Jin Zhang

List of Publications by Year
in descending order

499 papers	31,366 citations	90 h-index	158 g-index
		3531	6300
506 all docs	506 docs citations	506 times ranked	29718 citing authors

#	Article	IF	Citations
1	Experimental realization of two-dimensional boron sheets. Nature Chemistry, 2016, 8, 563-568.	13.6	1,398
2	Evidence of Silicene in Honeycomb Structures of Silicon on Ag(111). Nano Letters, 2012, 12, 3507-3511.	9.1	1,190
3	Exploring atomic defects in molybdenum disulphide monolayers. Nature Communications, 2015, 6, 6293.	12.8	1,124
4	Can Graphene be used as a Substrate for Raman Enhancement?. Nano Letters, 2010, 10, 553-561.	9.1	914
5	Evidence for Dirac Fermions in a Honeycomb Lattice Based on Silicon. Physical Review Letters, 2012, 109, 056804.	7.8	634
6	Graphdiyne: synthesis, properties, and applications. Chemical Society Reviews, 2019, 48, 908-936.	38.1	584
7	Synthesis of Graphdiyne Nanowalls Using Acetylenic Coupling Reaction. Journal of the American Chemical Society, 2015, 137, 7596-7599.	13.7	484
8	Raman Enhancement Effect on Two-Dimensional Layered Materials: Graphene, h-BN and MoS₂. Nano Letters, 2014, 14, 3033-3040.	9.1	464
9	Graphene as a Substrate To Suppress Fluorescence in Resonance Raman Spectroscopy. Journal of the American Chemical Society, 2009, 131, 9890-9891.	13.7	460
10	Graphene: A Platform for Surfaceâ€Enhanced Raman Spectroscopy. Small, 2013, 9, 1206-1224.	10.0	453
11	Robust Superhydrophobic Foam: A Graphdiyneâ€Based Hierarchical Architecture for Oil/Water Separation. Advanced Materials, 2016, 28, 168-173.	21.0	449
12	Water adsorption on metal surfaces: A general picture from density functional theory studies. Physical Review B, 2004, 69, .	3.2	448
13	Carbon Nanotubes and Related Nanomaterials: Critical Advances and Challenges for Synthesis toward Mainstream Commercial Applications. ACS Nano, 2018, 12, 11756-11784.	14.6	388
14	Dirac Fermions in Borophene. Physical Review Letters, 2017, 118, 096401.	7.8	353
15	Graphdiyne: A Metal-Free Material as Hole Transfer Layer To Fabricate Quantum Dot-Sensitized Photocathodes for Hydrogen Production. Journal of the American Chemical Society, 2016, 138, 3954-3957.	13.7	335
16	Doping-Free Fabrication of Carbon Nanotube Based Ballistic CMOS Devices and Circuits. Nano Letters, 2007, 7, 3603-3607.	9.1	319
17	Arrays of horizontal carbon nanotubes of controlled chirality grown using designed catalysts. Nature, 2017, 543, 234-238.	27.8	317
18	Identifying the Crystalline Orientation of Black Phosphorus Using Angleâ€Resolved Polarized Raman Spectroscopy. Angewandte Chemie - International Edition, 2015, 54, 2366-2369.	13.8	284

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19	Creation of Nanostructures with Poly(methyl methacrylate)-Mediated Nanotransfer Printing. Journal of the American Chemical Society, 2008, 130, 12612-12613.	13.7	283
20	Optical Anisotropy of Black Phosphorus in the Visible Regime. Journal of the American Chemical Society, 2016, 138, 300-305.	13.7	273
21	Carbon science in 2016: Status, challenges and perspectives. Carbon, 2016, 98, 708-732.	10.3	261
22	Nanoscale Chiral Rod-like Molecular Triads Assembled from Achiral Polyoxometalates. Journal of the American Chemical Society, 2010, 132, 14-15.	13.7	240
23	Vibrational Recognition of Hydrogen-Bonded Water Networks on a Metal Surface. Physical Review Letters, 2002, 89, 176104.	7.8	229
24	Growth of MoS_{2(1â€“x)}Se_{2x} (x = 0.41â€“1.00) Monolayer Alloys with Controlled Morphology by Physical Vapor Deposition. ACS Nano, 2015, 9, 7450-7455.	14.6	217
25	Large-Scale and Flexible Optical Synapses for Neuromorphic Computing and Integrated Visible Information Sensing Memory Processing. ACS Nano, 2021, 15, 1497-1508.	14.6	210
26	Two-Dimensional Molybdenum Tungsten Diselenide Alloys: Photoluminescence, Raman Scattering, and Electrical Transport. ACS Nano, 2014, 8, 7130-7137.	14.6	208
27	Firstâ€Layer Effect in Grapheneâ€Enhanced Raman Scattering. Small, 2010, 6, 2020-2025.	10.0	207
28	Synthesis of Hierarchical Graphdiyne-Based Architecture for Efficient Solar Steam Generation. Chemistry of Materials, 2017, 29, 5777-5781.	6.7	206
29	Spontaneous Symmetry Breaking and Dynamic Phase Transition in Monolayer Silicene. Physical Review Letters, 2013, 110, 085504.	7.8	205
30	Natural Dyes Adsorbed on TiO₂ Nanowire for Photovoltaic Applications: Enhanced Light Absorption and Ultrafast Electron Injection. Nano Letters, 2008, 8, 3266-3272.	9.1	198
31	Ultrathin graphdiyne film on graphene through solution-phase van der Waals epitaxy. Science Advances, 2018, 4, eaat6378.	10.3	198
32	Effect of Graphene Fermi Level on the Raman Scattering Intensity of Molecules on Graphene. ACS Nano, 2011, 5, 5338-5344.	14.6	193
33	Real-time, local basis-set implementation of time-dependent density functional theory for excited state dynamics simulations. Journal of Chemical Physics, 2008, 129, 054110.	3.0	191
34	â€œCloningâ€•of Single-Walled Carbon Nanotubes via Open-End Growth Mechanism. Nano Letters, 2009, 9, 1673-1677.	9.1	191
35	Direct Synthesis of Graphdiyne Nanowalls on Arbitrary Substrates and Its Application for Photoelectrochemical Water Splitting Cell. Advanced Materials, 2017, 29, 1605308.	21.0	189
36	Controllable synthesis of brookite/anatase/rutile TiO2 nanocomposites and single-crystalline rutile nanorods array. Journal of Materials Chemistry, 2012, 22, 7937.	6.7	188

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37	Controlled Synthesis of ZrS₂ Monolayer and Few Layers on Hexagonal Boron Nitride. Journal of the American Chemical Society, 2015, 137, 7051-7054.	13.7	178
38	Molecular Selectivity of Graphene-Enhanced Raman Scattering. Nano Letters, 2015, 15, 2892-2901.	9.1	177
39	Wrinkle-Free Single-Crystal Graphene Wafer Grown on Strain-Engineered Substrates. ACS Nano, 2017, 11, 12337-12345.	14.6	172
40	First Principles Design of Dye Molecules with Ullazine Donor for Dye Sensitized Solar Cells. Journal of Physical Chemistry C, 2013, 117, 3772-3778.	3.1	169
41	Telluriumâ€Assisted Epitaxial Growth of Largeâ€Area, Highly Crystalline ReS₂ Atomic Layers on Mica Substrate. Advanced Materials, 2016, 28, 5019-5024.	21.0	169
42	Low-temperature growth and properties of ZnO nanowires. Applied Physics Letters, 2004, 84, 4941-4943.	3.3	163
43	DNA Nucleoside Interaction and Identification with Carbon Nanotubes. Nano Letters, 2007, 7, 45-50.	9.1	156
44	Direct evidence of metallic bands in a monolayer boron sheet. Physical Review B, 2016, 94, .	3.2	152
45	Graphdiyne: A Promising Catalystâ€“Support To Stabilize Cobalt Nanoparticles for Oxygen Evolution. ACS Catalysis, 2017, 7, 5209-5213.	11.2	150
46	Direct Growth of Semiconducting Single-Walled Carbon Nanotube Array. Journal of the American Chemical Society, 2009, 131, 14642-14643.	13.7	143
47	Synthesis and Applications of Graphdiyneâ€Based Metalâ€Free Catalysts. Advanced Materials, 2019, 31, e1803762.	21.0	143
48	Synthesis and electrical properties of carbon nanotube polyaniline composites. Applied Physics Letters, 2004, 85, 1796-1798.	3.3	142
49	Lighting Up the Raman Signal of Molecules in the Vicinity of Graphene Related Materials. Accounts of Chemical Research, 2015, 48, 1862-1870.	15.6	141
50	Electron and Hole Dynamics in Dye-Sensitized Solar Cells: Influencing Factors and Systematic Trends. Nano Letters, 2010, 10, 1238-1247.	9.1	137
51	Diatomiteâ€Templated Synthesis of Freestanding 3D Graphdiyne for Energy Storage and Catalysis Application. Advanced Materials, 2018, 30, e1800548.	21.0	134
52	Emergence of electron coherence and two-color all-optical switching in MoS ₂ based on spatial self-phase modulation. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 11800-11805.	7.1	133
53	Robust Stacking-Independent Ultrafast Charge Transfer in MoS₂/WS₂ Bilayers. ACS Nano, 2017, 11, 12020-12026.	14.6	130
54	Monitoring Local Strain Vector in Atomic-Layered MoSe₂ by Second-Harmonic Generation. Nano Letters, 2017, 17, 7539-7543.	9.1	128

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55	Ordered and Reversible Hydrogenation of Silicene. Physical Review Letters, 2015, 114, 126101.	7.8	127
56	CMP Aerogels: Ultrahighâ€Surfaceâ€Area Carbonâ€Based Monolithic Materials with Superb Sorption Performance. Advanced Materials, 2014, 26, 8053-8058.	21.0	125
57	2D graphdiyne materials: challenges and opportunities in energy field. Science China Chemistry, 2018, 61, 765-786.	8.2	123
58	Enhanced Raman Scattering on In-Plane Anisotropic Layered Materials. Journal of the American Chemical Society, 2015, 137, 15511-15517.	13.7	122
59	Chemical Alignment of Oxidatively Shortened Single-Walled Carbon Nanotubes on Silver Surface. Journal of Physical Chemistry B, 2001, 105, 5075-5078.	2.6	120
60	Growth of high-density horizontally aligned SWNT arrays using Trojan catalysts. Nature Communications, 2015, 6, 6099.	12.8	120
61	Graphene-Based Enhanced Raman Scattering toward Analytical Applications. Chemistry of Materials, 2016, 28, 6426-6435.	6.7	120
62	Correlations between Immobilizing Ions and Suppressing Hysteresis in Perovskite Solar Cells. ACS Energy Letters, 2016, 1, 266-272.	17.4	118
63	Raman Spectra and Corresponding Strain Effects in Graphyne and Graphdiyne. Journal of Physical Chemistry C, 2016, 120, 10605-10613.	3.1	116
64	Cap Formation Engineering: From Opened C₆₀ to Single-Walled Carbon Nanotubes. Nano Letters, 2010, 10, 3343-3349.	9.1	115
65	Predicting Energy Conversion Efficiency of Dye Solar Cells from First Principles. Journal of Physical Chemistry C, 2014, 118, 16447-16457.	3.1	115
66	Architecture of Î²â€Graphdiyneâ€Containing Thin Film Using Modified Glaserâ€“Hay Coupling Reaction for Enhanced Photocatalytic Property of TiO₂. Advanced Materials, 2017, 29, 1700421.	21.0	115
67	Graphdiyne for crucial gas involved catalytic reactions in energy conversion applications. Energy and Environmental Science, 2020, 13, 1326-1346.	30.8	115
68	Controlled growth of large-area anisotropic ReS₂atomic layer and its photodetector application. Nanoscale, 2016, 8, 18956-18962.	5.6	114
69	Chemical Vapor Deposition Growth of Linked Carbon Monolayers with Acetylenic Scaffoldings on Silver Foil. Advanced Materials, 2017, 29, 1604665.	21.0	114
70	Few-Layer Graphene-Encapsulated Metal Nanoparticles for Surface-Enhanced Raman Spectroscopy. Journal of Physical Chemistry C, 2014, 118, 8993-8998.	3.1	113
71	Atomic Pd on Graphdiyne/Graphene Heterostructure as Efficient Catalyst for Aromatic Nitroreduction. Advanced Functional Materials, 2019, 29, 1905423.	14.9	112
72	Microscopic Dimensions Engineering: Stepwise Manipulation of the Surface Wettability on 3D Substrates for Oil/Water Separation. Advanced Materials, 2016, 28, 936-942.	21.0	109

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73	Solutionâ€Processable Highâ€Purity Semiconducting SWCNTs for Largeâ€Area Fabrication of Highâ€Performance Thinâ€Film Transistors. Small, 2016, 12, 4993-4999.	10.0	107
74	Quantum Mode Selectivity of Plasmon-Induced Water Splitting on Gold Nanoparticles. ACS Nano, 2016, 10, 5452-5458.	14.6	106
75	pH-Dependent Synthesis of Novel Structure-Controllable Polymer-Carbon NanoDots with High Acidophilic Luminescence and Super Carbon Dots Assembly for White Light-Emitting Diodes. ACS Applied Materials & Interfaces, 2016, 8, 4062-4068.	8.0	106
76	Probing the Effect of Molecular Orientation on the Intensity of Chemical Enhancement Using Grapheneâ€Enhanced Raman Spectroscopy. Small, 2012, 8, 1365-1372.	10.0	105
77	Raman Spectroscopy of Graphene. Acta Chimica Sinica, 2014, 72, 301.	1.4	105
78	Synthesis of Ultrathin Graphdiyne Film Using a Surface Template. ACS Applied Materials & Interfaces, 2019, 11, 2632-2637.	8.0	103
79	Theoretical Models of Eumelanin Protomolecules and their Optical Properties. Biophysical Journal, 2008, 94, 2095-2105.	0.5	100
80	Pyrolysis-induced synthesis of iron and nitrogen-containing carbon nanolayers modified graphdiyne nanostructure as a promising core-shell electrocatalyst for oxygen reduction reaction. Carbon, 2017, 119, 201-210.	10.3	99
81	Identifying the Crystalline Orientation of Black Phosphorus Using Angleâ€Resolved Polarized Raman Spectroscopy. Angewandte Chemie, 2015, 127, 2396-2399.	2.0	97
82	From Silicene to Half-Silicane by Hydrogenation. ACS Nano, 2015, 9, 11192-11199.	14.6	97
83	Nitrogenâ€Doped Carbon Nanotube Aerogels for Highâ€Performance ORR Catalysts. Small, 2015, 11, 3903-3908.	10.0	96
84	Side-group chemical gating via reversible optical and electric control in a single molecule transistor. Nature Communications, 2019, 10, 1450.	12.8	96
85	Sorting out Semiconducting Single-Walled Carbon Nanotube Arrays by Preferential Destruction of Metallic Tubes Using Xenon-Lamp Irradiation. Journal of Physical Chemistry C, 2008, 112, 3849-3856.	3.1	95
86	Interfaceâ€Engineered Plasmonics in Metal/Semiconductor Heterostructures. Advanced Energy Materials, 2016, 6, 1600431.	19.5	95
87	Superhydrophilic Graphdiyne Accelerates Interfacial Mass/Electron Transportation to Boost Electrocatalytic and Photoelectrocatalytic Water Oxidation Activity. Advanced Functional Materials, 2019, 29, 1808079.	14.9	95
88	Electricâ€Fieldâ€Assisted Growth of Vertical Graphene Arrays and the Application in Thermal Interface Materials. Advanced Functional Materials, 2020, 30, 2003302.	14.9	95
89	A universal etching-free transfer of MoS2 films for applications in photodetectors. Nano Research, 2015, 8, 3662-3672.	10.4	94
90	A new phase diagram of water under negative pressure: The rise of the lowest-density clathrate s-III. Science Advances, 2016, 2, e1501010.	10.3	92

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91	Design of a Photoactive Hybrid Bilayer Dielectric for Flexible Nonvolatile Organic Memory Transistors. ACS Nano, 2016, 10, 436-445.	14.6	91
92	Discovery of 2D Anisotropic Dirac Cones. Advanced Materials, 2018, 30, 1704025.	21.0	91
93	Surface-Enhanced Raman Scattering (SERS) from Azobenzene Self-Assembled â€œSandwichesâ€• Langmuir, 1999, 15, 16-19.	3.5	90
94	Suppressed superconductivity in substrate-supported Î² ₁₂ borophene by tensile strain and electron doping. 2D Materials, 2017, 4, 025032.	4.4	90
95	Observation of Dirac Cone Warping and Chirality Effects in Silicene. ACS Nano, 2013, 7, 9049-9054.	14.6	88
96	The chemistry of organoimido derivatives of polyoxometalates. Dalton Transactions, 2012, 41, 3599.	3.3	87
97	Characterizing hydrophobicity of amino acid side chains in a protein environment via measuring contact angle of a water nanodroplet on planar peptide network. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 12946-12951.	7.1	87
98	Interlayerâ€Stateâ€Coupling Dependent Ultrafast Charge Transfer in MoS₂/WS₂ Bilayers. Advanced Science, 2017, 4, 1700086.	11.2	87
99	Graphdiyne/Graphene Heterostructure: A Universal 2D Scaffold Anchoring Monodispersed Transition-Metal Phthalocyanines for Selective and Durable CO₂ Electroreduction. Journal of the American Chemical Society, 2021, 143, 8679-8688.	13.7	87
100	Macroscopic Carbon Nanotubeâ€based 3D Monoliths. Small, 2015, 11, 3263-3289.	10.0	83
101	Identifying spâ€“sp² carbon materials by Raman and infrared spectroscopies. Physical Chemistry Chemical Physics, 2014, 16, 11303-11309.	2.8	81
102	Photoinduced Nonequilibrium Topological States in Strained Black Phosphorus. Physical Review Letters, 2018, 120, 237403.	7.8	80
103	Core-shell Ag@nitrogen-doped carbon quantum dots modified BiVO4 nanosheets with enhanced photocatalytic performance under Vis-NIR light: Synergism of molecular oxygen activation and surface plasmon resonance. Chemical Engineering Journal, 2021, 410, 128336.	12.7	79
104	Metastable phases of 2D boron sheets on Ag(1â€‰1â€‰1). Journal of Physics Condensed Matter, 2017, 29, 095002.	1.8	78
105	SnO₂@PANI Coreâ€“Shell Nanorod Arrays on 3D Graphite Foam: A High-Performance Integrated Electrode for Lithium-Ion Batteries. ACS Applied Materials & Interfaces, 2017, 9, 9620-9629.	8.0	78
106	Water printing of ferroelectric polarization. Nature Communications, 2018, 9, 3809.	12.8	75
107	Fast Growth of Strain-Free AlN on Graphene-Buffered Sapphire. Journal of the American Chemical Society, 2018, 140, 11935-11941.	13.7	75
108	Anomalous Polarized Raman Scattering and Large Circular Intensity Differential in Layered Triclinic ReS₂. ACS Nano, 2017, 11, 10366-10372.	14.6	74

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109	Horizontal Single-Walled Carbon Nanotube Arrays: Controlled Synthesis, Characterizations, and Applications. Chemical Reviews, 2020, 120, 12592-12684.	47.7	74
110	The Origin of Oxygen Vacancies Controlling La_{2/3}Sr_{1/3}MnO₃ Electronic and Magnetic Properties. Advanced Materials Interfaces, 2016, 3, 1500753.	3.7	73
111	Enhanced tunable second harmonic generation from twistable interfaces and vertical superlattices in boron nitride homostructures. Science Advances, 2021, 7, .	10.3	73
112	State of the Art of Singleâ€Walled Carbon Nanotube Synthesis on Surfaces. Advanced Materials, 2014, 26, 5898-5922.	21.0	71
113	Diameter-Specific Growth of Semiconducting SWNT Arrays Using Uniform Mo2C Solid Catalyst. Journal of the American Chemical Society, 2015, 137, 8904-8907.	13.7	71
114	Spotting the differences in two-dimensional materials â€“ the Raman scattering perspective. Chemical Society Reviews, 2018, 47, 3217-3240.	38.1	71
115	Influence of water on the electronic structure of metal-supported graphene: Insights from van der Waals density functional theory. Physical Review B, 2012, 85, .	3.2	70
116	Stacking-dependent electronic structure of bilayer silicene. Applied Physics Letters, 2014, 104, .	3.3	70
117	Atomic Disorders Induced by Silver and Magnesium Ion Migrations Favor High Thermoelectric Performance in Î±â€MgAgSbâ€Based Materials. Advanced Functional Materials, 2015, 25, 6478-6488.	14.9	70
118	Chemical Vapor Deposition Growth of Single-Walled Carbon Nanotubes with Controlled Structures for Nanodevice Applications. Accounts of Chemical Research, 2014, 47, 2273-2281.	15.6	69
119	Density controlled oil uptake and beyond: from carbon nanotubes to graphene nanoribbon aerogels. Journal of Materials Chemistry A, 2015, 3, 20547-20553.	10.3	69
120	Epitaxial growth of large-area and highly crystalline anisotropic ReSe2 atomic layer. Nano Research, 2017, 10, 2732-2742.	10.4	69
121	Template Synthesis of an Ultrathin Î²-Graphdiyne-Like Film Using the Eglinton Coupling Reaction. ACS Applied Materials & Interfaces, 2019, 11, 2734-2739.	8.0	69
122	Structureâ€“Property Relations in Allâ€Organic Dyeâ€Sensitized Solar Cells. Advanced Functional Materials, 2013, 23, 424-429.	14.9	68
123	Microscopic Insight into Surface Wetting: Relations between Interfacial Water Structure and the Underlying Lattice Constant. Physical Review Letters, 2013, 110, 126101.	7.8	67
124	Z-scheme Ag3PO4/graphdiyne/g-C3N4 composites: Enhanced photocatalytic O2 generation benefiting from dual roles of graphdiyne. Carbon, 2018, 132, 598-605.	10.3	67
125	Exploring Approaches for the Synthesis of Fewâ€Layered Graphdiyne. Advanced Materials, 2019, 31, e1803758.	21.0	67
126	Integrated Plasmonics: Broadband Dirac Plasmons in Borophene. Physical Review Letters, 2020, 125, 116802.	7.8	67

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127	Nonâ€Volatile Electrolyteâ€Gated Transistors Based on Graphdiyne/MoS₂ with Robust Stability for Lowâ€Power Neuromorphic Computing and Logicâ€inâ€Memory. Advanced Functional Materials, 2021, 31, 2100069.	14.9	66
128	Modulating the Chargeâ€Transfer Enhancement in GERS using an Electrical Field under Vacuum and an n/pâ€Doping Atmosphere. Small, 2011, 7, 2945-2952.	10.0	65
129	Separation of Metallic and Semiconducting Singleâ€Walled Carbon Nanotube Arrays by â€œScotch Tapeâ€. Angewandte Chemie - International Edition, 2011, 50, 6819-6823.	13.8	64
130	Photoexcitation in Solids: Firstâ€Principles Quantum Simulations by Realâ€Time TDDFT. Advanced Theory and Simulations, 2018, 1, 1800055.	2.8	64
131	Boron doped graphdiyne: A metal-free peroxidase mimetic nanozyme for antibacterial application. Nano Research, 2022, 15, 1446-1454.	10.4	64
132	Temperatureâ€Mediated Engineering of Graphdiyne Framework Enabling Highâ€Performance Potassium Storage. Advanced Functional Materials, 2020, 30, 2003039.	14.9	62
133	Field and temperature dependence of intrinsic diamagnetism in graphene: Theory and experiment. Physical Review B, 2015, 91, .	3.2	61
134	Growing highly pure semiconducting carbon nanotubes by electrotwisting the helicity. Nature Catalysis, 2018, 1, 326-331.	34.4	61
135	Determination of DNA-Base Orientation on Carbon Nanotubes through Directional Optical Absorbance. Nano Letters, 2007, 7, 2312-2316.	9.1	60
136	Nonlinear Rashba spin splitting in transition metal dichalcogenide monolayers. Nanoscale, 2016, 8, 17854-17860.	5.6	60
137	Growth of Close-Packed Semiconducting Single-Walled Carbon Nanotube Arrays Using Oxygen-Deficient TiO₂ Nanoparticles as Catalysts. Nano Letters, 2015, 15, 403-409.	9.1	59
138	Chemical vapor deposition synthesis of near-zigzag single-walled carbon nanotubes with stable tube-catalyst interface. Science Advances, 2016, 2, e1501729.	10.3	59
139	Intelligent identification of two-dimensional nanostructures by machine-learning optical microscopy. Nano Research, 2018, 11, 6316-6324.	10.4	59
140	Designing Catalysts for Chiralityâ€Selective Synthesis of Singleâ€Walled Carbon Nanotubes: Past Success and Future Opportunity. Advanced Materials, 2019, 31, e1800805.	21.0	59
141	Birefringenceâ€Directed Raman Selection Rules in 2D Black Phosphorus Crystals. Small, 2016, 12, 2627-2633.	10.0	57
142	Electrostatic Functionalization and Passivation of Water-Exfoliated Few-Layer Black Phosphorus by Poly Dimethyldiallyl Ammonium Chloride and Its Ultrafast Laser Application. ACS Applied Materials & Interfaces, 2018, 10, 9679-9687.	8.0	57
143	Graphdiyne Filter for Decontaminating Leadâ€ionâ€Polluted Water. Advanced Electronic Materials, 2017, 3, 1700122.	5.1	56
144	Graphdiyne/Graphene/Graphdiyne Sandwiched Carbonaceous Anode for Potassium-Ion Batteries. ACS Nano, 2022, 16, 3163-3172.	14.6	56

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145	Bridging the Gap between Reality and Ideality of Graphdiyne: The Advances of Synthetic Methodology. CheM, 2020, 6, 1933-1951.	11.7	54
146	Catalystâ€Free Synthesis of Fewâ€Layer Graphdiyne Using a Microwaveâ€Induced Temperature Gradient at a Solid/Liquid Interface. Advanced Functional Materials, 2020, 30, 2001396.	14.9	54
147	Screening Magnetic Two-Dimensional Atomic Crystals with Nontrivial Electronic Topology. Journal of Physical Chemistry Letters, 2018, 9, 6709-6715.	4.6	53
148	Ultrafast charge ordering by self-amplified excitonâ€“phonon dynamics in TiSe2. Nature Communications, 2020, 11, 43.	12.8	53
149	Charge-Transfer Plasmon Polaritons at Graphene/Î±-RuCl₃ Interfaces. Nano Letters, 2020, 20, 8438-8445.	9.1	53
150	First-principles studies of cation-doped spinelLiMn2O4for lithium ion batteries. Physical Review B, 2003, 67, .	3.2	51
151	Novel Excitonic Solar Cells in Phosphoreneâ€“TiO₂ Heterostructures with Extraordinary Charge Separation Efficiency. Journal of Physical Chemistry Letters, 2016, 7, 1880-1887.	4.6	51
152	Gas exfoliation of graphitic carbon nitride to improve the photocatalytic hydrogen evolution of metal-free 2D/2D g-C3N4/graphdiyne heterojunction. Journal of Alloys and Compounds, 2020, 833, 155054.	5.5	51
153	Superconductorâ€“Insulator Transitions in Exfoliated Bi₂Sr₂CaCu₂O_{8+Î´} Flakes. Nano Letters, 2018, 18, 5660-5665.	9.1	50
154	Transparent proton transport through a two-dimensional nanomesh material. Nature Communications, 2019, 10, 3971.	12.8	50
155	Gate-Tunable Reversible Rashbaâ€“Edelstein Effect in a Few-Layer Graphene/2H-TaS₂ Heterostructure at Room Temperature. ACS Nano, 2020, 14, 5251-5259.	14.6	50
156	Giant enhancement of optical nonlinearity in two-dimensional materials by multiphoton-excitation resonance energy transfer from quantum dots. Nature Photonics, 2021, 15, 510-515.	31.4	50
157	New Pathway for Hot Electron Relaxation in Two-Dimensional Heterostructures. Nano Letters, 2018, 18, 6057-6063.	9.1	49
158	Transport behavior of water molecules through two-dimensional nanopores. Journal of Chemical Physics, 2014, 141, 18C528.	3.0	48
159	Temperature-dependent photoluminescence emission and Raman scattering from Mo_{1â€”x}W_xS₂monolayers. Nanotechnology, 2016, 27, 445705.	2.6	48
160	Unique structural advances of graphdiyne for energy applications. EnergyChem, 2020, 2, 100041.	19.1	48
161	Bimetallic Catalysts for the Efficient Growth of SWNTs on Surfaces. Chemistry of Materials, 2004, 16, 799-805.	6.7	47
162	Sorting out semiconducting single-walled carbon nanotube arrays by preferential destruction of metallic tubes using water. Journal of Materials Chemistry, 2011, 21, 11815.	6.7	47

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163	â€œSnowingâ€•Graphene using Microwave Ovens. Advanced Materials, 2018, 30, e1803189.	21.0	47
164	Growth of Horizontal Semiconducting SWNT Arrays with Density Higher than 100 tubes/Î¼m using Ethanol/Methane Chemical Vapor Deposition. Journal of the American Chemical Society, 2016, 138, 6727-6730.	13.7	46
165	Anisotropic Strain Relaxation of Graphene by Corrugation on Copper Crystal Surfaces. Small, 2018, 14, e1800725.	10.0	46
166	Toward the Chemistry of Carboxylic Single-Walled Carbon Nanotubes by Chemical Force Microscopy. Journal of Physical Chemistry B, 2002, 106, 4139-4144.	2.6	45
167	Helicity-dependent single-walled carbon nanotube alignment on graphite for helical angle and handedness recognition. Nature Communications, 2013, 4, 2205.	12.8	45
168	Ideal type-II Weyl phonons in wurtzite CuI. Physical Review B, 2019, 100, .	3.2	45
169	Water adsorption on a NaCl (001) surface: A density functional theory study. Physical Review B, 2006, 74, .	3.2	43
170	Synthesis of Hydrogenâ€Substituted Graphyne Film for Lithiumâ€“Sulfur Battery Applications. Small, 2019, 15, 1805344.	10.0	42
171	Growth kinetics of single-walled carbon nanotubes with a (2 n , n) chirality selection. Science Advances, 2019, 5, eaav9668.	10.3	42
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