Fang-Xing Xiao

List of Publications by Year
in descending order

88 papers	6,428 citations	66343 42 h-index	64796 79 g-index
91 all docs	91 docs citations	91 times ranked	9080 citing authors

#	Article	IF	Citations
1	Carbon nanotube catalysts: recent advances in synthesis, characterization and applications. Chemical Society Reviews, 2015, 44, 3295-3346.	38.1	586
2	Hierarchical Ni-Mo-S nanosheets on carbon fiber cloth: A flexible electrode for efficient hydrogen generation in neutral electrolyte. Science Advances, 2015, 1, e1500259.	10.3	427
3	Layer-by-Layer Self-Assembly of CdS Quantum Dots/Graphene Nanosheets Hybrid Films for Photoelectrochemical and Photocatalytic Applications. Journal of the American Chemical Society, 2014, 136, 1559-1569.	13.7	413
4	Construction of Highly Ordered ZnOâ€“TiO₂ Nanotube Arrays (ZnO/TNTs) Heterostructure for Photocatalytic Application. ACS Applied Materials & Interfaces, 2012, 4, 7055-7063.	8.0	294
5	Layer-by-layer assembly of versatile nanoarchitectures with diverse dimensionality: a new perspective for rational construction of multilayer assemblies. Chemical Society Reviews, 2016, 45, 3088-3121.	38.1	294
6	Metalâ€Clusterâ€Decorated TiO₂ Nanotube Arrays: A Composite Heterostructure toward Versatile Photocatalytic and Photoelectrochemical Applications. Small, 2015, 11, 554-567.	10.0	237
7	Oneâ€Dimensional Hybrid Nanostructures for Heterogeneous Photocatalysis and Photoelectrocatalysis. Small, 2015, 11, 2115-2131.	10.0	213
8	Bridging the Gap: Electron Relay and Plasmonic Sensitization of Metal Nanocrystals for Metal Clusters. Journal of the American Chemical Society, 2015, 137, 10735-10744.	13.7	141
9	Graphene Oxide Quantum Dots Covalently Functionalized PVDF Membrane with Significantly-Enhanced Bactericidal and Antibiofouling Performances. Scientific Reports, 2016, 6, 20142.	3.3	136
10	Layer-by-Layer Self-Assembly Construction of Highly Ordered Metal-TiO₂ Nanotube Arrays Heterostructures (M/TNTs, M = Au, Ag, Pt) with Tunable Catalytic Activities. Journal of Physical Chemistry C, 2012, 116, 16487-16498.	3.1	135
11	Graphene quantum dots (GQDs) and its derivatives for multifarious photocatalysis and photoelectrocatalysis. Catalysis Today, 2018, 315, 171-183.	4.4	135
12	Hierarchical Î±â€MnO₂ Nanowires@Ni_{1â€x}Mn_xO_y Nanoflakes Coreâ€“Shell Nanostructures for Supercapacitors. Small, 2014, 10, 3181-3186.	10.0	118
13	Iridium Oxideâ€Assisted Plasmonâ€Induced Hot Carriers: Improvement on Kinetics and Thermodynamics of Hot Carriers. Advanced Energy Materials, 2016, 6, 1501339.	19.5	111
14	Spatially branched hierarchical ZnO nanorod-TiO₂nanotube array heterostructures for versatile photocatalytic and photoelectrocatalytic applications: towards intimate integration of 1Dâ€“1D hybrid nanostructures. Nanoscale, 2014, 6, 14950-14961.	5.6	101
15	Metalâ€“Organic Frameworks as Promising Photosensitizers for Photoelectrochemical Water Splitting. Advanced Science, 2016, 3, 1500243.	11.2	100
16	Unraveling the cooperative synergy of zero-dimensional graphene quantum dots and metal nanocrystals enabled by layer-by-layer assembly. Journal of Materials Chemistry A, 2018, 6, 1700-1713.	10.3	99
17	Regulating spatial charge transfer over intrinsically ultrathin-carbon-encapsulated photoanodes toward solar water splitting. Journal of Materials Chemistry A, 2019, 7, 2741-2753.	10.3	96
18	Plasmonâ€Dictated Photoâ€Electrochemical Water Splitting for Solarâ€toâ€Chemical Energy Conversion: Current Status and Future Perspectives. Advanced Materials Interfaces, 2018, 5, 1701098.	3.7	92

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19	A green and facile self-assembly preparation of gold nanoparticles/ZnO nanocomposite for photocatalytic and photoelectrochemical applications. Journal of Materials Chemistry, 2012, 22, 2868.	6.7	90
20	Self-assembly of hierarchically ordered CdS quantum dotsâ€“TiO2 nanotube array heterostructures as efficient visible light photocatalysts for photoredox applications. Journal of Materials Chemistry A, 2013, 1, 12229.	10.3	89
21	Insight into the charge transport correlation in Au_x clusters and graphene quantum dots deposited on TiO₂ nanotubes for photoelectrochemical oxygen evolution. Journal of Materials Chemistry A, 2018, 6, 11154-11162.	10.3	89
22	In situ etching-induced self-assembly of metal cluster decorated one-dimensional semiconductors for solar-powered water splitting: unraveling cooperative synergy by photoelectrochemical investigations. Nanoscale, 2017, 9, 17118-17132.	5.6	88
23	Self-assembly preparation of gold nanoparticles-TiO2 nanotube arrays binary hybrid nanocomposites for photocatalytic applications. Journal of Materials Chemistry, 2012, 22, 7819.	6.7	85
24	Electrochemical construction of hierarchically ordered CdSe-sensitized TiO₂nanotube arrays: towards versatile photoelectrochemical water splitting and photoredox applications. Nanoscale, 2014, 6, 6727-6737.	5.6	85
25	Elegant Z-scheme-dictated g-C₃N₄ enwrapped WO₃ superstructures: a multifarious platform for versatile photoredox catalysis. Journal of Materials Chemistry A, 2017, 5, 15601-15612.	10.3	83
26	Enhancement of photocatalytic properties of TiO2 nanoparticles doped with CeO2 and supported on SiO2 for phenol degradation. Applied Surface Science, 2015, 331, 17-26.	6.1	82
27	Modulation of interfacial charge transfer by self-assembly of single-layer graphene enwrapped one-dimensional semiconductors toward photoredox catalysis. Journal of Materials Chemistry A, 2017, 5, 23681-23693.	10.3	72
28	Tuning the Electronic Spin State of Catalysts by Strain Control for Highly Efficient Water Electrolysis. Small Methods, 2018, 2, 1800001.	8.6	70
29	On the role of low-energy electrons in the radiosensitization of DNA by gold nanoparticles. Nanotechnology, 2011, 22, 465101.	2.6	69
30	Self-assembly of aligned rutile@anatase TiO₂nanorod@CdS quantum dots ternary coreâ€“shell heterostructure: cascade electron transfer by interfacial design. Materials Horizons, 2014, 1, 259-263.	12.2	69
31	Revisiting one-dimensional TiO2 based hybrid heterostructures for heterogeneous photocatalysis: a critical review. Materials Chemistry Frontiers, 2017, 1, 231-250.	5.9	67
32	Branched polymer-incorporated multi-layered heterostructured photoanode: precisely tuning directional charge transfer toward solar water oxidation. Journal of Materials Chemistry A, 2020, 8, 177-189.	10.3	65
33	Self-assembly of a Ag nanoparticle-modified and graphene-wrapped TiO₂nanobelt ternary heterostructure: surface charge tuning toward efficient photocatalysis. Nanoscale, 2014, 6, 11293-11302.	5.6	64
34	Plasmon-induced photoelectrochemical water oxidation enabled by <i>in situ</i> layer-by-layer construction of cascade charge transfer channel in multilayered photoanode. Journal of Materials Chemistry A, 2018, 6, 24686-24692.	10.3	62
35	Revisiting the construction of grapheneâ€“CdS nanocomposites as efficient visible-light-driven photocatalysts for selective organic transformation. Journal of Materials Chemistry A, 2014, 2, 5330-5339.	10.3	59
36	Light-Induced In Situ Transformation of Metal Clusters to Metal Nanocrystals for Photocatalysis. ACS Applied Materials & Interfaces, 2015, 7, 28105-28109.	8.0	59

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37	Layer-by-layer assembly of nitrogen-doped graphene quantum dots monolayer decorated one-dimensional semiconductor nanoarchitectures for solar-driven water splitting. Journal of Materials Chemistry A, 2016, 4, 16383-16393.	10.3	59
38	Unexpected Boosted Solar Water Oxidation by Nonconjugated Polymer-Mediated Tandem Charge Transfer. Journal of the American Chemical Society, 2020, 142, 21899-21912.	13.7	59
39	Cascade charge transfer mediated by <i>in situ</i> interface modulation toward solar hydrogen production. Journal of Materials Chemistry A, 2019, 7, 8938-8951.	10.3	57
40	An Overview of Solar-Driven Photoelectrochemical CO₂ Conversion to Chemical Fuels. ACS Catalysis, 2022, 12, 9023-9057.	11.2	51
41	Self-assembly of metal/semiconductor heterostructures via ligand engineering: unravelling the synergistic dual roles of metal nanocrystals toward plasmonic photoredox catalysis. Nanoscale, 2017, 9, 16922-16936.	5.6	50
42	Precise Tuning of Coordination Positions for Transition-Metal Ions via Layer-by-Layer Assembly To Enhance Solar Hydrogen Production. ACS Applied Materials & Interfaces, 2020, 12, 4373-4384.	8.0	44
43	Stimulating Charge Transfer Over Quantum Dots via Ligand-Triggered Layer-by-Layer Assembly toward Multifarious Photoredox Organic Transformation. Journal of Physical Chemistry C, 2019, 123, 9721-9734.	3.1	41
44	Ligand-Triggered Tunable Charge Transfer toward Multifarious Photoreduction Catalysis. Journal of Physical Chemistry C, 2019, 123, 4701-4714.	3.1	41
45	All-in-one: branched macromolecule-protected metal nanocrystals as integrated charge separation/motion centers for enhanced photocatalytic selective organic transformations. Journal of Materials Chemistry A, 2020, 8, 16392-16404.	10.3	41
46	General self-assembly of metal/metal chalcogenide heterostructures initiated by a surface linker: modulating tunable charge flow toward versatile photoredox catalysis. Journal of Materials Chemistry A, 2019, 7, 21182-21194.	10.3	40
47	Probing the Advantageous Photosensitization Effect of Metal Nanoclusters over Plasmonic Metal Nanocrystals in Photoelectrochemical Water Splitting. Journal of Physical Chemistry C, 2020, 124, 4989-4998.	3.1	40
48	Charge transfer modulation in layer-by-layer-assembled multilayered photoanodes for solar water oxidation. Journal of Materials Chemistry A, 2019, 7, 22487-22499.	10.3	39
49	Tuning atomically precise metal nanocluster mediated photoelectrocatalysis <i>via</i> a non-conjugated polymer. Journal of Materials Chemistry A, 2022, 10, 4032-4042.	10.3	39
50	Maneuvering Intrinsic Instability of Metal Nanoclusters for Boosted Solar-Powered Hydrogen Production. Journal of Physical Chemistry Letters, 2020, 11, 9138-9143.	4.6	38
51	Doping-induced structural evolution from rutile to anatase: formation of Nb-doped anatase TiO₂nanosheets with high photocatalytic activity. Journal of Materials Chemistry A, 2016, 4, 6926-6932.	10.3	36
52	Mesoporous implantable Pt/SrTiO3:C,N nanocuboids delivering enhanced photocatalytic H2-production activity via plasmon-induced interfacial electron transfer. Applied Catalysis B: Environmental, 2018, 236, 338-347.	20.2	35
53	Cleavage Enhancement of Specific Chemical Bonds in DNA by Cisplatin Radiosensitization. Journal of Physical Chemistry B, 2013, 117, 4893-4900.	2.6	34
54	An ambipolar azaacene as a stable photocathode for metal-free light-driven water reduction. Materials Chemistry Frontiers, 2017, 1, 495-498.	5.9	33

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55	Modulating charge migration in photoredox organic transformation <i>via</i> exquisite interface engineering. Journal of Materials Chemistry A, 2020, 8, 8360-8375.	10.3	31
56	Unlocking photoredox selective organic transformation over metal-free 2D transition metal chalcogenides-MXene heterostructures. Journal of Catalysis, 2020, 391, 485-496.	6.2	30
57	Unleashing Insulating Polymer as Charge Transport Cascade Mediator. Advanced Functional Materials, 2022, 32, .	14.9	30
58	Selective organic transformation over a self-assembled all-solid-state Z-scheme coreâ€“shell photoredox system. Journal of Materials Chemistry A, 2020, 8, 20151-20161.	10.3	29
59	Polymerâ€Mediated Electron Tunneling Towards Solar Water Oxidation. Advanced Functional Materials, 2022, 32, 2106338.	14.9	29
60	Stabilizing atomically precise metal nanoclusters as simultaneous charge relay mediators and photosensitizers. Journal of Materials Chemistry A, 2022, 10, 7006-7012.	10.3	29
61	Atomically Precise Metal Nanocluster-Mediated Photocatalysis. ACS Catalysis, 2022, 12, 4216-4226.	11.2	29
62	Assembly of a CdS quantum dotâ€“TiO₂ nanobelt heterostructure for photocatalytic application: towards an efficient visible light photocatalyst via facile surface charge tuning. New Journal of Chemistry, 2015, 39, 279-286.	2.8	28
63	Boosting Charge-Transfer Efficiency by Simultaneously Tuning Double Effects of Metal Nanocrystal in Z-Scheme Photocatalytic Redox System. Journal of Physical Chemistry C, 2018, 122, 12291-12306.	3.1	28
64	Self-transformation of ultra-small gold nanoclusters to gold nanocrystals toward boosted photoreduction catalysis. Chemical Communications, 2019, 55, 10591-10594.	4.1	28
65	Ligand-triggered electrostatic self-assembly of CdS nanosheet/Au nanocrystal nanocomposites for versatile photocatalytic redox applications. Nanoscale, 2016, 8, 19161-19173.	5.6	24
66	Partially Self-Transformed Transition-Metal Chalcogenide Interim Layer: Motivating Charge Transport Cascade for Solar Hydrogen Evolution. Inorganic Chemistry, 2020, 59, 2562-2574.	4.0	24
67	Linker-assisted assembly of 1D TiO2 nanobelts/3D CdS nanospheres hybrid heterostructure as efficient visible light photocatalyst. Applied Catalysis A: General, 2016, 521, 50-56.	4.3	23
68	Electrochemically anodized one-dimensional semiconductors: a fruitful platform for solar energy conversion. JPhys Energy, 2019, 1, 022002.	5.3	20
69	Nanoporous 2D semiconductors encapsulated by quantum-sized graphitic carbon nitride: tuning directional photoinduced charge transfer <i>via</i> nano-architecture modulation. Catalysis Science and Technology, 2019, 9, 672-687.	4.1	19
70	General Layer-by-Layer Assembly of Multilayered Photoanodes: Triggering Tandem Charge Transport toward Photoelectrochemical Water Oxidation. Inorganic Chemistry, 2020, 59, 7325-7334.	4.0	18
71	MXene-motivated accelerated charge transfer over TMCs quantum dots for solar-powered photoreduction catalysis. Journal of Catalysis, 2021, 404, 56-66.	6.2	18
72	Unleashing non-conjugated polymers as charge relay mediators. Chemical Science, 2022, 13, 497-509.	7.4	17

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73	Solar-Powered Photocatalysis and Photoelectrocatalysis over Atomically Precise Metal Nanoclusters. Journal of Physical Chemistry C, 2021, 125, 22421-22428.	3.1	15
74	Modulating Unidirectional Charge Transfer via in Situ Etching-Accompanied Layer-By-Layer Self-Assembly toward Multifarious Photoredox Catalysis. Journal of Physical Chemistry C, 2019, 123, 28066-28080.	3.1	14
75	Fine tuning of charge motion over homogeneous transient metal chalcogenides heterostructured photoanodes for photoelectrochemical water splitting. Chemical Engineering Journal, 2022, 433, 133641.	12.7	13
76	Layer-by-Layer Self-Assembly of Metal/Metal Oxide Superstructures: Self-Etching Enables Boosted Photoredox Catalysis. Inorganic Chemistry, 2020, 59, 4129-4139.	4.0	12
77	Charge Transport Surmounting Hierarchical Ligand Confinement toward Multifarious Photoredox Catalysis. Inorganic Chemistry, 2020, 59, 1364-1375.	4.0	11
78	A novel route for self-assembly of gold nanoparticleâ€“TiO2 nanotube array (Au/TNTs) heterostructure for versatile catalytic applications: pinpoint position via hierarchically dendritic ligand. RSC Advances, 2012, 2, 12699.	3.6	10
79	Electron tunneling through interim ligand layers towards photoredox selective organic transformation. Journal of Catalysis, 2021, 400, 28-39.	6.2	8
80	Ultrathin carbon interim layer encapsulation for constructing pÂâˆ’Ân heterojunction photoanode towards photoelectrochemical water splitting. Catalysis Communications, 2022, 162, 106399.	3.3	7
81	Self-assembly of graphene-encapsulated antimony sulfide nanocomposites for photoredox catalysis: boosting charge transfer <i>via</i> interface configuration modulation. New Journal of Chemistry, 2019, 43, 13837-13849.	2.8	6
82	Intercalating ultrathin polymer interim layer for charge transfer cascade towards solar-powered selective organic transformation. Journal of Catalysis, 2021, 399, 150-161.	6.2	6
83	TiO2 Nanotubes: Metal-Cluster-Decorated TiO2 Nanotube Arrays: A Composite Heterostructure toward Versatile Photocatalytic and Photoelectrochemical Applications (Small 5/2015). Small, 2015, 11, 553-553.	10.0	5
84	Precisely Modulating the Photosensitization Efficiency of Transition-Metal Chalcogenide Quantum Dots toward Solar Water Oxidation. Inorganic Chemistry, 2022, 61, 1188-1194.	4.0	5
85	Confinement of Quantum Dots in between Monolayered Graphene Nanosheets for Arousing Boosted Multifarious Photoredox Selective Organic Transformation. Inorganic Chemistry, 2020, 59, 16654-16664.	4.0	4
86	Precise interface modulation cascade enables unidirectional charge transport. Journal of Catalysis, 2022, 410, 31-41.	6.2	2
87	1D TiO2 Nanotube-Based Photocatalysts. Green Chemistry and Sustainable Technology, 2016, , 151-173.	0.7	1
88	Nanostructures: Iridium Oxideâ€Assisted Plasmonâ€Induced Hot Carriers: Improvement on Kinetics and Thermodynamics of Hot Carriers (Adv. Energy Mater. 8/2016). Advanced Energy Materials, 2016, 6, .	19.5	0