapacitors beyond traditional energy storage. Energy and Environmental Science, 2021, 14, 1854-1896.	30.8	252
18	Tailoring the Pore Size, Basicity, and Binding Energy of Mesoporous C₃N₅ for CO₂ Capture and Conversion. Chemistry - an Asian Journal, 2021, 16, 3999-4005.	3.3	23

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19	Surface Reconstruction Enabled Efficient Hydrogen Generation on a Cobaltâ€"Iron Phosphate Electrocatalyst in Neutral Water. ACS Applied Materials & Interfaces, 2021, 13, 53798-53809.	8.0	14
20	From passivation to activation â€" tunable nickel/nickel oxide for hydrogen evolution electrocatalysis. Chemical Communications, 2020, 56, 1709-1712.	4.1	35
21	Heteroatom-doped carbon catalysts for zincâ€"air batteries: progress, mechanism, and opportunities. Energy and Environmental Science, 2020, 13, 4536-4563.	30.8	209
22	Valence Alignment of Mixed Niâ€"Fe Hydroxide Electrocatalysts through Preferential Templating on Graphene Edges for Enhanced Oxygen Evolution. ACS Nano, 2020, 14, 11327-11340.	14.6	42
23	Transforming active sites in nickelâ€"nitrogenâ€"carbon catalysts for efficient electrochemical CO2 reduction to CO. Nano Energy, 2020, 78, 105213.	16.0	69
24	Direct insights into the role of epoxy groups on cobalt sites for acidic H2O2 production. Nature Communications, 2020, 11, 4181.	12.8	204
25	Impact of Micropores and Dopants to Mitigate Lithium Polysulfides Shuttle over High Surface Area of ZIF-8 Derived Nanoporous Carbons. ACS Applied Energy Materials, 2020, 3, 5523-5532.	5.1	21
26	Uncovering Atomicâ€Scale Stability and Reactivity in Engineered Zinc Oxide Electrocatalysts for Controllable Syngas Production. Advanced Energy Materials, 2020, 10, 2001381.	19.5	51
27	Tunable Syngas Production through CO₂ Electroreduction on Cobaltâ€"Carbon Composite Electrocatalyst. ACS Applied Materials & Interfaces, 2020, 12, 9307-9315.	8.0	79
28	Harnessing the interplay of Feâ€"Ni atom pairs embedded in nitrogen-doped carbon for bifunctional oxygen electrocatalysis. Nano Energy, 2020, 71, 104597.	16.0	231
29	A Disquisition on the Active Sites of Heterogeneous Catalysts for Electrochemical Reduction of CO₂ to Valueâ€Added Chemicals and Fuel. Advanced Energy Materials, 2020, 10, 1902106.	19.5	113
30	Reversible ternary nickelâ€cobaltâ€iron catalysts for intermittent water electrolysis. EcoMat, 2020, 2, e12012.	11.9	14
31	3D Heterostructured Copper Electrode for Conversion of Carbon Dioxide to Alcohols at Low Overpotentials. Advanced Sustainable Systems, 2019, 3, 1800064.	5.3	37
32	Cadmium sulfide Co-catalyst reveals the crystallinity impact of nickel oxide photocathode in photoelectrochemical water splitting. International Journal of Hydrogen Energy, 2019, 44, 20851-20856.	7.1	7
33	Unifying double flame spray pyrolysis with lanthanum doping to restrict cobaltâ€"aluminate formation in Co/Al₂O₃ catalysts for the dry reforming of methane. Catalysis Science and Technology, 2019, 9, 4970-4980.	4.1	23
34	Modulating Activity through Defect Engineering of Tin Oxides for Electrochemical CO₂ Reduction. Advanced Science, 2019, 6, 1900678.	11.2	92
35	Antipoisoning Nickelâ€"Carbon Electrocatalyst for Practical Electrochemical CO₂ Reduction to CO. ACS Applied Energy Materials, 2019, 2, 8002-8009.	5.1	45
36	N,P Coâ€Coordinated Manganese Atoms in Mesoporous Carbon for Electrochemical Oxygen Reduction. Small, 2019, 15, e1804524.	10.0	76

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37	A Fully Reversible Water Electrolyzer Cell Made Up from FeCoNi (Oxy)hydroxide Atomic Layers. Advanced Energy Materials, 2019, 9, 1901312.	19.5	106
38	N,P co-coordinated Fe species embedded in carbon hollow spheres for oxygen electrocatalysis. Journal of Materials Chemistry A, 2019, 7, 14732-14742.	10.3	80
39	Versatile electrocatalytic processes realized by Ni, Co and Fe alloyed core coordinated carbon shells. Journal of Materials Chemistry A, 2019, 7, 12154-12165.	10.3	34
40	Ultrathin Feâ€Nâ€C Nanosheets Coordinated Feâ€Doped CoNi Alloy Nanoparticles for Electrochemical Water Splitting. Particle and Particle Systems Characterization, 2019, 36, 1800252.	2.3	21
41	Carbonâ€Based Metalâ€Free Catalysts for Electrocatalytic Reduction of Nitrogen for Synthesis of Ammonia at Ambient Conditions. Advanced Materials, 2019, 31, e1805367.	21.0	247
42	Highly Selective Reduction of CO₂ to Formate at Low Overpotentials Achieved by a Mesoporous Tin Oxide Electrocatalyst. ACS Sustainable Chemistry and Engineering, 2018, 6, 1670-1679.	6.7	96
43	Pulsed Electrodeposition of Co3 O4 Nanocrystals on One-Dimensional ZnO Scaffolds for Enhanced Electrochemical Water Oxidation. ChemPlusChem, 2018, 83, 889-889.	2.8	0
44	Oxidant or Catalyst for Oxidation? A Study of How Structure and Disorder Change the Selectivity for Direct versus Catalytic Oxidation Mediated by Manganese(III,IV) Oxides. Chemistry of Materials, 2018, 30, 8244-8256.	6.7	19
45	Electroreduction of CO₂ to CO on a Mesoporous Carbon Catalyst with Progressively Removed Nitrogen Moieties. ACS Energy Letters, 2018, 3, 2292-2298.	17.4	129
46	Pulsed Electrodeposition of Co₃O₄ Nanocrystals on Oneâ€Dimensional ZnO Scaffolds for Enhanced Electrochemical Water Oxidation. ChemPlusChem, 2018, 83, 934-940.	2.8	16
47	A sea-change: manganese doped nickel/nickel oxide electrocatalysts for hydrogen generation from seawater. Energy and Environmental Science, 2018, 11, 1898-1910.	30.8	192
48	Highly Selective Conversion of CO₂ to CO Achieved by a Threeâ€Dimensional Porous Silver Electrocatalyst. ChemistrySelect, 2017, 2, 879-884.	1.5	51
49	Surface engineered tin foil for electrocatalytic reduction of carbon dioxide to formate. Catalysis Science and Technology, 2017, 7, 2542-2550.	4.1	39
50	Liquid Hydrocarbon Production from CO₂: Recent Development in Metalâ€Based Electrocatalysis. ChemSusChem, 2017, 10, 4342-4358.	6.8	54
51	Nitrogen Doped Carbon Nanosheets Coupled Nickelâ€"Carbon Pyramid Arrays Toward Efficient Evolution of Hydrogen. Advanced Sustainable Systems, 2017, 1, 1700032.	5.3	12
52	Spatially confined electrochemical activity at a non-patterned semiconductor electrode. Electrochimica Acta, 2017, 242, 240-246.	5.2	12
53	Highly Selective and Stable Reduction of CO₂ to CO by a Graphitic Carbon Nitride/Carbon Nanotube Composite Electrocatalyst. Chemistry - A European Journal, 2016, 22, 11991-11996.	3.3	132
54	Bifunctional Porous NiFe/NiCo₂O₄/Ni Foam Electrodes with Triple Hierarchy and Double Synergies for Efficient Whole Cell Water Splitting. Advanced Functional Materials, 2016, 26, 3515-3523.	14.9	545

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55	Modelling an electrochemically roughened porous platinum electrode for water oxidation. Chemical Communications, 2016, 52, 4068-4071.	4.1	9
56	Interconnected coreâ€“shell carbon nanotubeâ€“graphene nanoribbon scaffolds for anchoring cobalt oxides as bifunctional electrocatalysts for oxygen evolution and reduction. Journal of Materials Chemistry A, 2015, 3, 13371-13376.	10.3	51
57	Preparation of Metal-Free Nitrogen-Doped Graphene Via Direct Electrochemical Exfoliation of Graphite in Ammonium Nitrate. Australian Journal of Chemistry, 2015, 68, 830.	0.9	19
58	Electrocatalytic Oxygen Evolution at Surface-Oxidized Multiwall Carbon Nanotubes. Journal of the American Chemical Society, 2015, 137, 2901-2907.	13.7	495
59	Electrodeposition of hierarchically structured three-dimensional nickelâ€“iron electrodes for efficient oxygen evolution at high current densities. Nature Communications, 2015, 6, 6616.	12.8	1,671
60	Gold Nanoparticles Embedded within Mesoporous Cobalt Oxide Enhance Electrochemical Oxygen Evolution. ChemSusChem, 2014, 7, 82-86.	6.8	99
61	Unusual synergistic effects upon incorporation of Fe and/or Ni into mesoporous Co₃O₄for enhanced oxygen evolution. Chemical Communications, 2014, 50, 10122.	4.1	150
62	Decorating Semiconductor Silver-Tetracyanoquinodimethane Nanowires with Silver Nanoparticles from Ionic Liquids. Australian Journal of Chemistry, 2014, 67, 213.	0.9	1
63	Oxygen Reduction Reaction in Room Temperature Protic Ionic Liquids. Journal of Physical Chemistry C, 2013, 117, 18334-18342.	3.1	62
64	Layer-by-layer assembly of transparent amorphous Co3O4 nanoparticles/graphene composite electrodes for sustained oxygen evolution reaction. Journal of Materials Chemistry A, 2013, 1, 12726.	10.3	98
65	Controlled electrodeposition of cobalt oxides from protic ionic liquids for electrocatalytic water oxidation. RSC Advances, 2013, 3, 20936.	3.6	28
66	Highly efficient and robust oxygen evolution catalysts achieved by anchoring nanocrystalline cobalt oxides onto mildly oxidized multiwalled carbon nanotubes. Journal of Materials Chemistry A, 2013, 1, 12053.	10.3	166
67	Controlled electrochemical intercalation, exfoliation and in situ nitrogen doping of graphite in nitrate-based protic ionic liquids. Physical Chemistry Chemical Physics, 2013, 15, 20005.	2.8	48
68	Water sorption in protic ionic liquids: correlation between hygroscopicity and polarity. New Journal of Chemistry, 2013, 37, 1959.	2.8	35
69	Determination of Water in Room Temperature Ionic Liquids by Cathodic Stripping Voltammetry at a Gold Electrode. Analytical Chemistry, 2012, 84, 2784-2791.	6.5	74
70	Electrochemistry of Room Temperature Protic Ionic Liquids: A Critical Assessment for Use as Electrolytes in Electrochemical Applications. Journal of Physical Chemistry B, 2012, 116, 9160-9170.	2.6	94
71	Tuning the electrodeposition parameters of silver to yield micro/nano structures from room temperature protic ionic liquids. Electrochimica Acta, 2012, 81, 98-105.	5.2	50
72	Endosomal pH-activatable magnetic nanoparticle-capped mesoporous silica for intracellular controlled release. Journal of Materials Chemistry, 2012, 22, 15960.	6.7	57

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73	A magnetic, reversible pH-responsive nanogated ensemble based on Fe3O4 nanoparticles-capped mesoporous silica. Biomaterials, 2011, 32, 1932-1942.	11.4	186
74	A Facile Route to Prepare Organic/Inorganic Hybrid Nanomaterials by â€˜Click Chemistryâ€™. Macromolecular Rapid Communications, 2009, 30, 2116-2120.	3.9	21