

Lu Shang

List of Publications by Year in descending order

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99
papers

12,821
citations

34076

52
h-index

34964

98
g-index

105
all docs

105
docs citations

105
times ranked

14496
citing authors

#	ARTICLE	IF	CITATIONS
1	Vertical graphene array for efficient electrocatalytic reduction of oxygen to hydrogen peroxide. Nano Energy, 2022, 96, 107046.	8.2	37
2	Deciphering the Dynamic Structure Evolution of Fe- and Ni-Codoped CoS ₂ for Enhanced Water Oxidation. ACS Catalysis, 2022, 12, 3743-3751.	5.5	59
3	Ordered Pt/Fe Intermetallic Nanowires Prepared through a Silica Protection Strategy for the Oxygen Reduction Reaction. Angewandte Chemie - International Edition, 2022, 61, .	7.2	61
4	Fe Single-Atom Catalysts on MOF-Derived Carbon for Efficient Oxygen Reduction Reaction in Proton Exchange Membrane Fuel Cells. Advanced Energy Materials, 2022, 12, .	10.2	150
5	Ordered Pt/Fe Intermetallic Nanowires Prepared through a Silica Protection Strategy for the Oxygen Reduction Reaction. Angewandte Chemie, 2022, 134, .	1.6	8
6	Interfacial wettability and mass transfer characterizations for gas-liquid-solid triple-phase catalysis. Exploration, 2022, 2, .	5.4	21
7	Tailoring the microenvironment in Fe-N-C electrocatalysts for optimal oxygen reduction reaction performance. Science Bulletin, 2022, 67, 1264-1273.	4.3	36
8	Mesopore-Rich Fe-N-C Catalyst with FeN ₄ -O-NC Single-Atom Sites Delivers Remarkable Oxygen Reduction Reaction Performance in Alkaline Media. Advanced Materials, 2022, 34, e2202544.	11.1	168
9	Photo-thermal characteristics of water-based graphene oxide (GO) nanofluids at reverse-irradiation conditions with different irradiation angles for high-efficiency solar thermal energy harvesting. Renewable Energy, 2022, 195, 516-527.	4.3	6
10	Evaluating Automatic Segmentation for Swallowing-Related Organs for Head and Neck Cancer. Technology in Cancer Research and Treatment, 2022, 21, 153303382211057.	0.8	6
11	Substitutionally Dispersed High-Oxidation CoO _x Clusters in the Lattice of Rutile TiO ₂ Triggering Efficient Co/Ti Cooperative Catalytic Centers for Oxygen Evolution Reactions. Advanced Functional Materials, 2021, 31, 2009610.	7.8	82
12	Electrocatalytic Oxygen Reduction to Hydrogen Peroxide: From Homogeneous to Heterogeneous Electrocatalysis. Advanced Energy Materials, 2021, 11, 2003323.	10.2	150
13	Molten NaCl-Assisted Synthesis of Porous Fe-N-C Electrocatalysts with a High Density of Catalytically Accessible FeN ₄ -Active Sites and Outstanding Oxygen Reduction Reaction Performance. Advanced Energy Materials, 2021, 11, 2100219.	10.2	160
14	Optical absorption property and photo-thermal conversion performance of Ag@Al ₂ O ₃ plasmonic nanofluids with Al ₂ O ₃ nano-shell fabricated by atomic layer deposition. Journal of Molecular Liquids, 2021, 326, 115388.	2.3	20
15	Recent Advancements of Porphyrin-Like Single-Atom Catalysts: Synthesis and Applications. Small Structures, 2021, 2, 2100007.	6.9	77
16	MIL-101-Derived Mesoporous Carbon Supporting Highly Exposed Fe Single-Atom Sites as Efficient Oxygen Reduction Reaction Catalysts. Advanced Materials, 2021, 33, e2101038.	11.1	327
17	Engineering local coordination environments and site densities for high-performance Fe-N-C oxygen reduction reaction electrocatalysis. SmartMat, 2021, 2, 154-175.	6.4	81
18	Atomic Cation Vacancy Engineering of NiFe Layered Double Hydroxides for Improved Activity and Stability towards the Oxygen Evolution Reaction. Angewandte Chemie, 2021, 133, 24817-24824.	1.6	39

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19	Atomic Cation Vacancy Engineering of NiFe Layered Double Hydroxides for Improved Activity and Stability towards the Oxygen Evolution Reaction. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 24612-24619.	7.2	259
20	Benchmarking of Deformable Image Registration for Multiple Anatomic Sites Using Digital Data Sets With Ground-Truth Deformation Vector Fields. <i>Practical Radiation Oncology</i> , 2021, 11, 404-414.	1.1	12
21	Three Phase Interface Engineering for Advanced Catalytic Applications. <i>ACS Applied Energy Materials</i> , 2021, 4, 1045-1052.	2.5	22
22	A Rhenium Single-Atom Catalyst for the Electrocatalytic Oxygen Reduction Reaction. <i>ChemPlusChem</i> , 2021, 86, 1635-1639.	1.3	7
23	Convolutional neural network enhancement of fast-scan low-dose cone-beam CT images for head and neck radiotherapy. <i>Physics in Medicine and Biology</i> , 2020, 65, 035003.	1.6	42
24	A General Route to Prepare Low-Ruthenium Content Bimetallic Electrocatalysts for pH-Universal Hydrogen Evolution Reaction by Using Carbon Quantum Dots. <i>Angewandte Chemie</i> , 2020, 132, 1735-1743.	1.6	40
25	A General Route to Prepare Low-Ruthenium Content Bimetallic Electrocatalysts for pH-Universal Hydrogen Evolution Reaction by Using Carbon Quantum Dots. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 1718-1726.	7.2	452
26	Hollow PtFe Alloy Nanoparticles Derived from Pt ₃ O ₄ Dimers through a Silica Protection Reduction Strategy as Efficient Oxygen Reduction Electrocatalysts. <i>Chemistry - A European Journal</i> , 2020, 26, 4090-4096.	1.7	49
27	Underwater superaerophobic Ni nanoparticle-decorated nickel-molybdenum nitride nanowire arrays for hydrogen evolution in neutral media. <i>Nano Energy</i> , 2020, 78, 105375.	8.2	148
28	Recent Advances in the Development of Single-Atom Catalysts for Oxygen Electrocatalysis and Zinc-Air Batteries. <i>Advanced Energy Materials</i> , 2020, 10, 2003018.	10.2	181
29	Reassessing effects of Zn ²⁺ toward oxygen electrocatalytic activity in ternary spinel. <i>Science Bulletin</i> , 2020, 65, 974-976.	4.3	2
30	Tubular assemblies of N-doped carbon nanotubes loaded with NiFe alloy nanoparticles as efficient bifunctional catalysts for rechargeable zinc-air batteries. <i>Nanoscale</i> , 2020, 12, 13129-13136.	2.8	110
31	Efficient wettability-controlled electroreduction of CO ₂ to CO at Au/C interfaces. <i>Nature Communications</i> , 2020, 11, 3028.	5.8	294
32	Evolution of Zn(II) single atom catalyst sites during the pyrolysis-induced transformation of ZIF-8 to N-doped carbons. <i>Science Bulletin</i> , 2020, 65, 1743-1751.	4.3	115
33	Designed controllable nitrogen-doped carbon-dots-loaded MoP nanoparticles for boosting hydrogen evolution reaction in alkaline medium. <i>Nano Energy</i> , 2020, 72, 104730.	8.2	171
34	Graphene oxide/multi-walled carbon nanotube-Therminol®66 hybrid nanofluids for low-to-medium temperature volumetric solar collectors. <i>International Journal of Energy Research</i> , 2020, 44, 7216-7228.	2.2	20
35	High-Efficiency Oxygen Reduction to Hydrogen Peroxide Catalyzed by Nickel Single-Atom Catalysts with Tetradentate N ₂ O ₂ Coordination in a Three-Phase Flow Cell. <i>Angewandte Chemie</i> , 2020, 132, 13157-13162.	1.6	16
36	High-Efficiency Oxygen Reduction to Hydrogen Peroxide Catalyzed by Nickel Single-Atom Catalysts with Tetradentate N ₂ O ₂ Coordination in a Three-Phase Flow Cell. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 13057-13062.	7.2	222

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37	Clinical Enhancement in AI-Based Post-processed Fast-Scan Low-Dose CBCT for Head and Neck Adaptive Radiotherapy. <i>Frontiers in Artificial Intelligence</i> , 2020, 3, 614384.	2.0	9
38	A universal ligand mediated method for large scale synthesis of transition metal single atom catalysts. <i>Nature Communications</i> , 2019, 10, 4585.	5.8	441
39	Self-crosslinking carbon dots loaded ruthenium dots as an efficient and super-stable hydrogen production electrocatalyst at all pH values. <i>Nano Energy</i> , 2019, 65, 104023.	8.2	117
40	A Nanozyme with Photo-enhanced Dual Enzyme-like Activities for Deep Pancreatic Cancer Therapy. <i>Angewandte Chemie</i> , 2019, 131, 12754-12761.	1.6	71
41	A Nanozyme with Photo-enhanced Dual Enzyme-like Activities for Deep Pancreatic Cancer Therapy. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 12624-12631.	7.2	345
42	Intrinsic Carbon-Defect-Driven Electrocatalytic Reduction of Carbon Dioxide. <i>Advanced Materials</i> , 2019, 31, e1808276.	11.1	263
43	Pd Single-Atom Catalysts on Nitrogen-Doped Graphene for the Highly Selective Photothermal Hydrogenation of Acetylene to Ethylene. <i>Advanced Materials</i> , 2019, 31, e1900509.	11.1	262
44	Silica-Protected Ultrathin Ni ₃ FeN Nanocatalyst for the Efficient Hydrolytic Dehydrogenation of NH ₃ BH ₃ . <i>Advanced Energy Materials</i> , 2018, 8, 1702780.	10.2	66
45	Template-free large-scale synthesis of g-C ₃ N ₄ microtubes for enhanced visible light-driven photocatalytic H ₂ production. <i>Nano Research</i> , 2018, 11, 3462-3468.	5.8	199
46	Photothermal CO ₂ Hydrogenation: Alumina-Supported CoFe Alloy Catalysts Derived from Layered-Double-Hydroxide Nanosheets for Efficient Photothermal CO ₂ Hydrogenation to Hydrocarbons (<i>Adv. Mater.</i> 3/2018). <i>Advanced Materials</i> , 2018, 30, 1870015.	11.1	3
47	Two-step hydrothermal synthesis of Sn ₂ Nb ₂ O ₇ nanocrystals with enhanced visible-light-driven H ₂ evolution activity. <i>Chinese Journal of Catalysis</i> , 2018, 39, 395-400.	6.9	17
48	Alumina-Supported CoFe Alloy Catalysts Derived from Layered-Double-Hydroxide Nanosheets for Efficient Photothermal CO ₂ Hydrogenation to Hydrocarbons. <i>Advanced Materials</i> , 2018, 30, 1704663.	11.1	309
49	Nanocrystals@Hollow Mesoporous Silica Reverse-Bumpy-Ball Structure Nanoreactors by a Versatile Microemulsion-templated Approach. <i>Small Methods</i> , 2018, 2, 1800105.	4.6	23
50	“Naked”-Magnetically Recyclable Mesoporous Au@Fe ₂ O ₃ Nanocrystal Clusters: A Highly Integrated Catalyst System. <i>Advanced Functional Materials</i> , 2017, 27, 1606215.	7.8	85
51	Catalysts: “Naked”-Magnetically Recyclable Mesoporous Au@Fe ₂ O ₃ Nanocrystal Clusters: A Highly Integrated Catalyst System (<i>Adv. Funct. Mater.</i> 9/2017). <i>Advanced Functional Materials</i> , 2017, 27, .	7.8	1
52	3D carbon nanoframe scaffold-immobilized Ni ₃ FeN nanoparticle electrocatalysts for rechargeable zinc-air batteries TM cathodes. <i>Nano Energy</i> , 2017, 40, 382-389.	8.2	153
53	NiFe Layered Double Hydroxide Nanoparticles on Co,N-Codoped Carbon Nanoframes as Efficient Bifunctional Catalysts for Rechargeable Zinc-Air Batteries. <i>Advanced Energy Materials</i> , 2017, 7, 1700467.	10.2	422
54	Effect of Nitrogen Doping Level on the Performance of N-Doped Carbon Quantum Dot/TiO ₂ Composites for Photocatalytic Hydrogen Evolution. <i>ChemSusChem</i> , 2017, 10, 4650-4656.	3.6	171

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55	Zinc-Air Batteries: NiFe Layered Double Hydroxide Nanoparticles on Co,Ni-Codoped Carbon Nanoframes as Efficient Bifunctional Catalysts for Rechargeable Zinc-Air Batteries (Adv. Energy Mater. 21/2017). Advanced Energy Materials, 2017, 7, .	10.2	5
56	A Sustainable Strategy for the Synthesis of Pyrochlore $\text{Hf}_4\text{Nb}_2\text{O}_7$ Hollow Microspheres as Photocatalysts for Overall Water Splitting. ChemPlusChem, 2017, 82, 181-185.	1.3	30
57	Multishelled Ni-Rich $\text{Li}(\text{Ni}_x\text{Co}_y\text{Mn}_z)\text{O}_2$ Hollow Fibers with Low Cation Mixing as High-Performance Cathode Materials for Li-Ion Batteries. Advanced Science, 2017, 4, 1600262.	5.6	172
58	Controllable Synthesis of Ultrathin Transition-Metal Hydroxide Nanosheets and their Extended Composite Nanostructures for Enhanced Catalytic Activity in the Heck Reaction. Angewandte Chemie - International Edition, 2016, 55, 2167-2170.	7.2	105
59	Well-Dispersed ZIF-Derived Co,Ni-Co-doped Carbon Nanoframes through Mesoporous-Silica-Protected Calcination as Efficient Oxygen Reduction Electrocatalysts. Advanced Materials, 2016, 28, 1668-1674.	11.1	663
60	CdS Nanoparticle-Decorated Cd Nanosheets for Efficient Visible Light-Driven Photocatalytic Hydrogen Evolution. Advanced Energy Materials, 2016, 6, 1501241.	10.2	253
61	Controllable Synthesis of Ultrathin Transition-Metal Hydroxide Nanosheets and their Extended Composite Nanostructures for Enhanced Catalytic Activity in the Heck Reaction. Angewandte Chemie, 2016, 128, 2207-2210.	1.6	13
62	Controllable Synthesis of Ultrathin Transition-Metal Hydroxide Nanosheets and their Extended Composite Nanostructures for Enhanced Catalytic Activity in the Heck Reaction (Angew.)	1.6	13
63	Hydrogen Evolution: CdS Nanoparticle-Decorated Cd Nanosheets for Efficient Visible Light-Driven Photocatalytic Hydrogen Evolution (Adv. Energy Mater. 3/2016). Advanced Energy Materials, 2016, 6, .	10.2	3
64	Carbon Nanoframes: Well-Dispersed ZIF-Derived Co,Ni-Co-doped Carbon Nanoframes through Mesoporous-Silica-Protected Calcination as Efficient Oxygen Reduction Electrocatalysts (Adv. Mater.)	11.1	663
65	Ultrafine NiO Nanosheets Stabilized by TiO_2 from Monolayer NiTi-LDH Precursors: An Active Water Oxidation Electrocatalyst. Journal of the American Chemical Society, 2016, 138, 6517-6524.	6.6	597
66	Phototherapy: Metal-Organic-Framework-Derived Mesoporous Carbon Nanospheres Containing Porphyrin-Like Metal Centers for Conformal Phototherapy (Adv. Mater. 38/2016). Advanced Materials, 2016, 28, 8318-8318.	11.1	5
67	Thiolate-Mediated Photoinduced Synthesis of Ultrafine Ag_2S Quantum Dots from Silver Nanoparticles. Angewandte Chemie, 2016, 128, .	1.6	0
68	Metal-Organic-Framework-Derived Mesoporous Carbon Nanospheres Containing Porphyrin-Like Metal Centers for Conformal Phototherapy. Advanced Materials, 2016, 28, 8379-8387.	11.1	264
69	Carbon Nanosheets: Nitrogen-Doped Porous Carbon Nanosheets Templated from $\text{g-C}_3\text{N}_4$ as Metal-Free Electrocatalysts for Efficient Oxygen Reduction Reaction (Adv. Mater. 25/2016). Advanced Materials, 2016, 28, 5140-5140.	11.1	44
70	Thiolate-Mediated Photoinduced Synthesis of Ultrafine Ag_2S Quantum Dots from Silver Nanoparticles. Angewandte Chemie - International Edition, 2016, 55, .	7.2	0
71	Thiolate-Mediated Photoinduced Synthesis of Ultrafine Ag_2S Quantum Dots from Silver Nanoparticles. Angewandte Chemie - International Edition, 2016, 55, 14952-14957.	7.2	38
72	Thiolate-Mediated Photoinduced Synthesis of Ultrafine Ag_2S Quantum Dots from Silver Nanoparticles. Angewandte Chemie, 2016, 128, 15176-15181.	1.6	5

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73	Nitrogen-Doped Porous Carbon Nanosheets Templated from $\text{g-C}_3\text{N}_4$ as Metal-Free Electrocatalysts for Efficient Oxygen Reduction Reaction. <i>Advanced Materials</i> , 2016, 28, 5080-5086.	11.1	718
74	Ni_3FeN Nanoparticles Derived from Ultrathin $\text{NiFe-Layered Double Hydroxide}$ Nanosheets: An Efficient Overall Water Splitting Electrocatalyst. <i>Advanced Energy Materials</i> , 2016, 6, 1502585.	10.2	668
75	Facile synthesis of ultrathin SnNb_2O_6 nanosheets towards improved visible-light photocatalytic H_2 -production activity. <i>Chemical Communications</i> , 2016, 52, 8239-8242.	2.2	79
76	Water Splitting: Ni_3FeN Nanoparticles Derived from Ultrathin $\text{NiFe-Layered Double Hydroxide}$ Nanosheets: An Efficient Overall Water Splitting Electrocatalyst (<i>Adv. Energy Mater.</i>)	10.2	668
77	pH-Responsive reversible self-assembly of gold nanoparticles into nanovesicles. <i>Nanoscale</i> , 2016, 8, 3923-3925.	2.8	45
78	Recent Advances in the Synthesis, Characterization and Application of Zn-containing Heterogeneous Catalysts. <i>Advanced Science</i> , 2016, 3, 1500424.	5.6	42
79	High-yield preparation of robust gold nanoshells on silica nanorattles with good biocompatibility. <i>Science Bulletin</i> , 2016, 61, 282-291.	4.3	12
80	Graphene modified mesoporous titania single crystals with controlled and selective photoredox surfaces. <i>Chemical Communications</i> , 2016, 52, 1689-1692.	2.2	45
81	Effects of surfactants on visible-light-driven photocatalytic hydrogen evolution activities of $\text{AgInZn}_7\text{S}_9$ nanorods. <i>Applied Surface Science</i> , 2015, 358, 485-490.	3.1	23
82	Highly luminescent nitrogen-doped carbon quantum dots as effective fluorescent probes for mercuric and iodide ions. <i>Journal of Materials Chemistry C</i> , 2015, 3, 1922-1928.	2.7	173
83	Flower-like CdSe ultrathin nanosheet assemblies for enhanced visible-light-driven photocatalytic H_2 production. <i>Chemical Communications</i> , 2015, 51, 4677-4680.	2.2	53
84	Copper(cysteine) complexes: efficient earth-abundant oxidation co-catalysts for visible light-driven photocatalytic H_2 production. <i>Chemical Communications</i> , 2015, 51, 12556-12559.	2.2	47
85	Architecture-controlled synthesis of M_xO_y ($\text{M} = \text{Ni, Fe, Cu}$) microfibrils from seaweed biomass for high-performance lithium ion battery anodes. <i>Journal of Materials Chemistry A</i> , 2015, 3, 22708-22715.	5.2	75
86	Nanoparticles: Spontaneous Organization of Inorganic Nanoparticles into Nanovesicles Triggered by UV Light (<i>Adv. Mater.</i> 32/2014). <i>Advanced Materials</i> , 2014, 26, 5731-5731.	11.1	0
87	Carbon quantum dots/ TiO_2 composites for efficient photocatalytic hydrogen evolution. <i>Journal of Materials Chemistry A</i> , 2014, 2, 3344.	5.2	601
88	One-Pot Hydrothermal Synthesis and Photocatalytic Hydrogen Evolution of Pyrochlore Type $\text{K}_2\text{Nb}_2\text{O}_6$. <i>Chinese Journal of Chemistry</i> , 2014, 32, 485-490.	2.6	24
89	Spontaneous Organization of Inorganic Nanoparticles into Nanovesicles Triggered by UV Light. <i>Advanced Materials</i> , 2014, 26, 5613-5618.	11.1	112
90	Graphene-Supported Ultrafine Metal Nanoparticles Encapsulated by Mesoporous Silica: Robust Catalysts for Oxidation and Reduction Reactions. <i>Angewandte Chemie - International Edition</i> , 2014, 53, 250-254.	7.2	384

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91	Mesoporous plasmonic Au-loaded Ta ₂ O ₅ nanocomposites for efficient visible light photocatalysis. <i>Catalysis Today</i> , 2014, 225, 158-163.	2.2	82
92	Facile preparation of black Nb ⁴⁺ -self-doped K ₄ Nb ₆ O ₁₇ microspheres with high solar absorption and enhanced photocatalytic activity. <i>Chemical Communications</i> , 2014, 50, 9554.	2.2	92
93	A mild one-step solvothermal route to truncated octahedral magnetite crystals. <i>Particuology</i> , 2014, 15, 51-55.	2.0	9
94	Facile synthesis of hierarchical ZnIn ₂ S ₄ submicrospheres composed of ultrathin mesoporous nanosheets as a highly efficient visible-light-driven photocatalyst for H ₂ production. <i>Journal of Materials Chemistry A</i> , 2013, 1, 4552.	5.2	166
95	Type-II ZnO nanorod@SnO ₂ nanoparticle heterostructures: characterization of structural, optical and photocatalytic properties. <i>Nanoscale</i> , 2013, 5, 3828.	2.8	48
96	Bubble template synthesis of Sn ₂ Nb ₂ O ₇ hollow spheres for enhanced visible-light-driven photocatalytic hydrogen production. <i>Chemical Communications</i> , 2013, 49, 9872.	2.2	84
97	Shape-controlled synthesis of polyhedral 50-facet Cu ₂ O microcrystals with high-index facets. <i>CrystEngComm</i> , 2012, 14, 4431.	1.3	70
98	Heteronanostructure of Ag particle on titanate nanowire membrane with enhanced photocatalytic properties and bactericidal activities. <i>Journal of Hazardous Materials</i> , 2010, 178, 1109-1114.	6.5	66
99	Controlled synthesis and self-assembly of dendrite patterns of Fe ₃ O ₄ nanoparticles. <i>Nanotechnology</i> , 2009, 20, 035601.	1.3	22