Shicheng Yan

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/4039376/publications.pdf

Version: 2024-02-01

106 papers	5,716 citations	71061 41 h-index	79644 73 g-index
107 all docs	107 docs citations	107 times ranked	7140 citing authors

#	Article	IF	Citations
1	High-Yield Synthesis of Ultralong and Ultrathin Zn₂GeO₄ Nanoribbons toward Improved Photocatalytic Reduction of CO₂ into Renewable Hydrocarbon Fuel. Journal of the American Chemical Society, 2010, 132, 14385-14387.	6.6	606
2	Solar hydrogen generation from seawater with a modified BiVO4 photoanode. Energy and Environmental Science, 2011, 4, 4046.	15.6	564
3	An In Situ Simultaneous Reductionâ€Hydrolysis Technique for Fabrication of TiO₂â€Graphene 2D Sandwichâ€Like Hybrid Nanosheets: Grapheneâ€Promoted Selectivity of Photocatalyticâ€Driven Hydrogenation and Coupling of CO₂ into Methane and Ethane. Advanced Functional Materials, 2013, 23, 1743-1749.	7.8	357
4	A Facetâ€Dependent Schottkyâ€Junction Electron Shuttle in a BiVO₄{010}â€“Auâ€“Cu₂O Zâ€Scheme Photocatalyst for Efficient Charge Separation. Advanced Functional Materials, 2018, 28, 1801214.	7.8	193
5	Facile temperature-controlled synthesis of hexagonal Zn2GeO4nanorods with different aspect ratios toward improved photocatalytic activity for overall water splitting and photoreduction of CO2. Chemical Communications, 2011, 47, 5632-5634.	2.2	159
6	Solâ€“gel hydrothermal synthesis of visible-light-driven Cr-doped SrTiO3 for efficient hydrogen production. Journal of Materials Chemistry, 2011, 21, 11347.	6.7	157
7	The charge carrier dynamics, efficiency and stability of two-dimensional material-based perovskite solar cells. Chemical Society Reviews, 2019, 48, 4854-4891.	18.7	139
8	A simple and efficient strategy for the synthesis of a chemically tailored g-C₃N₄ material. Journal of Materials Chemistry A, 2014, 2, 17521-17529.	5.2	128
9	Solar fuel production: Strategies and new opportunities with nanostructures. Nano Today, 2015, 10, 468-486.	6.2	126
10	Oxygen-Vacancy-Activated CO₂ Splitting over Amorphous Oxide Semiconductor Photocatalyst. ACS Catalysis, 2018, 8, 516-525.	5.5	126
11	Atom vacancies induced electron-rich surface of ultrathin Bi nanosheet for efficient electrochemical CO2 reduction. Applied Catalysis B: Environmental, 2020, 266, 118625.	10.8	112
12	Frustrated Lewis Pairs Accelerating CO₂ Reduction on Oxyhydroxide Photocatalysts with Surface Lattice Hydroxyls as a Solidâ€State Proton Donor. Advanced Functional Materials, 2018, 28, 1804191.	7.8	102
13	Sacrificing ionic liquid-assisted anchoring of carbonized polymer dots on perovskite-like PbBiO2Br for robust CO2 photoreduction. Applied Catalysis B: Environmental, 2019, 254, 551-559.	10.8	91
14	Zinc Gallogermanate Solid Solution: A Novel Photocatalyst for Efficiently Converting CO₂ into Solar Fuels. Advanced Functional Materials, 2013, 23, 1839-1845.	7.8	89
15	La₂O₃â€Modified LaTiO₂N Photocatalyst with Spatially Separated Active Sites Achieving Enhanced CO₂ Reduction. Advanced Functional Materials, 2017, 27, 1702447.	7.8	87
16	Enhanced Waterâ€Splitting Performance of Perovskite SrTaO₂N Photoanode Film through Ameliorating Interparticle Charge Transport. Advanced Functional Materials, 2016, 26, 7156-7163.	7.8	86
17	Surface states as electron transfer pathway enhanced charge separation in TiO2 nanotube water splitting photoanodes. Applied Catalysis B: Environmental, 2018, 234, 100-108.	10.8	77
18	Non-oxide semiconductors for artificial photosynthesis: Progress on photoelectrochemical water splitting and carbon dioxide reduction. Nano Today, 2020, 30, 100830.	6.2	76

#	Article	IF	Citations
19	CoS₂@N-doped carbon coreâ€“shell nanorod array grown on Ni foam for enhanced electrocatalytic water oxidation. Journal of Materials Chemistry A, 2020, 8, 6795-6803.	5.2	75
20	An Ionâ€Exchange Phase Transformation to ZnGa₂O₄ Nanocube Towards Efficient Solar Fuel Synthesis. Advanced Functional Materials, 2013, 23, 758-763.	7.8	72
21	Understanding spatial effects of tetrahedral and octahedral cobalt cations on peroxymonosulfate activation for efficient pollution degradation. Applied Catalysis B: Environmental, 2021, 291, 120072.	10.8	68
22	BiVO4 nanoâ€“leaves: Mild synthesis and improved photocatalytic activity for O2 production under visible light irradiation. CrystEngComm, 2011, 13, 2500.	1.3	65
23	Efficient conversion of CO₂and H2O into hydrocarbonfuel over ZnAl₂O₄-modified mesoporous ZnGaNO under visible light irradiation. Chemical Communications, 2012, 48, 1048-1050.	2.2	58
24	Silicon Photoanodes Partially Covered by Ni@Ni(OH)₂ Coreâ€“Shell Particles for Photoelectrochemical Water Oxidation. ChemSusChem, 2017, 10, 2897-2903.	3.6	58
25	Effective separation and transfer of carriers into the redox sites on Ta3N5/Bi photocatalyst for promoting conversion of CO2 into CH4. Applied Catalysis B: Environmental, 2018, 224, 10-16.	10.8	58
26	Balancing Catalytic Activity and Interface Energetics of Electrocatalyst-Coated Photoanodes for Photoelectrochemical Water Splitting. ACS Applied Materials & Interfaces, 2018, 10, 3624-3633.	4.0	56
27	Defect Engineering in Semiconductors: Manipulating Nonstoichiometric Defects and Understanding Their Impact in Oxynitrides for Solar Energy Conversion. Advanced Functional Materials, 2019, 29, 1808389.	7.8	56
28	Ultrafast Fenton-like reaction route to FeOOH/NiFe-LDH heterojunction electrode for efficient oxygen evolution reaction. Journal of Materials Chemistry A, 2021, 9, 21785-21791.	5.2	55
29	Synthesis of a mesoporous single crystal Ga2O3 nanoplate with improved photoluminescence and high sensitivity in detecting CO. Chemical Communications, 2010, 46, 6388.	2.2	54
30	Facile synthesis of anatase TiO2 mesocrystal sheets with dominant {001} facets based on topochemical conversion. CrystEngComm, 2010, 12, 3425.	1.3	54
31	Tuning the ion permeability of an Al₂O₃ coating layer on Fe₂O₃ photoanodes for improved photoelectrochemical water oxidation. Journal of Materials Chemistry A, 2017, 5, 8402-8407.	5.2	54
32	In-Situ Formed Hydroxide Accelerating Water Dissociation Kinetics on Co₃N for Hydrogen Production in Alkaline Solution. ACS Applied Materials & Interfaces, 2018, 10, 22102-22109.	4.0	54
33	Unlocking the potential of graphene for water oxidation using an orbital hybridization strategy. Energy and Environmental Science, 2018, 11, 407-416.	15.6	52
34	Schottky junction effect enhanced plasmonic photocatalysis by TaON@Ni NP heterostructures. Chemical Communications, 2019, 55, 11754-11757.	2.2	52
35	In Situ-Grown Island-Shaped Hollow Graphene on TaON with Spatially Separated Active Sites Achieving Enhanced Visible-Light CO₂ Reduction. ACS Catalysis, 2020, 10, 15083-15091.	5.5	51
36	Mg-doped Ta₃N₅nanorods coated with a conformal CoOOH layer for water oxidation: bulk and surface dual modification of photoanodes. Journal of Materials Chemistry A, 2017, 5, 20439-20447.	5.2	49

#	Article	IF	Citations
37	Inhibiting Hydrogen Evolution using a Chloride Adlayer for Efficient Electrochemical CO₂ Reduction on Zn Electrodes. ACS Applied Materials & Interfaces, 2020, 12, 4565-4571.	4.0	49
38	Oriented Growth of Sc-Doped Ta₃N₅ Nanorod Photoanode Achieving Low-Onset-Potential for Photoelectrochemical Water Oxidation. ACS Applied Energy Materials, 2018, 1, 4150-4157.	2.5	46
39	Nanostructured TaON/Ta₃N₅ as a highly efficient type-II heterojunction photoanode for photoelectrochemical water splitting. Dalton Transactions, 2018, 47, 8949-8955.	1.6	43
40	Surface electric field driven directional charge separation on Ta3N5 cuboids enhancing photocatalytic solar energy conversion. Applied Catalysis B: Environmental, 2018, 237, 742-752.	10.8	43
41	Direct Growth of Fe₂V₄O₁₃ Nanoribbons on a Stainlessâ€Steel Mesh for Visibleâ€Light Photoreduction of CO₂ into Renewable Hydrocarbon Fuel and Degradation of Gaseous Isopropyl Alcohol. ChemPlusChem, 2013, 78, 274-278.	1.3	41
42	Ultralong metahewettite CaV 6 O 16 Â·3H 2 O nanoribbons as novel host materials for lithium storage: Towards high-rate and excellent long-term cyclability. Nano Energy, 2016, 22, 38-47.	8.2	38
43	Interface Manipulation to Improve Plasmonâ€Coupled Photoelectrochemical Water Splitting on Î±â€Fe₂O₃ Photoanodes. ChemSusChem, 2018, 11, 237-244.	3.6	38
44	Dual-metal hydroxide with ordering frustrated Lewis pairs for photoactivating CO2 to CO. Applied Catalysis B: Environmental, 2021, 283, 119639.	10.8	38
45	Oxygen related recombination defects in Ta3N5 water splitting photoanode. Applied Physics Letters, 2015, 107, .	1.5	37
46	ZnO plates synthesized from the ammonium zinc nitrate hydroxide precursor. CrystEngComm, 2012, 14, 154-159.	1.3	34
47	Tuning the transport behavior of centimeter-scale WTe2 ultrathin films fabricated by pulsed laser deposition. Applied Physics Letters, 2017, 111, .	1.5	34
48	Surface chemistry imposes selective reduction of CO₂ to CO over Ta₃N₅/LaTiO₂N photocatalyst. Journal of Materials Chemistry A, 2018, 6, 14838-14846.	5.2	34
49	Visible light driven TaON/V2O5 heterojunction photocatalyst for deep elimination of volatile-aromatic compounds. Applied Catalysis B: Environmental, 2019, 245, 220-226.	10.8	33
50	An anion-controlled crystal growth route to Zn2GeO4 nanorods for efficient photocatalytic conversion of CO2 into CH4. Dalton Transactions, 2013, 42, 12975.	1.6	32
51	Back Electron Transfer at TiO₂ Nanotube Photoanodes in the Presence of a H₂O₂ Hole Scavenger. ACS Applied Materials & Interfaces, 2017, 9, 33887-33895.	4.0	31
52	Low onset potential on single crystal Ta3N5 polyhedron array photoanode with preferential exposure of {001} facets. Applied Catalysis B: Environmental, 2018, 237, 665-672.	10.8	31
53	Oriented-growth Ta3N5/SrTaO2N array heterojunction with extended depletion region for improved water oxidation. Applied Catalysis B: Environmental, 2020, 269, 118777.	10.8	31
54	Highly selective electrochemical CO₂ reduction to CO using a redox-active couple on low-crystallinity mesoporous ZnGa₂O₄ catalyst. Journal of Materials Chemistry A, 2019, 7, 9316-9323.	5.2	30

#	Article	IF	Citations
55	Two-step reactive template route to a mesoporous ZnGaNO solid solution for improved photocatalytic performance. Journal of Materials Chemistry, 2011, 21, 5682.	6.7	29
56	One-step synthesis of IrO_x-decorated ultrathin NiFe LDH nanosheets for efficient oxygen evolution reaction. Chemical Communications, 2020, 56, 11465-11468.	2.2	28
57	CO2 photoreduction on hydroxyl-group-rich mesoporous single crystal TiO2. Applied Surface Science, 2018, 427, 603-607.	3.1	27
58	Ta₃N₅nanorods encapsulated into 3D hydrangea-like MoS₂for enhanced photocatalytic hydrogen evolution under visible light irradiation. Dalton Transactions, 2019, 48, 13176-13183.	1.6	27
59	Oriented attachment growth of hundred-nanometer-size LaTaON₂ single crystals in molten salts for enhanced photoelectrochemical water splitting. Journal of Materials Chemistry A, 2018, 6, 7706-7713.	5.2	26
60	A phase transformation-free redox couple mediated electrocatalytic oxygen evolution reaction. Applied Catalysis B: Environmental, 2022, 306, 121146.	10.8	26
61	Solvothermal synthesis of monodisperse iron oxides with various morphologies and their applications in removal of Cr(vi). CrystEngComm, 2011, 13, 2727.	1.3	25
62	Direct Electrochemical Protonation of Metal Oxide Particles. Journal of the American Chemical Society, 2021, 143, 9236-9243.	6.6	25
63	Crystal facet-dependent frustrated Lewis pairs on dual-metal hydroxide for photocatalytic CO2 reduction. Applied Catalysis B: Environmental, 2022, 300, 120748.	10.8	25
64	Temperature-controlled evolution of microstructures that promote charge separation in a TaON photoanode for enhanced solar energy conversion. Journal of Materials Chemistry A, 2017, 5, 12848-12855.	5.2	24
65	Novel Cobalt Germanium Hydroxide for Electrochemical Water Oxidation. ACS Applied Materials & Interfaces, 2018, 10, 30357-30366.	4.0	22
66	Incorporating pâ€Phenylene as an Electronâ€Đonating Group into Graphitic Carbon Nitride for Efficient Charge Separation. ChemSusChem, 2019, 12, 4285-4292.	3.6	22
67	Variable-valence ion and heterointerface accelerated electron transfer kinetics of electrochemical water splitting. Journal of Materials Chemistry A, 2022, 10, 12391-12399.	5.2	21
68	Basic Molten Salt Route to Prepare Porous SrTiO₃ Nanocrystals for Efficient Photocatalytic Hydrogen Production. European Journal of Inorganic Chemistry, 2014, 2014, 3731-3735.	1.0	19
69	Spin unlocking oxygen evolution reaction on antiperovskite nitrides. Journal of Materials Chemistry A, 2021, 9, 25435-25444.	5.2	19
70	Inorganic ions promoted photocatalysis based on polymer photocatalyst. Applied Catalysis B: Environmental, 2014, 158-159, 321-328.	10.8	18
71	N-Doped Graphene-Coated Commercial Pt/C Catalysts toward High-Stability and Antipoisoning in Oxygen Reduction Reaction. Journal of Physical Chemistry Letters, 2022, 13, 2019-2026.	2.1	18
72	Solid Solution Photocatalyst with Spontaneous Polarization Exhibiting Low Recombination Toward Efficient CO₂ Photoreduction. ChemSusChem, 2016, 9, 2064-2068.	3.6	17

#	Article	IF	Citations
73	Inorganic Frustrated Lewis Pairs in Photocatalytic CO₂ Reduction. ChemPhotoChem, 2021, 5, 495-501.	1.5	17
74	Reactive Inorganic Vapor Deposition of Perovskite Oxynitride Films for Solar Energy Conversion. Research, 2019, 2019, 9282674.	2.8	17
75	Molten salt-assisted a-axis-oriented growth of Ta₃N₅ nanorod arrays with enhanced charge transport for efficient photoelectrochemical water oxidation. CrystEngComm, 2018, 20, 5364-5369.	1.3	16
76	KOH-modified Ni/LaTiO2N Schottky junction efficiently reducing CO2 to CH4 under visible light irradiation. Applied Catalysis B: Environmental, 2019, 244, 786-794.	10.8	16
77	Modeling of Zinc Bromine redox flow battery with application to channel design. Journal of Power Sources, 2020, 450, 227436.	4.0	16
78	Formation of Hexagonal PdSe₂ for Electronics and Catalysis. Journal of Physical Chemistry C, 2020, 124, 10935-10940.	1.5	16
79	Formation of 3D interconnectively macro/mesoporous TiO₂ sponges through gelation of lotus root starch toward CO₂ photoreduction into hydrocarbon fuels. RSC Advances, 2014, 4, 43172-43177.	1.7	15
80	Highâ€Performance and Stable Silicon Photoanode Modified by Crystalline Ni@ Amorphous Co Coreâ€Shell Nanoparticles. ChemCatChem, 2018, 10, 5025-5031.	1.8	14
81	Polaron States as a Massive Electron-Transfer Pathway at Heterojunction Interface. Journal of Physical Chemistry Letters, 2020, 11, 9184-9194.	2.1	14
82	In Situ Determination of Polaron-Mediated Ultrafast Electron Trapping in Rutile TiO₂ Nanorod Photoanodes. Journal of Physical Chemistry Letters, 2021, 12, 10815-10822.	2.1	14
83	ALD-grown oxide protective layers on Ta3N5â€“Cu2O nâ€“p nanoarray heterojunction for improved photoelectrochemical water splitting. Applied Physics Letters, 2020, 117, 163902.	1.5	13
84	Template-Assisted Surface Hydrophilicity of Graphitic Carbon Nitride for Enhanced Photocatalytic H₂ Evolution. ACS Applied Energy Materials, 2021, 4, 12965-12973.	2.5	13
85	Lewis acid activated CO₂ reduction over a Ni modified Niâ€“Ge hydroxide driven by visible-infrared light. Dalton Transactions, 2019, 48, 1672-1679.	1.6	12
86	Silicon Photoanode Modified with Workâ€functionâ€tuned Ni@Fe_yNi_{1â^'y}(OH)₂ Coreâ€Shell Particles for Water Oxidation. ChemSusChem, 2020, 13, 6037-6044.	3.6	11
87	Bi particles with exposed (012) facet on 3D substrate as highly active and durable electrode for CO2 reduction to formate. Journal of CO2 Utilization, 2022, 55, 101797.	3.3	10
88	Lowâ€Workâ€Function Silver Activating Nâ€doped Graphene as Efficient Oxygen Reduction Catalysts in Acidic Medium. ChemCatChem, 2019, 11, 1033-1038.	1.8	9
89	A hierarchical dual-phase photoetching template route to assembling functional layers on Si photoanode with tunable nanostructures for efficient water splitting. Applied Catalysis B: Environmental, 2019, 259, 118115.	10.8	9
90	A Novel Visibleâ€Lightâ€Responsive Semiconductor ScTaO_{4â^'x}N_x for Photocatalytic Oxygen and Hydrogen Evolution Reactions. ChemCatChem, 2021, 13, 180-184.	1.8	8

#	Article	IF	Citations
91	Heatâ€“Electricity Coupling Driven Cascade Oxidation Reaction of Redox Couple and Water. Journal of Physical Chemistry Letters, 2022, 13, 49-57.	2.1	8
92	Heatâ€Triggered Ferriâ€toâ€Paramagnetic Transition Accelerates Redox Coupleâ€Mediated Electrocatalytic Water Oxidation. Advanced Functional Materials, 2022, 32, .	7.8	8
93	One-step synthesis of single crystalline wedge-shaped Ta₃N₅ nanoflakes with ultrathin top ends. CrystEngComm, 2019, 21, 2980-2984.	1.3	7
94	Catalytic reduction of NOx by CO over a Niâ€“Ga based oxide catalyst. Journal of Materials Chemistry A, 2015, 3, 15133-15140.	5.2	6
95	In situ formed oxy/hydroxide antennas accelerating the water dissociation kinetics on a Co@N-doped carbon coreâ€“shell assembly for hydrogen production in alkaline solution. Dalton Transactions, 2019, 48, 11927-11933.	1.6	6
96	Enhanced charge separation by oriented growth of Ta3N5-Cu2O n-p array heterojunction. Applied Physics Letters, 2019, 114, .	1.5	6
97	Synthesis of Hydroxyl-Group-Rich Single-Crystalline SrTaO₂N from Single-Crystalline NaTaO₃ by Topotactic Transformation. Crystal Growth and Design, 2020, 20, 4307-4312.	1.4	6
98	Ni2P as an electron donor stabilizing Pt for highly efficient isopropanol fuel cell. International Journal of Hydrogen Energy, 2020, 45, 6573-6582.	3.8	6
99	Anatase Mg0.05Ta0.95O1.15N0.85: a novel photocatalyst for solar hydrogen production. RSC Advances, 2016, 6, 86240-86244.	1.7	5
100	Solid-state redox couple mediated water splitting. Dalton Transactions, 2021, 50, 2722-2725.	1.6	5
101	Silicon photoanodes partially covered by Ni@Fe core-shell particles with in situ formed gradient-enhanced junction electric field for photoelectrochemical water oxidation. Applied Physics Letters, 2019, 115, .	1.5	4
102	Selectively triggering photoelectrons for CO₂ to CH₄ reduction over SrTiO₃ {110} facet with dual-metal sites. Nanotechnology, 2022, 33, 100401.	1.3	4
103	Galvanic cell reaction driven electrochemical doping of TiO2 nanotube photoanodes for enhanced charge separation. Chemical Communications, 2018, 54, 11116-11119.	2.2	3
104	Surface polaron states on single-crystal rutile TiO2 nanorod arrays enhancing charge separation and transfer. Dalton Transactions, 2020, 49, 15054-15060.	1.6	3
105	Synthesis of mesoporous strontium titanate by molten salt assisted templateâ€free method. Journal of the American Ceramic Society, 2019, 102, 4325-4332.	1.9	1
106	Physical Basis of Multi-Energy Coupling-Driven Water Oxidation. Frontiers in Chemistry, 2022, 10, .	1.8	1