Pulickel M Ajayan

List of Publications by Year
in descending order

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474	63,249	764 119	930 240
papers	citations	h-index	g-index

486	486	486	56681
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	High-efficiency two-dimensional Ruddlesdenâ€“Popper perovskite solar cells. Nature, 2016, 536, 312-316.	13.7	2,767
2	Large Scale Growth and Characterization of Atomic Hexagonal Boron Nitride Layers. Nano Letters, 2010, 10, 3209-3215.	4.5	2,317
3	Exfoliated Graphitic Carbon Nitride Nanosheets as Efficient Catalysts for Hydrogen Evolution Under Visible Light. Advanced Materials, 2013, 25, 2452-2456.	11.1	2,227
4	Atomic layers of hybridized boron nitride and graphene domains. Nature Materials, 2010, 9, 430-435.	13.3	2,002
5	Vertical and in-plane heterostructures from WS2/MoS2 monolayers. Nature Materials, 2014, 13, 1135-1142.	13.3	1,918
6	Intrinsic Structural Defects in Monolayer Molybdenum Disulfide. Nano Letters, 2013, 13, 2615-2622.	4.5	1,766
7	Vapour phase growth and grain boundary structure of molybdenum disulphide atomic layers. Nature Materials, 2013, 12, 754-759.	13.3	1,590
8	Largeâ€Area Vaporâ€Phase Growth and Characterization of MoS₂ Atomic Layers on a SiO₂ Substrate. Small, 2012, 8, 966-971.	5.2	1,556
9	Atomic cobalt on nitrogen-doped graphene for hydrogen generation. Nature Communications, 2015, 6, 8668.	5.8	1,356
10	Defects Engineered Monolayer MoS₂ for Improved Hydrogen Evolution Reaction. Nano Letters, 2016, 16, 1097-1103.	4.5	1,015
11	Wetting transparency of graphene. Nature Materials, 2012, 11, 217-222.	13.3	971
12	In-plane heterostructures of graphene and hexagonal boron nitride with controlled domain sizes. Nature Nanotechnology, 2013, 8, 119-124.	15.6	796
13	A subthermionic tunnel field-effect transistor with an atomically thin channel. Nature, 2015, 526, 91-95.	13.7	793
14	Atomically dispersed platinum supported on curved carbon supports for efficient electrocatalytic hydrogen evolution. Nature Energy, 2019, 4, 512-518.	19.8	756
15	Chemical Vapor Deposition Growth of Crystalline Monolayer MoSe₂. ACS Nano, 2014, 8, 5125-5131.	7.3	694
16	High Efficiency Photocatalytic Water Splitting Using 2D Î±â€Fe₂O₃/gâ€C₃N₄ Zâ€Scheme Catalysts. Advanced Energy Materials, 2017, 7, 1700025.	10.2	664
17	Composites with carbon nanotubes and graphene: An outlook. Science, 2018, 362, 547-553.	6.0	662
18	Room-temperature ferroelectricity in CuInP2S6 ultrathin flakes. Nature Communications, 2016, 7, 12357.	5.8	637

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19	Fracture toughness of graphene. Nature Communications, 2014, 5, 3782.	5.8	567
20	Light-induced lattice expansion leads to high-efficiency perovskite solar cells. Science, 2018, 360, 67-70.	6.0	554
21	Achieving Highly Efficient, Selective, and Stable CO₂ Reduction on Nitrogen-Doped Carbon Nanotubes. ACS Nano, 2015, 9, 5364-5371.	7.3	546
22	Second harmonic microscopy of monolayer MoS<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub></mml:math>. Physical Review B, 2013, 87, .	1.1	539
23	Ultrathin high-temperature oxidation-resistant coatings of hexagonal boron nitride. Nature Communications, 2013, 4, 2541.	5.8	536
24	Graphene-Based Standalone Solar Energy Converter for Water Desalination and Purification. ACS Nano, 2018, 12, 829-835.	7.3	519
25	A metal-free electrocatalyst for carbon dioxide reduction to multi-carbon hydrocarbons and oxygenates. Nature Communications, 2016, 7, 13869.	5.8	505
26	Charge-transfer-based Gas Sensing Using Atomic-layer MoS2. Scientific Reports, 2015, 5, 8052.	1.6	489
27	Two-Step Growth of Two-Dimensional WSe₂/MoSe₂ Heterostructures. Nano Letters, 2015, 15, 6135-6141.	4.5	479
28	Controlled nanocutting of graphene. Nano Research, 2008, 1, 116-122.	5.8	472
29	Direct Growth of Graphene/Hexagonal Boron Nitride Stacked Layers. Nano Letters, 2011, 11, 2032-2037.	4.5	466
30	Band Gap Engineering and Layer-by-Layer Mapping of Selenium-Doped Molybdenum Disulfide. Nano Letters, 2014, 14, 442-449.	4.5	463
31	Three-dimensionally bonded spongy graphene material with super compressive elasticity and near-zero Poissonâ€™s ratio. Nature Communications, 2015, 6, 6141.	5.8	458
32	Strain and structure heterogeneity in MoS2 atomic layers grown by chemical vapour deposition. Nature Communications, 2014, 5, 5246.	5.8	453
33	Liquid Phase Exfoliation of Two-Dimensional Materials by Directly Probing and Matching Surface Tension Components. Nano Letters, 2015, 15, 5449-5454.	4.5	436
34	Incorporation of Nitrogen Defects for Efficient Reduction of CO₂ via Two-Electron Pathway on Three-Dimensional Graphene Foam. Nano Letters, 2016, 16, 466-470.	4.5	435
35	Deep eutectic solvents for cathode recycling of Li-ion batteries. Nature Energy, 2019, 4, 339-345.	19.8	422
36	Nitrogenâ€Doped Carbon Nanotube Arrays for Highâ€Efficiency Electrochemical Reduction of CO₂: On the Understanding of Defects, Defect Density, and Selectivity. Angewandte Chemie - International Edition, 2015, 54, 13701-13705.	7.2	382

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37	Two-dimensional van der Waals materials. Physics Today, 2016, 69, 38-44.	0.3	381
38	Oxygenated monolayer carbon nitride for excellent photocatalytic hydrogen evolution and external quantum efficiency. Nano Energy, 2016, 27, 138-146.	8.2	379
39	Highly Sensitive Detection of Polarized Light Using Anisotropic 2D ReS₂. Advanced Functional Materials, 2016, 26, 1169-1177.	7.8	376
40	Strategies for Dendriteâ€Free Anode in Aqueous Rechargeable Zinc Ion Batteries. Advanced Energy Materials, 2020, 10, 2001599.	10.2	376
41	Electrochemical CO₂ Reduction with Atomic Ironâ€Dispersed on Nitrogenâ€Doped Graphene. Advanced Energy Materials, 2018, 8, 1703487.	10.2	369
42	Direct Ink Writing: A 3D Printing Technology for Diverse Materials. Advanced Materials, 2022, 34, e2108855.	11.1	361
43	Pyridinicâ€Nitrogenâ€Dominated Graphene Aerogels with Feâ€“Nâ€“C Coordination for Highly Efficient Oxygen Reduction Reaction. Advanced Functional Materials, 2016, 26, 5708-5717.	7.8	360
44	Full-color fluorescent carbon quantum dots. Science Advances, 2020, 6, .	4.7	344
45	Self-optimizing, highly surface-active layeredÂmetal dichalcogenide catalysts for hydrogen evolution. Nature Energy, 2017, 2, .	19.8	336
46	Emerging Applications of Elemental 2D Materials. Advanced Materials, 2020, 32, e1904302.	11.1	336
47	Optoelectronic crystal of artificial atoms in strain-textured molybdenum disulphide. Nature Communications, 2015, 6, 7381.	5.8	331
48	Multisegmented Au-MnO₂/Carbon Nanotube Hybrid Coaxial Arrays for High-Power Supercapacitor Applications. Journal of Physical Chemistry C, 2010, 114, 658-663.	1.5	314
49	Ultrafast formation of interlayer hot excitons in atomically thin MoS2/WS2 heterostructures. Nature Communications, 2016, 7, 12512.	5.8	313
50	Exfoliation of a non-van der Waals material from iron ore hematite. Nature Nanotechnology, 2018, 13, 602-609.	15.6	295
51	Wafer-scale monodomain films of spontaneously aligned single-walled carbon nanotubes. Nature Nanotechnology, 2016, 11, 633-638.	15.6	292
52	Two-dimensional non-volatile programmable pâ€“n junctions. Nature Nanotechnology, 2017, 12, 901-906.	15.6	278
53	Design Considerations for Unconventional Electrochemical Energy Storage Architectures. Advanced Energy Materials, 2015, 5, 1402115.	10.2	271
54	High temperature electrical energy storage: advances, challenges, and frontiers. Chemical Society Reviews, 2016, 45, 5848-5887.	18.7	268

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55	Stable Lightâ€Emitting Diodes Using Phaseâ€Pure Ruddlesdenâ€“Popper Layered Perovskites. Advanced Materials, 2018, 30, 1704217.	11.1	258
56	An Atomically Layered InSe Avalanche Photodetector. Nano Letters, 2015, 15, 3048-3055.	4.5	253
57	Temperature dependence of radial breathing mode Raman frequency of single-walled carbon nanotubes. Physical Review B, 2002, 66, .	1.1	250
58	Unveiling Active Sites for the Hydrogen Evolution Reaction on Monolayer MoS₂. Advanced Materials, 2017, 29, 1701955.	11.1	249
59	A Bottomâ€Up Approach to Build 3D Architectures from Nanosheets for Superior Lithium Storage. Advanced Functional Materials, 2014, 24, 125-130.	7.8	247
60	Facile Synthesis of Single Crystal Vanadium Disulfide Nanosheets by Chemical Vapor Deposition for Efficient Hydrogen Evolution Reaction. Advanced Materials, 2015, 27, 5605-5609.	11.1	241
61	Novel Liquid Precursor-Based Facile Synthesis of Large-Area Continuous, Single, and Few-Layer Graphene Films. Chemistry of Materials, 2010, 22, 3457-3461.	3.2	239
62	Structure, Properties and Applications of Twoâ€Dimensional Hexagonal Boron Nitride. Advanced Materials, 2021, 33, e2101589.	11.1	239
63	Marine Corrosion Protective Coatings of Hexagonal Boron Nitride Thin Films on Stainless Steel. ACS Applied Materials & Interfaces, 2013, 5, 4129-4135.	4.0	234
64	Anomalous piezoelectricity in two-dimensional graphene nitride nanosheets. Nature Communications, 2014, 5, 4284.	5.8	228
65	Superior Potassium Ion Storage via Vertical MoS₂ â€œNanoâ€Roseâ€•with Expanded Interlayers on Graphene. Small, 2017, 13, 1701471.	5.2	221
66	Binary and Ternary Atomic Layers Built from Carbon, Boron, and Nitrogen. Advanced Materials, 2012, 24, 4878-4895.	11.1	219
67	Boron- and Nitrogen-Substituted Graphene Nanoribbons as Efficient Catalysts for Oxygen Reduction Reaction. Chemistry of Materials, 2015, 27, 1181-1186.	3.2	219
68	Emerging Carbonâ€Based Heterogeneous Catalysts for Electrochemical Reduction of Carbon Dioxide into Valueâ€Added Chemicals. Advanced Materials, 2019, 31, e1804257.	11.1	218
69	Highâ€Lithiumâ€Affinity Chemically Exfoliated 2D Covalent Organic Frameworks. Advanced Materials, 2019, 31, e1901640.	11.1	217
70	Electrically Insulating Thermal Nano-Oils Using 2D Fillers. ACS Nano, 2012, 6, 1214-1220.	7.3	214
71	High thermal conductivity of suspended few-layer hexagonal boron nitride sheets. Nano Research, 2014, 7, 1232-1240.	5.8	211
72	Tracking Structural Selfâ€Reconstruction and Identifying True Active Sites toward Cobalt Oxychloride Precatalyst of Oxygen Evolution Reaction. Advanced Materials, 2019, 31, e1805127.	11.1	211

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73	Stable Metallic 1Tâ€WS₂ Nanoribbons Intercalated with Ammonia Ions: The Correlation between Structure and Electrical/Optical Properties. Advanced Materials, 2015, 27, 4837-4844.	11.1	207
74	Nickel Vacancies Boost Reconstruction in Nickel Hydroxide Electrocatalyst. ACS Energy Letters, 2018, 3, 1373-1380.	8.8	206
75	A Scalable Approach to Dendriteâ€Free Lithium Anodes via Spontaneous Reduction of Sprayâ€Coated Graphene Oxide Layers. Advanced Materials, 2018, 30, e1801213.	11.1	204
76	Chemical Vapor Deposition of Monolayer Rhenium Disulfide (ReS₂). Advanced Materials, 2015, 27, 4640-4648.	11.1	203
77	Electrical performance of monolayer MoS2 field-effect transistors prepared by chemical vapor deposition. Applied Physics Letters, 2013, 102, .	1.5	201
78	Recent developments of transition metal phosphides as catalysts in the energy conversionÂfield. Journal of Materials Chemistry A, 2018, 6, 23220-23243.	5.2	200
79	Temperature-dependent phonon shifts in monolayer MoS2. Applied Physics Letters, 2013, 103, .	1.5	199
80	Direct chemical conversion of graphene to boron- and nitrogen- and carbon-containing atomic layers. Nature Communications, 2014, 5, 3193.	5.8	198
81	Critical Role of Interface and Crystallinity on the Performance and Photostability of Perovskite Solar Cell on Nickel Oxide. Advanced Materials, 2018, 30, 1703879.	11.1	198
82	Surface functionalization of two-dimensional metal chalcogenides by Lewis acidâ€“base chemistry. Nature Nanotechnology, 2016, 11, 465-471.	15.6	197
83	Re Doping in 2D Transition Metal Dichalcogenides as a New Route to Tailor Structural Phases and Induced Magnetism. Advanced Materials, 2017, 29, 1703754.	11.1	191
84	Atomic Cobalt Covalently Engineered Interlayers for Superior Lithiumâ€Ion Storage. Advanced Materials, 2018, 30, e1802525.	11.1	187
85	Seawater electrolysis for hydrogen production: a solution looking for a problem?. Energy and Environmental Science, 2021, 14, 4831-4839.	15.6	187
86	Quaternary 2D Transition Metal Dichalcogenides (TMDs) with Tunable Bandgap. Advanced Materials, 2017, 29, 1702457.	11.1	186
87	Transforming Nickel Hydroxide into 3D Prussian Blue Analogue Array to Obtain Ni₂P/Fe₂P for Efficient Hydrogen Evolution Reaction. Advanced Energy Materials, 2018, 8, 1800484.	10.2	186
88	Electron Transfer Directed Antibacterial Properties of Graphene Oxide on Metals. Advanced Materials, 2018, 30, 1702149.	11.1	181
89	Mass and Charge Transfer Coenhanced Oxygen Evolution Behaviors in CoFeâ€Layered Double Hydroxide Assembled on Graphene. Advanced Materials Interfaces, 2016, 3, 1500782.	1.9	165
90	Rheniumâ€Doped and Stabilized MoS₂ Atomic Layers with Basalâ€Plane Catalytic Activity. Advanced Materials, 2018, 30, e1803477.	11.1	164

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91	Formation of CuPd and CuPt Bimetallic Nanotubes by Galvanic Replacement Reaction. Journal of Physical Chemistry C, 2011, 115, 9403-9409.	1.5	163
92	Power from nature: designing green battery materials from electroactive quinone derivatives and organic polymers. Journal of Materials Chemistry A, 2016, 4, 12370-12386.	5.2	161
93	Lithium storage mechanisms in purpurin based organic lithium ion battery electrodes. Scientific Reports, 2012, 2, 960.	1.6	160
94	Carbon Nanotubeâ€Encapsulated Noble Metal Nanoparticle Hybrid as a Cathode Material for Liâ€Oxygen Batteries. Advanced Functional Materials, 2014, 24, 6516-6523.	7.8	157
95	Atomically thin gallium layers from solid-melt exfoliation. Science Advances, 2018, 4, e1701373.	4.7	157
96	Metallic 1T phase source/drain electrodes for field effect transistors from chemical vapor deposited MoS2. APL Materials, 2014, 2, .	2.2	155
97	Covalent Organic Frameworks for Batteries. Advanced Functional Materials, 2021, 31, 2100505.	7.8	154
98	High Strain Tolerant EMI Shielding Using Carbon Nanotube Network Stabilized Rubber Composite. Advanced Materials Technologies, 2017, 2, 1700078.	3.0	153
99	Design principles for electronic charge transport in solution-processed vertically stacked 2D perovskite quantum wells. Nature Communications, 2018, 9, 2130.	5.8	153
100	Synthesis of Millimeterâ€Scale Transition Metal Dichalcogenides Single Crystals. Advanced Functional Materials, 2016, 26, 2009-2015.	7.8	152
101	Wormâ€Shape Pt Nanocrystals Grown on Nitrogenâ€Doped Lowâ€Defect Graphene Sheets: Highly Efficient Electrocatalysts for Methanol Oxidation Reaction. Small, 2017, 13, 1603013.	5.2	151
102	Controlled synthesis of Mo-doped Ni₃S₂nano-rods: an efficient and stable electro-catalyst for water splitting. Journal of Materials Chemistry A, 2017, 5, 1595-1602.	5.2	148
103	Effect of H2O adsorption on electron transport in a carbon nanotube. Applied Physics Letters, 2002, 81, 2638-2640.	1.5	147
104	CoNi₂S₄â€Grapheneâ€2Dâ€MoSe₂ as an Advanced Electrode Material for Supercapacitors. Advanced Energy Materials, 2016, 6, 1600341.	10.2	145
105	Conversion of non-van der Waals solids to 2D transition-metal chalcogenides. Nature, 2020, 577, 492-496.	13.7	145
106	Nanomechanical cleavage of molybdenum disulphide atomic layers. Nature Communications, 2014, 5, 3631.	5.8	144
107	Strong coupling and pressure engineering in WSe2â€“MoSe2 heterobilayers. Nature Physics, 2021, 17, 92-98.	6.5	140
108	Square selenene and tellurene: novel group VI elemental 2D materials with nontrivial topological properties. 2D Materials, 2017, 4, 041003.	2.0	139

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109	Brittle Fracture of 2D MoSe₂. Advanced Materials, 2017, 29, 1604201.	11.1	138
110	Exfoliated 2D Transition Metal Disulfides for Enhanced Electrocatalysis of Oxygen Evolution Reaction in Acidic Medium. Advanced Materials Interfaces, 2016, 3, 1500669.	1.9	136
111	Grapheneâ€“protein field effect biosensors: glucose sensing. Materials Today, 2015, 18, 513-522.	8.3	134
112	Controllable Codoping of Nitrogen and Sulfur in Graphene for Highly Efficient Li-Oxygen Batteries and Direct Methanol Fuel Cells. Chemistry of Materials, 2016, 28, 1737-1745.	3.2	132
113	Effect of Precursor Solution Aging on the Crystallinity and Photovoltaic Performance of Perovskite Solar Cells. Advanced Energy Materials, 2017, 7, 1602159.	10.2	130
114	Hexagonal Boron Nitride and Graphite Oxide Reinforced Multifunctional Porous Cement Composites. Advanced Functional Materials, 2013, 23, 5624-5630.	7.8	129
115	Three-dimensional mesostructures as high-temperature growth templates, electronic cellular scaffolds, and self-propelled microrobots. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E9455-E9464.	3.3	129
116	Gold Nanoparticles and gâ€C₃N₄â€Intercalated Graphene Oxide Membrane for Recyclable Surface Enhanced Raman Scattering. Advanced Functional Materials, 2017, 27, 1701714.	7.8	129
117	How Nitrogen-Doped Graphene Quantum Dots Catalyze Electroreduction of CO₂ to Hydrocarbons and Oxygenates. ACS Catalysis, 2017, 7, 6245-6250.	5.5	129
118	Surface Tension Components Based Selection of Cosolvents for Efficient Liquid Phase Exfoliation of 2D Materials. Small, 2016, 12, 2741-2749.	5.2	128
119	Synthesis of large-scale atomic-layer SnS2 through chemical vapor deposition. Nano Research, 2017, 10, 2386-2394.	5.8	124
120	Imaging the motion of electrons across semiconductor heterojunctions. Nature Nanotechnology, 2017, 12, 36-40.	15.6	124
121	Improving the Catalytic Activity of Carbonâ€Supported Single Atom Catalysts by Polynary Metal or Heteroatom Doping. Small, 2020, 16, e1906782.	5.2	124
122	Tellurium-Assisted Low-Temperature Synthesis of MoS₂ and WS₂ Monolayers. ACS Nano, 2015, 9, 11658-11666.	7.3	123
123	Strain-Induced Electronic Structure Changes in Stacked van der Waals Heterostructures. Nano Letters, 2016, 16, 3314-3320.	4.5	122
124	Fluorinated h-BN as a magnetic semiconductor. Science Advances, 2017, 3, e1700842.	4.7	121
125	Highly Inâ€Plane Optical and Electrical Anisotropy of 2D Germanium Arsenide. Advanced Functional Materials, 2018, 28, 1707379.	7.8	121
126	Boron Nitrideâ€“Graphene Nanocapacitor and the Origins of Anomalous Size-Dependent Increase of Capacitance. Nano Letters, 2014, 14, 1739-1744.	4.5	120

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127	Carbon Nitrogen Nanotubes as Efficient Bifunctional Electrocatalysts for Oxygen Reduction and Evolution Reactions. ACS Applied Materials & Interfaces, 2015, 7, 11991-12000.	4.0	120
128	Characterizing energy dissipation in single-walled carbon nanotube polycarbonate composites. Applied Physics Letters, 2005, 87, 063102.	1.5	119
129	Spectroscopic Signatures of AAâ€² and AB Stacking of Chemical Vapor Deposited Bilayer MoS₂. ACS Nano, 2015, 9, 12246-12254.	7.3	117
130	Etchingâ€Doping Sedimentation Equilibrium Strategy: Accelerating Kinetics on Hollow Rhâ€Doped CoFeâ€Layered Double Hydroxides for Water Splitting. Advanced Functional Materials, 2020, 30, 2003556.	7.8	117
131	Controlled Electrodeposition Synthesis of Coâ€“Niâ€“P Film as a Flexible and Inexpensive Electrode for Efficient Overall Water Splitting. ACS Applied Materials & Interfaces, 2017, 9, 31887-31896.	4.0	116
132	Probing the phonon dispersion relations of graphite from the double-resonance process of Stokes and anti-Stokes Raman scatterings in multiwalled carbon nanotubes. Physical Review B, 2002, 66, .	1.1	113
133	Hexagonal Boron Nitrideâ€Based Electrolyte Composite for Liâ€Ion Battery Operation from Room Temperature to 150 Â°C. Advanced Energy Materials, 2016, 6, 1600218.	10.2	112
134	Fatigue of graphene. Nature Materials, 2020, 19, 405-411.	13.3	110
135	Metal-Oxide-Mediated Subtractive Manufacturing of Two-Dimensional Carbon Nitride for High-Efficiency and High-Yield Photocatalytic H₂ Evolution. ACS Nano, 2019, 13, 11294-11302.	7.3	109
136	Tuning the Electrochemical Reactivity of Boronâ€and Nitrogenâ€Substituted Graphene. Advanced Materials, 2016, 28, 6239-6246.	11.1	107
137	Graphene Supported MoS₂ Structures with High Defect Density for an Efficient HER Electrocatalysts. ACS Applied Materials & Interfaces, 2020, 12, 12629-12638.	4.0	101
138	Pronounced Photovoltaic Response from Multilayered Transition-Metal Dichalcogenides PN-Junctions. Nano Letters, 2015, 15, 7532-7538.	4.5	98
139	Multifunctional Bioâ€Nanocomposite Coatings for Perishable Fruits. Advanced Materials, 2020, 32, e1908291.	11.1	97
140	Growth-substrate induced performance degradation in chemically synthesized monolayer MoS2 field effect transistors. Applied Physics Letters, 2014, 104, .	1.5	96
141	Correlating the three-dimensional atomic defects and electronic properties of two-dimensional transition metal dichalcogenides. Nature Materials, 2020, 19, 867-873.	13.3	96
142	Atomic Ru Immobilized on Porous h-BN through Simple Vacuum Filtration for Highly Active and Selective CO₂ Methanation. ACS Catalysis, 2019, 9, 10077-10086.	5.5	93
143	A solvent-assisted ligand exchange approach enables metal-organic frameworks with diverse and complex architectures. Nature Communications, 2020, 11, 927.	5.8	93
144	3D-printed silica with nanoscale resolution. Nature Materials, 2021, 20, 1506-1511.	13.3	93

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145	Sustainable Synthesis of Bright Green Fluorescent Nitrogenâ€Doped Carbon Quantum Dots from Alkali Lignin. ChemSusChem, 2019, 12, 4202-4210.	3.6	92
146	Low-density three-dimensional foam using self-reinforced hybrid two-dimensional atomic layers. Nature Communications, 2014, 5, 4541.	5.8	91
147	Cryo-mediated exfoliation and fracturing of layered materials into 2D quantum dots. Science Advances, 2017, 3, e1701500.	4.7	91
148	Ni filled flexible multi-walled carbon nanotubeâ€“polystyrene composite films as efficient microwave absorbers. Applied Physics Letters, 2011, 99, .	1.5	90
149	Reversible Formation of gâ€C₃N₄ 3D Hydrogels through Ionic Liquid Activation: Gelation Behavior and Roomâ€Temperature Gasâ€Sensing Properties. Advanced Functional Materials, 2017, 27, 1700653.	7.8	90
150	Regulation of functional groups on graphene quantum dots directs selective CO2 to CH4 conversion. Nature Communications, 2021, 12, 5265.	5.8	89
151	Utilizing interfaces in carbon nanotube reinforced polymer composites for structural damping. Journal of Materials Science, 2006, 41, 7824-7829.	1.7	88
152	Multifunctional nanocoated membranes for high-rate electrothermal desalination of hypersaline waters. Nature Nanotechnology, 2020, 15, 1025-1032.	15.6	88
153	Temperature dependent electrical transport of disordered reduced graphene oxide. 2D Materials, 2014, 1, 011008.	2.0	86
154	Manipulation on active electronic states of metastable phase Î²-NiMoO4 for large current density hydrogen evolution. Nature Communications, 2021, 12, 5960.	5.8	86
155	2D TiS₂ Layers: A Superior Nonlinear Optical Limiting Material. Advanced Optical Materials, 2017, 5, 1700713.	3.6	84
156	Super-elasticity of three-dimensionally cross-linked graphene materials all the way to deep cryogenic temperatures. Science Advances, 2019, 5, eaav2589.	4.7	84
157	A Non-van der Waals Two-Dimensional Material from Natural Titanium Mineral Ore Ilmenite. Chemistry of Materials, 2018, 30, 5923-5931.	3.2	82
158	Synthesis of Low-Density, Carbon-Doped, Porous Hexagonal Boron Nitride Solids. ACS Nano, 2015, 9, 12088-12095.	7.3	81
159	HClâ€Based Hydrothermal Etching Strategy toward Fluorideâ€Free MXenes. Advanced Materials, 2021, 33, e2101015.	11.1	79
160	Alloyed 2D Metalâ€“Semiconductor Atomic Layer Junctions. Nano Letters, 2016, 16, 1890-1895.	4.5	77
161	Electromechanically Responsive Liquid Crystal Elastomer Nanocomposites for Active Cell Culture. ACS Macro Letters, 2016, 5, 1386-1390.	2.3	76
162	Synthesis of Highâ€Quality Graphene and Hexagonal Boron Nitride Monolayer Inâ€Plane Heterostructure on Cuâ€“Ni Alloy. Advanced Science, 2017, 4, 1700076.	5.6	76

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163	Multiscale Geometric Design Principles Applied to 3D Printed Schwarzites. Advanced Materials, 2018, 30, 1704820.	11.1	76
164	Localized Ostwald Ripening Guided Dissolution/Regrowth to Ancient Chinese Coinâ€shaped VO₂ Nanoplates with Enhanced Mass Transfer for Zinc Ion Storage. Advanced Functional Materials, 2020, 30, 2000472.	7.8	76
165	Aligned Carbon Nanotube Stationary Phases for Electrochromatographic Chip Separations. Chromatographia, 2009, 69, 473-480.	0.7	72
166	Super-elasticity at 4â€‰K of covalently crosslinked polyimide aerogels with negative Poissonâ€™s ratio. Nature Communications, 2021, 12, 4092.	5.8	72
167	Carbon Dioxide Hydrogenation over a Metal-Free Carbon-Based Catalyst. ACS Catalysis, 2017, 7, 4497-4503.	5.5	71
168	Observation of Dynamic Strain Hardening in Polymer Nanocomposites. ACS Nano, 2011, 5, 2715-2722.	7.3	70
169	Low Contact Barrier in 2H/1Tâ€² MoTe₂ In-Plane Heterostructure Synthesized by Chemical Vapor Deposition. ACS Applied Materials & Interfaces, 2019, 11, 12777-12785.	4.0	70
170	Active Control of Plasmonâ€“Exciton Coupling in MoS₂â€“Ag Hybrid Nanostructures. Advanced Optical Materials, 2016, 4, 1463-1469.	3.6	69
171	Experimental Determination of the Ionization Energies of MoSe₂, WS₂, and MoS₂ on SiO₂ Using Photoemission Electron Microscopy. ACS Nano, 2017, 11, 8223-8230.	7.3	69
172	Doping Nanoscale Graphene Domains Improves Magnetism in Hexagonal Boron Nitride. Advanced Materials, 2019, 31, e1805778.	11.1	69
173	Integrated Energy Aerogel of N,S-rGO/WSe₂/NiFe-LDH for Both Energy Conversion and Storage. ACS Applied Materials & Interfaces, 2017, 9, 32756-32766.	4.0	68
174	Polytypism in ultrathin tellurium. 2D Materials, 2019, 6, 015013.	2.0	68
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