Haoyu Fu

List of Publications by Year
in descending order

124 papers	14,947 citations	15466 65 h-index	19136 118 g-index
125 all docs	125 docs citations	125 times ranked	18628 citing authors

#	Article	IF	Citations
1	Nanomaterials for energy conversion and storage. Chemical Society Reviews, 2013, 42, 3127.	18.7	1,356
2	Nanostructured carbon for energy storage and conversion. Nano Energy, 2012, 1, 195-220.	8.2	895
3	Understanding electrochemical potentials of cathode materials in rechargeable batteries. Materials Today, 2016, 19, 109-123.	8.3	811
4	Hydrogenated Li₄Ti₅O₁₂ Nanowire Arrays for High Rate Lithium Ion Batteries. Advanced Materials, 2012, 24, 6502-6506.	11.1	451
5	Synthesis and Enhanced Intercalation Properties of Nanostructured Vanadium Oxides. Chemistry of Materials, 2006, 18, 2787-2804.	3.2	428
6	MoSe2 nanosheets perpendicularly grown on graphene with Moâ€“C bonding for sodium-ion capacitors. Nano Energy, 2018, 47, 224-234.	8.2	358
7	Highly Efficient and Stable Perovskite Solar Cells Based on Monolithically Grained CH₃NH₃PbI₃ Film. Advanced Energy Materials, 2017, 7, 1602017.	10.2	291
8	ZnO cathode buffer layers for inverted polymer solar cells. Energy and Environmental Science, 2015, 8, 3442-3476.	15.6	279
9	From scalable solution fabrication of perovskite films towards commercialization of solar cells. Energy and Environmental Science, 2019, 12, 518-549.	15.6	269
10	Facile synthesis of ultrathin NiCo₂S₄ nano-petals inspired by blooming buds for high-performance supercapacitors. Journal of Materials Chemistry A, 2017, 5, 7144-7152.	5.2	251
11	Novel Carbonâ€Encapsulated Porous SnO₂ Anode for Lithiumâ€Ion Batteries with Much Improved Cyclic Stability. Small, 2016, 12, 1945-1955.	5.2	247
12	Beyond Li-ion: electrode materials for sodium- and magnesium-ion batteries. Science China Materials, 2015, 58, 715-766.	3.5	241
13	Revitalized interest in vanadium pentoxide as cathode material for lithium-ion batteries and beyond. Energy Storage Materials, 2018, 11, 205-259.	9.5	221
14	Co₃S₄@polyaniline nanotubes as high-performance anode materials for sodium ion batteries. Journal of Materials Chemistry A, 2016, 4, 5505-5516.	5.2	204
15	Mesocrystal MnO cubes as anode for Li-ion capacitors. Nano Energy, 2016, 22, 290-300.	8.2	189
16	A low crystallinity oxygen-vacancy-rich Co₃O₄ cathode for high-performance flexible asymmetric supercapacitors. Journal of Materials Chemistry A, 2018, 6, 16094-16100.	5.2	182
17	Enhanced Performance of CdS/CdSe Quantum Dot Cosensitized Solar Cells via Homogeneous Distribution of Quantum Dots in TiO₂ Film. Journal of Physical Chemistry C, 2012, 116, 18655-18662.	1.5	176
18	Fast and Reversible Li Ion Insertion in Carbonâ€Encapsulated Li₃VO₄ as Anode for Lithiumâ€Ion Battery. Advanced Functional Materials, 2015, 25, 3497-3504.	7.8	173

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19	Encapsulation of CoS_x Nanocrystals into N/S Coâ€Doped Honeycombâ€Like 3D Porous Carbon for Highâ€Performance Lithium Storage. Advanced Science, 2018, 5, 1800829.	5.6	172
20	Sn-Doped V₂O₅ Film with Enhanced Lithium-Ion Storage Performance. Journal of Physical Chemistry C, 2013, 117, 23507-23514.	1.5	170
21	Walnut-like Porous Core/Shell TiO₂ with Hybridized Phases Enabling Fast and Stable Lithium Storage. ACS Applied Materials & Interfaces, 2017, 9, 10652-10663.	4.0	169
22	Flexible and Wearable Allâ€Solidâ€State Supercapacitors with Ultrahigh Energy Density Based on a Carbon Fiber Fabric Electrode. Advanced Energy Materials, 2017, 7, 1700409.	10.2	169
23	Exploiting Highâ€Performance Anode through Tuning the Character of Chemical Bonds for Liâ€Ion Batteries and Capacitors. Advanced Energy Materials, 2017, 7, 1601127.	10.2	149
24	Lamellar MoSe₂nanosheets embedded with MoO₂nanoparticles: novel hybrid nanostructures promoted excellent performances for lithium ion batteries. Nanoscale, 2016, 8, 17902-17910.	2.8	143
25	rGO/SnS₂/TiO₂heterostructured composite with dual-confinement for enhanced lithium-ion storage. Journal of Materials Chemistry A, 2017, 5, 25056-25063.	5.2	136
26	Template-free synthesis of ultra-large V2O5 nanosheets with exceptional small thickness for high-performance lithium-ion batteries. Nano Energy, 2015, 13, 58-66.	8.2	135
27	Monolithic MAPbI₃ films for high-efficiency solar cells via coordination and a heat assisted process. Journal of Materials Chemistry A, 2017, 5, 21313-21319.	5.2	132
28	A promising cathode for Li-ion batteries: Li3V2(PO4)3. Energy Storage Materials, 2016, 4, 15-58.	9.5	129
29	A highly efficient (>6%) Cd_{1â^'x}Mn_xSe quantum dot sensitized solar cell. Journal of Materials Chemistry A, 2014, 2, 19653-19659.	5.2	126
30	Design of coherent anode materials with 0D Ni₃S₂nanoparticles self-assembled on 3D interconnected carbon networks for fast and reversible sodium storage. Journal of Materials Chemistry A, 2017, 5, 7394-7402.	5.2	125
31	ZnO/TiO₂nanocable structured photoelectrodes for CdS/CdSe quantum dot co-sensitized solar cells. Nanoscale, 2013, 5, 936-943.	2.8	124
32	Energy storage through intercalation reactions: electrodes for rechargeable batteries. National Science Review, 2017, 4, 26-53.	4.6	122
33	Phosphorized SnO₂/graphene heterostructures for highly reversible lithium-ion storage with enhanced pseudocapacitance. Journal of Materials Chemistry A, 2018, 6, 3479-3487.	5.2	117
34	Reversible and fast Na-ion storage in MoO2/MoSe2 heterostructures for high energy-high power Na-ion capacitors. Energy Storage Materials, 2018, 12, 241-251.	9.5	117
35	Layered ternary metal oxides: Performance degradation mechanisms as cathodes, and design strategies for high-performance batteries. Progress in Materials Science, 2020, 111, 100655.	16.0	115
36	Chemical Synthesis of 3D Grapheneâ€Like Cages for Sodiumâ€Ion Batteries Applications. Advanced Energy Materials, 2017, 7, 1700797.	10.2	113

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37	Doubling the power conversion efficiency in CdS/CdSe quantum dot sensitized solar cells with a ZnSe passivation layer. Nano Energy, 2016, 26, 114-122.	8.2	112
38	Sulfur-deficient MoS₂ grown inside hollow mesoporous carbon as a functional polysulfide mediator. Journal of Materials Chemistry A, 2019, 7, 12068-12074.	5.2	112
39	Oxygen-deficient titanium dioxide as a functional host for lithiumâ€“sulfur batteries. Journal of Materials Chemistry A, 2019, 7, 10346-10353.	5.2	109
40	Self-templated synthesis of N-doped CoSe2/C double-shelled dodecahedra for high-performance supercapacitors. Energy Storage Materials, 2017, 8, 28-34.	9.5	107
41	Mesoporous TiO2 beads for high efficiency CdS/CdSe quantum dot co-sensitized solar cells. Journal of Materials Chemistry A, 2014, 2, 2517.	5.2	102
42	Control of Nanostructures and Interfaces of Metal Oxide Semiconductors for Quantum-Dots-Sensitized Solar Cells. Journal of Physical Chemistry Letters, 2015, 6, 1859-1869.	2.1	102
43	Facile synthesis of nanorod-assembled multi-shelled Co3O4 hollow microspheres for high-performance supercapacitors. Journal of Power Sources, 2014, 272, 107-112.	4.0	101
44	Mechanism of cycling degradation and strategy to stabilize a nickel-rich cathode. Journal of Materials Chemistry A, 2018, 6, 16149-16163.	5.2	97
45	Enhanced Lithium-Ion Intercalation Properties of V₂O₅ Xerogel Electrodes with Surface Defects. Journal of Physical Chemistry C, 2011, 115, 4959-4965.	1.5	96
46	Enhanced storage of sodium ions in Prussian blue cathode material through nickel doping. Journal of Materials Chemistry A, 2017, 5, 9604-9610.	5.2	95
47	Three dimensional architecture of carbon wrapped multilayer Na₃V₂O₂(PO₄)₂F nanocubes embedded in graphene for improved sodium ion batteries. Journal of Materials Chemistry A, 2015, 3, 17563-17568.	5.2	91
48	Rational design of multi-shelled CoO/Co₉S₈ hollow microspheres for high-performance hybrid supercapacitors. Journal of Materials Chemistry A, 2017, 5, 18448-18456.	5.2	91
49	Heterogeneous NiS/NiO multi-shelled hollow microspheres with enhanced electrochemical performances for hybrid-type asymmetric supercapacitors. Journal of Materials Chemistry A, 2018, 6, 9153-9160.	5.2	90
50	Constructing water-resistant CH₃NH₃PbI₃perovskite films via coordination interaction. Journal of Materials Chemistry A, 2016, 4, 17018-17024.	5.2	89
51	Colloidal engineering for monolayer CH₃NH₃PbI₃ films toward high performance perovskite solar cells. Journal of Materials Chemistry A, 2017, 5, 24168-24177.	5.2	87
52	High Efficiency CdS/CdSe Quantum Dot Sensitized Solar Cells with Two ZnSe Layers. ACS Applied Materials & Interfaces, 2016, 8, 34482-34489.	4.0	85
53	Freestanding flexible graphene foams@polypyrrole@MnO₂ electrodes for high-performance supercapacitors. Journal of Materials Chemistry A, 2016, 4, 9196-9203.	5.2	83
54	Superior Pseudocapacitive Lithium-Ion Storage in Porous Vanadium Oxides@C Heterostructure Composite. ACS Applied Materials & Interfaces, 2017, 9, 43665-43673.	4.0	83

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55	Engineering Halide Perovskite Crystals through Precursor Chemistry. Small, 2019, 15, e1903613.	5.2	82
56	Uniform 8LiFePO 4 Â·Li 3 V 2 (PO 4) 3 /C nanoflakes for high-performance Li-ion batteries. Nano Energy, 2016, 22, 48-58.	8.2	80
57	High performance of Mn-doped CdSe quantum dot sensitized solar cells based on the vertical ZnO nanorod arrays. Journal of Power Sources, 2016, 325, 438-445.	4.0	77
58	Efficiency Enhancement of Quantum Dot Sensitized TiO₂/ZnO Nanorod Arrays Solar Cells by Plasmonic Ag Nanoparticles. ACS Applied Materials & Interfaces, 2016, 8, 26675-26682.	4.0	76
59	Constructing ZnO nanorod array photoelectrodes for highly efficient quantum dot sensitized solar cells. Journal of Materials Chemistry A, 2013, 1, 6770.	5.2	74
60	Synergistic coupling of lamellar MoSe2 and SnO2 nanoparticles via chemical bonding at interface for stable and high-power sodium-ion capacitors. Chemical Engineering Journal, 2018, 354, 1164-1173.	6.6	73
61	A comparison of ZnS and ZnSe passivation layers on CdS/CdSe co-sensitized quantum dot solar cells. Journal of Materials Chemistry A, 2016, 4, 14773-14780.	5.2	70
62	Impacts of surface or interface chemistry of ZnSe passivation layer on the performance of CdS/CdSe quantum dot sensitized solar cells. Nano Energy, 2017, 32, 433-440.	8.2	70
63	Enhanced Performance of PbS-quantum-dot-sensitized Solar Cells via Optimizing Precursor Solution and Electrolytes. Scientific Reports, 2016, 6, 23094.	1.6	69
64	Tubular MoO2 organized by 2D assemblies for fast and durable alkali-ion storage. Energy Storage Materials, 2018, 11, 161-169.	9.5	69
65	S-doped porous carbon confined SnS nanospheres with enhanced electrochemical performance for sodium-ion batteries. Journal of Materials Chemistry A, 2018, 6, 18286-18292.	5.2	67
66	Interface Engineering V₂O₅ Nanofibers for Highâ€Energy and Durable Supercapacitors. Small, 2019, 15, e1901747.	5.2	66
67	High-Voltage-Efficiency Inorganic Perovskite Solar Cells in a Wide Solution-Processing Window. Journal of Physical Chemistry Letters, 2018, 9, 3646-3653.	2.1	63
68	SnS Nanosheets Confined Growth by S and N Codoped Graphene with Enhanced Pseudocapacitance for Sodium-Ion Capacitors. ACS Applied Materials & Interfaces, 2019, 11, 41363-41373.	4.0	63
69	Necklace-like Si@C nanofibers as robust anode materials for high performance lithium ion batteries. Science Bulletin, 2019, 64, 261-269.	4.3	63
70	Self-supported binder-free carbon fibers/MnO 2 electrodes derived from disposable bamboo chopsticks for high-performance supercapacitors. Journal of Alloys and Compounds, 2017, 699, 126-135.	2.8	60
71	Carbon quantum dot modified Na₃V₂(PO₄)₂F₃as a high-performance cathode material for sodium-ion batteries. Journal of Materials Chemistry A, 2020, 8, 18872-18879.	5.2	59
72	Tailoring band structure of ternary CdS Se1â^' quantum dots for highly efficient sensitized solar cells. Solar Energy Materials and Solar Cells, 2016, 155, 20-29.	3.0	58

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73	Hydrothermal synthesis of coherent porous V2O3/carbon nanocomposites for high-performance lithium- and sodium-ion batteries. Science China Materials, 2017, 60, 717-727.	3.5	58
74	Tailoring Energy and Power Density through Controlling the Concentration of Oxygen Vacancies in V₂O₅/PEDOT Nanocable-Based Supercapacitors. ACS Applied Materials & Interfaces, 2019, 11, 16647-16655.	4.0	57
75	Superior sodium storage performance of additive-free V₂O₅ thin film electrodes. Journal of Materials Chemistry A, 2017, 5, 16590-16594.	5.2	56
76	Nanostructured manganese dioxide with adjustable Mn3+/Mn4+ ratio for flexible high-energy quasi-solid supercapacitors. Chemical Engineering Journal, 2020, 396, 125342.	6.6	56
77	3D flexible O/N Co-doped graphene foams for supercapacitor electrodes with high volumetric and areal capacitances. Journal of Power Sources, 2016, 336, 455-464.	4.0	54
78	Monolayer-like hybrid halide perovskite films prepared by additive engineering without antisolvents for solar cells. Journal of Materials Chemistry A, 2018, 6, 15386-15394.	5.2	53
79	Synergistic combination of semiconductor quantum dots and organic-inorganic halide perovskites for hybrid solar cells. Coordination Chemistry Reviews, 2018, 374, 279-313.	9.5	51
80	Dynamic Growth of Pinhole-Free Conformal CH3NH3PbI3 Film for Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2016, 8, 4684-4690.	4.0	50
81	Investigation of the role of Mn dopant in CdS quantum dot sensitized solar cell. Electrochimica Acta, 2016, 191, 62-69.	2.6	49
82	High mass loading Ni-decorated Co9S8 with enhanced electrochemical performance for flexible quasi-solid-state asymmetric supercapacitors. Journal of Power Sources, 2019, 423, 106-114.	4.0	48
83	Covalent organic framework-regulated ionic transportation for high-performance lithium-ion batteries. Journal of Materials Chemistry A, 2019, 7, 26540-26548.	5.2	48
84	Enhancing sodium-ion storage performance of MoO2/N-doped carbon through interfacial Mo-N-C bond. Science China Materials, 2021, 64, 85-95.	3.5	48
85	Three-Dimensional Carbon-Coated Treelike Ni₃S₂ Superstructures on a Nickel Foam as Binder-Free Bifunctional Electrodes. ACS Applied Materials & Interfaces, 2018, 10, 36018-36027.	4.0	44
86	Dodecahedron-Shaped Porous Vanadium Oxide and Carbon Composite for High-Rate Lithium Ion Batteries. ACS Applied Materials & Interfaces, 2016, 8, 17303-17311.	4.0	43
87	Continuous Size Tuning of Monodispersed ZnO Nanoparticles and Its Size Effect on the Performance of Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2017, 9, 9785-9794.	4.0	43
88	A novel anion-exchange strategy for constructing high performance PbS quantum dot-sensitized solar cells. Nano Energy, 2016, 30, 559-569.	8.2	40
89	Repairing Defects of Halide Perovskite Films To Enhance Photovoltaic Performance. ACS Applied Materials & Interfaces, 2018, 10, 37005-37013.	4.0	40
90	Improved charge generation and collection in dye-sensitized solar cells with modified photoanode surface. Nano Energy, 2014, 10, 353-362.	8.2	38

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91	Fabrication of hybrid Co3O4/NiCo2O4 nanosheets sandwiched by nanoneedles for high-performance supercapacitors using a novel electrochemical ion exchange. Science China Materials, 2017, 60, 1168-1178.	3.5	38
92	Facile one-step fabrication of CdS_{0.12}Se_{0.88} quantum dots with a ZnSe/ZnS-passivation layer for highly efficient quantum dot sensitized solar cells. Journal of Materials Chemistry A, 2018, 6, 9866-9873.	5.2	38
93	Boosting the cycling stability of hydrated vanadium pentoxide by Y3+ pillaring for sodium-ion batteries. Materials Today Energy, 2019, 11, 218-227.	2.5	38
94	Sodium ion storage performance and mechanism in orthorhombic V2O5 single-crystalline nanowires. Science China Materials, 2021, 64, 557-570.	3.5	36
95	In-situ fabrication of P3HT passivating layer with hole extraction ability for enhanced performance of perovskite solar cell. Chemical Engineering Journal, 2020, 402, 126152.	6.6	35
96	Carbon fabric supported 3D cobalt oxides/hydroxide nanosheet network as cathode for flexible all-solid-state asymmetric supercapacitor. Dalton Transactions, 2018, 47, 11503-11511.	1.6	34
97	Controlled crystallinity and morphologies of 2D Ruddlesden-Popper perovskite films grown without anti-solvent for solar cells. Chemical Engineering Journal, 2020, 394, 124959.	6.6	33
98	Nanoporous carbon leading to the high performance of a Na₃V₂O₂(PO₄)₂F@carbon/graphene cathode in a sodium ion battery. CrystEngComm, 2017, 19, 4287-4293.	1.3	31
99	Surface Engineering of Quantum Dots for Remarkably High Detectivity Photodetectors. Journal of Physical Chemistry Letters, 2018, 9, 3285-3294.	2.1	31
100	Facile fabrication of interconnected-mesoporous T-Nb2O5 nanofibers as anodes for lithium-ion batteries. Science China Materials, 2019, 62, 465-473.	3.5	31
101	Rational design of the pea-pod structure of SiO_x/C nanofibers as a high-performance anode for lithium ion batteries. Inorganic Chemistry Frontiers, 2020, 7, 1762-1769.	3.0	31
102	Self-templating synthesis of double-wall shelled vanadium oxide hollow microspheres for high-performance lithium ion batteries. Journal of Materials Chemistry A, 2018, 6, 6792-6799.	5.2	30
103	Towards a durable high performance anode material for lithium storage: stabilizing N-doped carbon encapsulated FeS nanosheets with amorphous TiO₂. Journal of Materials Chemistry A, 2019, 7, 16541-16552.	5.2	30
104	Interphases, Interfaces, and Surfaces of Active Materials in Rechargeable Batteries and Perovskite Solar Cells. Advanced Materials, 2021, 33, e1905245.	11.1	30
105	Band-structure tailoring and surface passivation for highly efficient near-infrared responsive PbS quantum dot photovoltaics. Journal of Power Sources, 2016, 333, 107-117.	4.0	29
106	Efficient band alignment for ZnxCd1â^'xSe QD-sensitized TiO2 solar cells. Journal of Materials Chemistry A, 2014, 2, 3669.	5.2	28
107	Revealing the impacts of metastable structure on the electrochemical properties: The case of MnS. Journal of Power Sources, 2019, 431, 75-83.	4.0	27
108	Novel synthesis of V2O5 hollow microspheres for lithium ion batteries. Science China Materials, 2016, 59, 567-573.	3.5	26

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109	Amorphous NiWO₄ Nanospheres with High-Conductivity and -Capacitive Performance for Supercapacitors. Journal of Physical Chemistry C, 2019, 123, 30067-30076.	1.5	26
110	Mesoporous Carbon Nanofibers Embedded with MoS₂ Nanocrystals for Extraordinary Liâ€ion Storage. Chemistry - A European Journal, 2015, 21, 18248-18257.	1.7	25
111	Microbeltâ€“voidâ€“microbelt-structured SnO₂@C as an advanced electrode with outstanding rate capability and high reversibility. Journal of Materials Chemistry A, 2019, 7, 10523-10533.	5.2	25
112	Dual interface coupled molybdenum diselenide for high-performance sodium ion batteries and capacitors. Journal of Power Sources, 2020, 446, 227298.	4.0	25
113	Impact of sol aging on TiO2 compact layer and photovoltaic performance of perovskite solar cell. Science China Materials, 2016, 59, 710-718.	3.5	23
114	In situ formation of porous graphitic carbon wrapped MnO/Ni microsphere networks as binder-free anodes for high-performance lithium-ion batteries. Journal of Materials Chemistry A, 2018, 6, 12316-12322.	5.2	23
115	Ultrathin ALD coating on TiO2 photoanodes with enhanced quantum dot loading and charge collection in quantum dots sensitized solar cells. Science China Materials, 2016, 59, 833-841.	3.5	21
116	Twin-nanoplate assembled hierarchical Ni/MnO porous microspheres as advanced anode materials for lithium-ion batteries. Electrochimica Acta, 2018, 259, 419-426.	2.6	20
117	Enhanced-performance of self-powered flexible quantum dot photodetectors by a double hole transport layer structure. Nanoscale, 2019, 11, 9626-9632.	2.8	18
118	Nearly monodisperse PbS quantum dots for highly efficient solar cells: anin situseeded ion exchange approach. Chemical Communications, 2018, 54, 12598-12601.	2.2	17
119	Flexible all-solid-state ultrahigh-energy asymmetric supercapacitors based on tailored morphology of NiCoO₂/Ni(OH)₂/Co(OH)₂ electrodes. CrystEngComm, 2018, 20, 6519-6528.	1.3	14
120	Impacts of Mn ion in ZnSe passivation on electronic band structure for high efficiency CdS/CdSe quantum dot solar cells. Dalton Transactions, 2018, 47, 9634-9642.	1.6	13
121	Fabrication of tunable aluminum nanodisk arrays via a self-assembly nanoparticle template method and their applications for performance enhancement in organic photovoltaics. Journal of Materials Chemistry A, 2018, 6, 3649-3658.	5.2	9
122	Tunable engineering of photo- and electro-induced carrier dynamics in perovskite photoelectronic devices. Science China Materials, 2022, 65, 855-875.	3.5	9
123	Surface-defect passivation through complexation with organic molecules leads to enhanced power conversion efficiency and long term stability of perovskite photovoltaics. Science China Materials, 2020, 63, 479-480.	3.5	8
124	Electrocatalytic oxygen reduction reaction activity of KOH etched carbon films as metal-free cathodic catalysts for fuel cells. RSC Advances, 2019, 9, 2803-2811.	1.7	5