

Jiming Bao

List of Publications by Year in descending order

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122
papers

13,038
citations

50276

46
h-index

24982

109
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125
all docs

125
docs citations

125
times ranked

18564
citing authors

#	ARTICLE	IF	CITATIONS
1	Atomic cobalt on nitrogen-doped graphene for hydrogen generation. <i>Nature Communications</i> , 2015, 6, 8668.	12.8	1,356
2	Cu nanowires shelled with NiFe layered double hydroxide nanosheets as bifunctional electrocatalysts for overall water splitting. <i>Energy and Environmental Science</i> , 2017, 10, 1820-1827.	30.8	1,002
3	High-performance bifunctional porous non-noble metal phosphide catalyst for overall water splitting. <i>Nature Communications</i> , 2018, 9, 2551.	12.8	812
4	Efficient solar water-splitting using a nanocrystalline CoO photocatalyst. <i>Nature Nanotechnology</i> , 2014, 9, 69-73.	31.5	764
5	Non-noble metal-nitride based electrocatalysts for high-performance alkaline seawater electrolysis. <i>Nature Communications</i> , 2019, 10, 5106.	12.8	742
6	Ultrafast All-Optical Graphene Modulator. <i>Nano Letters</i> , 2014, 14, 955-959.	9.1	610
7	Broadband ZnO Single-Nanowire Light-Emitting Diode. <i>Nano Letters</i> , 2006, 6, 1719-1722.	9.1	531
8	Water splitting by electrolysis at high current densities under 1.6 volts. <i>Energy and Environmental Science</i> , 2018, 11, 2858-2864.	30.8	438
9	Efficient hydrogen evolution by ternary molybdenum sulfoselenide particles on self-standing porous nickel diselenide foam. <i>Nature Communications</i> , 2016, 7, 12765.	12.8	312
10	Hierarchical CoP/Ni ₅ P ₄ /CoP microsheet arrays as a robust pH-universal electrocatalyst for efficient hydrogen generation. <i>Energy and Environmental Science</i> , 2018, 11, 2246-2252.	30.8	306
11	Optical Properties of Rotationally Twinned InP Nanowire Heterostructures. <i>Nano Letters</i> , 2008, 8, 836-841.	9.1	303
12	Hierarchical Cu@CoFe layered double hydroxide core-shell nanoarchitectures as bifunctional electrocatalysts for efficient overall water splitting. <i>Nano Energy</i> , 2017, 41, 327-336.	16.0	252
13	Facile Synthesis of Single Crystal Vanadium Disulfide Nanosheets by Chemical Vapor Deposition for Efficient Hydrogen Evolution Reaction. <i>Advanced Materials</i> , 2015, 27, 5605-5609.	21.0	241
14	Discovery of TaFeSb-based half-Heuslers with high thermoelectric performance. <i>Nature Communications</i> , 2019, 10, 270.	12.8	227
15	Laser action in nanowires: Observation of the transition from amplified spontaneous emission to laser oscillation. <i>Applied Physics Letters</i> , 2008, 93, 051101.	3.3	223
16	High mobility and high on/off ratio field-effect transistors based on chemical vapor deposited single-crystal MoS ₂ grains. <i>Applied Physics Letters</i> , 2013, 102, .	3.3	217
17	Three-Dimensional Nanoporous Iron Nitride Film as an Efficient Electrocatalyst for Water Oxidation. <i>ACS Catalysis</i> , 2017, 7, 2052-2057.	11.2	207
18	Trimetallic NiFeMo for Overall Electrochemical Water Splitting with a Low Cell Voltage. <i>ACS Energy Letters</i> , 2018, 3, 546-554.	17.4	205

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19	Photoinduced oxygen release and persistent photoconductivity in ZnO nanowires. <i>Nanoscale Research Letters</i> , 2011, 6, 404.	5.7	184
20	Vertically Aligned MoS ₂ /Mo ₂ C hybrid Nanosheets Grown on Carbon Paper for Efficient Electrocatalytic Hydrogen Evolution. <i>ACS Catalysis</i> , 2017, 7, 7312-7318.	11.2	181
21	Outstanding hydrogen evolution reaction catalyzed by porous nickel diselenide electrocatalysts. <i>Energy and Environmental Science</i> , 2017, 10, 1487-1492.	30.8	176
22	Interaction of Organic Cation with Water Molecule in Perovskite MAPbI ₃ : From Dynamic Orientational Disorder to Hydrogen Bonding. <i>Chemistry of Materials</i> , 2016, 28, 7385-7393.	6.7	169
23	Efficient Alkaline Water/Seawater Hydrogen Evolution by a Nanorod-Structured Ni-MoN Catalyst with Fast Water-Dissociation Kinetics. <i>Advanced Materials</i> , 2022, 34, e2201774.	21.0	165
24	Electronic transport in chemical vapor deposited graphene synthesized on Cu: Quantum Hall effect and weak localization. <i>Applied Physics Letters</i> , 2010, 96, .	3.3	160
25	Photoactivated Mixed In-Plane and Edge-Enriched p-Type MoS ₂ Flake-Based NO ₂ Sensor Working at Room Temperature. <i>ACS Sensors</i> , 2018, 3, 998-1004.	7.8	149
26	Highly Efficient Red-Emitting Bis-Cyclometalated Iridium Complexes. <i>Journal of the American Chemical Society</i> , 2018, 140, 10198-10207.	13.7	149
27	Boron-modified cobalt iron layered double hydroxides for high efficiency seawater oxidation. <i>Nano Energy</i> , 2021, 83, 105838.	16.0	132
28	Effects of Catalyst Phase on the Hydrogen Evolution Reaction of Water Splitting: Preparation of Phase-Pure Films of FeP, Fe ₂ P, and Fe ₃ P and Their Relative Catalytic Activities. <i>Chemistry of Materials</i> , 2018, 30, 3588-3598.	6.7	123
29	Making g-C ₃ N ₄ ultra-thin nanosheets active for photocatalytic overall water splitting. <i>Applied Catalysis B: Environmental</i> , 2021, 282, 119557.	20.2	121
30	Bifunctional metal phosphide FeMnP films from single source metal organic chemical vapor deposition for efficient overall water splitting. <i>Nano Energy</i> , 2017, 39, 444-453.	16.0	117
31	A TiO ₂ /FeMnP Core/Shell Nanorod Array Photoanode for Efficient Photoelectrochemical Oxygen Evolution. <i>ACS Nano</i> , 2017, 11, 4051-4059.	14.6	106
32	A high-performance spectrally-selective solar absorber based on a yttria-stabilized zirconia cermet with high-temperature stability. <i>Energy and Environmental Science</i> , 2015, 8, 3040-3048.	30.8	102
33	Phosphate Changes Effect of Humic Acids on TiO ₂ Photocatalysis: From Inhibition to Mitigation of Electron-Hole Recombination. <i>Environmental Science & Technology</i> , 2017, 51, 514-521.	10.0	102
34	Revealing the Origin of Luminescence Center in OD Cs ₄ PbBr ₆ Perovskite. <i>Chemistry of Materials</i> , 2019, 31, 9098-9104.	6.7	93
35	3D-printed silica with nanoscale resolution. <i>Nature Materials</i> , 2021, 20, 1506-1511.	27.5	93
36	Secondary Oil Recovery Using Graphene-Based Amphiphilic Janus Nanosheet Fluid at an Ultralow Concentration. <i>Industrial & Engineering Chemistry Research</i> , 2017, 56, 11125-11132.	3.7	87

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37	New insight into the material parameter B to understand the enhanced thermoelectric performance of $Mg_{2-x}Sn_{1-x}Ge_xSb_y$. Energy and Environmental Science, 2016, 9, 530-539.	30.8	83
38	Direct Z-Scheme charge transfer in heterostructured $MoO_3/g-C_3N_4$ photocatalysts and the generation of active radicals in photocatalytic dye degradations. Environmental Pollution, 2019, 250, 338-345.	7.5	78
39	Graphene oxide liquid crystals: synthesis, phase transition, rheological property, and applications in optoelectronics and display. Nanoscale Research Letters, 2015, 10, 435.	5.7	76
40	Extrinsic Green Photoluminescence from the Edges of 2D Cesium Lead Halides. Advanced Materials, 2019, 31, e1902492.	21.0	75
41	Orientation Control of Graphene Flakes by Magnetic Field: Broad Device Applications of Macroscopically Aligned Graphene. Advanced Materials, 2017, 29, 1604453.	21.0	72
42	Surface defection reduces cytotoxicity of $Zn(2\text{-methylimidazole})_2$ (ZIF-8) without compromising its drug delivery capacity. RSC Advances, 2016, 6, 4128-4135.	3.6	68
43	Point defect engineered Si sub-bandgap light-emitting diode. Optics Express, 2007, 15, 6727.	3.4	66
44	Substrate Hybridization and Rippling of Graphene Evidenced by Near-Edge X-ray Absorption Fine Structure Spectroscopy. Journal of Physical Chemistry Letters, 2010, 1, 1247-1253.	4.6	60
45	Distinguishing thermal lens effect from electronic third-order nonlinear self-phase modulation in liquid suspensions of 2D nanomaterials. Nanoscale, 2017, 9, 3547-3554.	5.6	60
46	Fast detection and low power hydrogen sensor using edge-oriented vertically aligned 3-D network of MoS_2 flakes at room temperature. Applied Physics Letters, 2017, 111, .	3.3	53
47	UV-aging of microplastics increases proximal ARG donor-recipient adsorption and leaching of chemicals that synergistically enhance antibiotic resistance propagation. Journal of Hazardous Materials, 2022, 427, 127895.	12.4	49
48	The effect of carbon quantum dots on the electrocatalytic hydrogen evolution reaction of manganese-nickel phosphide nanosheets. Journal of Materials Chemistry A, 2019, 7, 21488-21495.	10.3	46
49	Graphene oxide liquid crystals for reflective displays without polarizing optics. Nanoscale, 2015, 7, 1616-1622.	5.6	45
50	Laser streaming: Turning a laser beam into a flow of liquid. Science Advances, 2017, 3, e1700555.	10.3	45
51	Spontaneous Formation of 2D/3D Heterostructures on the Edges of 2D Ruddlesden-Popper Hybrid Perovskite Crystals. Chemistry of Materials, 2020, 32, 5009-5015.	6.7	45
52	Effects of Defects on the Temperature-Dependent Thermal Conductivity of Suspended Monolayer Molybdenum Disulfide Grown by Chemical Vapor Deposition. Advanced Functional Materials, 2017, 27, 1704357.	14.9	44
53	Controlled Growth of MoS_2 Flakes from in-Plane to Edge-Enriched 3D Network and Their Surface-Energy Studies. ACS Applied Nano Materials, 2018, 1, 2356-2367.	5.0	44
54	Steric and Electronic Influence of Aryl Isocyanides on the Properties of Iridium(III) Cyclometalates. Inorganic Chemistry, 2016, 55, 2299-2308.	4.0	43

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55	Origin of Luminescent Centers and Edge States in Low-Dimensional Lead Halide Perovskites: Controversies, Challenges and Instructive Approaches. <i>Nano-Micro Letters</i> , 2019, 11, 26.	27.0	42
56	Sub-bandgap luminescence centers in silicon created by self-ion implantation and thermal annealing. <i>Journal of Applied Physics</i> , 2010, 107, .	2.5	36
57	Colloidal Stability of Graphene-Based Amphiphilic Janus Nanosheet Fluid. <i>Chemistry of Materials</i> , 2017, 29, 3454-3460.	6.7	36
58	Synthesis of graphene-based amphiphilic Janus nanosheets via manipulation of hydrogen bonding. <i>Carbon</i> , 2018, 126, 105-110.	10.3	36
59	Enhanced adsorption sites in monolayer MoS ₂ pyramid structures for highly sensitive and fast hydrogen sensor. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 9268-9277.	7.1	36
60	A Conductive Nanowire-Mesh Biosensor for Ultrasensitive Detection of Serum C-reactive Protein in Melanoma. <i>Advanced Functional Materials</i> , 2018, 28, 1802482.	14.9	34
61	Planar Alignment of Graphene Sheets by a Rotating Magnetic Field for Full Exploitation of Graphene as a 2D Material. <i>Advanced Functional Materials</i> , 2018, 28, 1805255.	14.9	33
62	Manipulation of Ni Interstitials for Realizing Large Power Factor in TiNiSn-Based Materials. <i>Advanced Electronic Materials</i> , 2019, 5, 1900166.	5.1	32
63	A new use for bandgap engineering. <i>Nature Nanotechnology</i> , 2015, 10, 19-20.	31.5	31
64	Synthesis and Photoluminescence Properties of 2D Phenethylammonium Lead Bromide Perovskite Nanocrystals. <i>Small Methods</i> , 2017, 1, 1700245.	8.6	27
65	Graphene levitation and orientation control using a magnetic field. <i>Journal of Applied Physics</i> , 2018, 123, .	2.5	27
66	Gold-implanted plasmonic quartz plate as a launch pad for laser-driven photoacoustic microfluidic pumps. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 6580-6585.	7.1	27
67	Freezing of few nanometers water droplets. <i>Nature Communications</i> , 2021, 12, 6973.	12.8	24
68	Electrochemical Insight into Na _x CoO ₂ for the Oxygen Evolution Reaction and the Oxygen Reduction Reaction. <i>Chemistry of Materials</i> , 2021, 33, 6299-6310.	6.7	21
69	Moisture-driven phase transition for improved perovskite solar cells with reduced trap-state density. <i>Nano Research</i> , 2017, 10, 1413-1422.	10.4	20
70	Ultrathin bismuth oxyiodide nanosheets for photocatalytic ammonia generation from nitrogen and water under visible to near-infrared light. <i>Materials Today Physics</i> , 2021, 16, 100293.	6.0	18
71	Transmissive Nanohole Arrays for Massively-Parallel Optical Biosensing. <i>ACS Photonics</i> , 2014, 1, 241-245.	6.6	17
72	Molecularly Imprinted Polymer-Based Biosensors: For the Early, Rapid Detection of Pathogens, Biomarkers, and Toxins in Clinical, Environmental, or Food Samples. <i>IEEE Nanotechnology Magazine</i> , 2018, 12, 6-13.	1.3	17

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73	Room-temperature Fano resonance tunable by chemical doping in few-layer graphene synthesized by chemical-vapor deposition. <i>Physical Review B</i> , 2010, 82, .	3.2	16
74	Photoluminescence mapping and time-domain thermo-photoluminescence for rapid imaging and measurement of thermal conductivity of boron arsenide. <i>Materials Today Physics</i> , 2020, 13, 100194.	6.0	16
75	Poly(octadecyl acrylate)-Grafted Multiwalled Carbon Nanotube Composites for Wearable Temperature Sensors. <i>ACS Applied Nano Materials</i> , 2020, 3, 2288-2301.	5.0	16
76	Polarity-controlled visible/infrared electroluminescence in Si-nanocrystal/Si light-emitting devices. <i>Applied Physics Letters</i> , 2010, 97, 071112.	3.3	15
77	Graphene Flakes: Orientation Control of Graphene Flakes by Magnetic Field: Broad Device Applications of Macroscopically Aligned Graphene (<i>Adv. Mater.</i> 1/2017). <i>Advanced Materials</i> , 2017, 29, .	21.0	15
78	Broadband infrared photoluminescence in silicon nanowires with high density stacking faults. <i>Nanoscale</i> , 2015, 7, 1601-1605.	5.6	14
79	Percolating conductive networks in multiwall carbon nanotube-filled polymeric nanocomposites: towards scalable high-conductivity applications of disordered systems. <i>Nanoscale</i> , 2019, 11, 8565-8578.	5.6	14
80	Graphene Diamagnetism: Levitation, transport, rotation, and orientation alignment of graphene flakes in a magnetic field. <i>IEEE Nanotechnology Magazine</i> , 2020, 14, 14-22.	1.3	14
81	Photoluminescence and Raman Spectra of One-Dimensional Lead-free Perovskite CsCu ₂ Te ₃ Single-Crystal Wires. <i>Journal of Physical Chemistry Letters</i> , 2022, 13, 6447-6454.	4.6	13
82	Sol-gel synthesis of stabilized silver nanoparticles in an organosiloxane matrix and its optical nonlinearity. <i>Chemical Physics</i> , 2020, 532, 110610.	1.9	12
83	Photoacoustic identification of laser-induced microbubbles as light scattering centers for optical limiting in a liquid suspension of graphene nanosheets. <i>Nanoscale</i> , 2020, 12, 7109-7115.	5.6	11
84	Integration of Highly Luminescent Lead Halide Perovskite Nanocrystals on Transparent Lead Halide Nanowire Waveguides through Morphological Transformation and Spontaneous Growth in Water. <i>Small</i> , 2022, 18, e2105009.	10.0	11
85	Nanowire thermometers. <i>Nanoscale</i> , 2013, 5, 9532.	5.6	10
86	Functionalized few-layered graphene oxide embedded in an organosiloxane matrix for applications in optical limiting. <i>Chemical Physics Letters</i> , 2019, 714, 149-155.	2.6	10
87	Unusual catalytic activity of TiO ₂ @CoTiO ₃ under 1064 nm pulsed laser illumination. <i>Catalysis Today</i> , 2020, 349, 3-9.	4.4	10
88	Molding, patterning and driving liquids with light. <i>Materials Today</i> , 2021, 51, 48-55.	14.2	10
89	Cyclometalated iridium-coumarin ratiometric oxygen sensors: improved signal resolution and tunable dynamic ranges. <i>Chemical Science</i> , 2022, 13, 8804-8812.	7.4	10
90	Ultraweak electron-phonon coupling strength in cubic boron arsenide unveiled by ultrafast dynamics. <i>Physical Review B</i> , 2022, 105, .	3.2	8

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91	Recent developments in photocatalytic solar water splitting. <i>Materials Today</i> , 2014, 17, 208-209.	14.2	6
92	Flexible single-crystalline GaN substrate by direct deposition of III-N thin films on polycrystalline metal tape. <i>Journal of Materials Chemistry C</i> , 2021, 9, 2243-2251.	5.5	6
93	Resolving Nanocomposite Interfaces via Simultaneous Submicrometer Opticalâ€Photothermal Infraredâ€Raman Microspectroscopy. <i>Advanced Materials Interfaces</i> , 2021, 8, 2001720.	3.7	6
94	Marangoni convection-driven laser fountains on free surfaces of liquids. <i>Materials Today Physics</i> , 2021, 21, 100558.	6.0	6
95	Singular wavelength dependence on the sensitization of lanthanides by graphene quantum dots. <i>Chemical Communications</i> , 2018, 54, 4325-4328.	4.1	5
96	Surface Tension Nanogates for Controlled Ion Transport. <i>ACS Applied Nano Materials</i> , 2020, 3, 6979-6986.	5.0	5
97	Graphene: Growth of Single Crystal Graphene Arrays by Locally Controlling Nucleation on Polycrystalline Cu Using Chemical Vapor Deposition (Adv. Mater. 42/2011). <i>Advanced Materials</i> , 2011, 23, 4897-4897.	21.0	4
98	Significant Enhancement of Hydrogen Production in $\text{MoS}_2/\text{Cu}_2\text{ZnSnS}_4$ Nanoparticles. <i>Particle and Particle Systems Characterization</i> , 2018, 35, 1700472.	2.3	4
99	Large graphene-induced shift of surface-plasmon resonances of gold films: Effective-medium theory for atomically thin materials. <i>Physical Review Research</i> , 2020, 2, .	3.6	4
100	Resonant Degenerate Four-Wave Mixing at the Defect Energy Levels of 2D Organicâ€Inorganic Hybrid Perovskite Crystals. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 57075-57083.	8.0	4
101	Graphene Sheets: Planar Alignment of Graphene Sheets by a Rotating Magnetic Field for Full Exploitation of Graphene as a 2D Material (Adv. Funct. Mater. 46/2018). <i>Advanced Functional Materials</i> , 2018, 28, 1870330.	14.9	3
102	Magnetically Enhanced Marangoni Convection for Efficient Mass and Heat Transfer like a Selfâ€Driving Liquid Conveyor Belt. <i>Advanced Functional Materials</i> , 2022, 32, .	14.9	3
103	Nanoporous gallium nitride square microtubes. <i>Journal of Materials Science</i> , 2013, 48, 7703-7707.	3.7	2
104	Multi resolution touch panel with built-in fingerprint sensing support. , 2014, , .		2
105	Photoacoustic laser streaming with non-plasmonic metal ion implantation in transparent substrates. <i>Optics Express</i> , 2021, 29, 22567.	3.4	2
106	Laser-induced dynamic alignment and nonlinear-like optical transmission in liquid suspensions of 2D atomically thin nanomaterials. <i>Optics Express</i> , 2021, 29, 36389.	3.4	2
107	Semiconductor nanowires embedded in optical microcavities. , 2006, , .		1
108	Single-photon oxidation of C60 by self-sensitized singlet oxygen. <i>Communications Chemistry</i> , 2020, 3, .	4.5	1

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109	Graphene Flakes Controlled by Magnetic Fields for a Display Application. , 2017, , .		1
110	Enhanced photocatalytic ammonia generation from water and nitrogen by decorating BiOCl nanosheets with CoOOH oxygen evolution reaction cocatalyst. Materials Today Chemistry, 2022, 24, 100993.	3.5	1
111	Hybrid single nanowire photonic crystal structure. , 2006, , .		0
112	Efficient point defect engineered si light-emitting diode at 1.218 μm. , 2007, , .		0
113	Efficient point defect engineered si light-emitting diode at 1.218 μm. , 2007, , .		0
114	Controlled Modification of Erbium Lifetime in Silicon Dioxide Film with Chromium or Titanium Coatings. Materials Research Society Symposia Proceedings, 2007, 1055, 1.	0.1	0
115	Enhanced fano-like phonon resonance in heavily doped graphene. , 2011, , .		0
116	OBSERVATION ON PHOTOLUMINESCENCE EVOLUTION IN 300 keV SELF-ION IMPLANTED AND ANNEALED SILICON. , 2011, , .		0
117	Sunlight Active Perovskites (TiCh-CoTiCb) with Effective Dye Degradation and Water Splitting. Microscopy and Microanalysis, 2018, 24, 154-155.	0.4	0
118	CBED Investigations of Boron Monoarsenide Crystals. Microscopy and Microanalysis, 2018, 24, 30-31.	0.4	0
119	Electron Microscopy of Perovskite Phase Distribution on Light Emitting Edges. Microscopy and Microanalysis, 2020, 26, 2346-2347.	0.4	0
120	Planar Alignment of Graphene Sheets by a Rotating Magnetic Field for Polarizer and Display Applications. , 2019, , .		0
121	Understanding the Origin of Green Photoluminescence in Low-dimensional Lead Halide Perovskites. , 2019, , .		0
122	Photoluminescence-Raman/FTIR under Variable Hydrostatic Pressure to Reveal the Origin of Luminescent Centers in Lead Halide Perovskites. , 2021, , .		0