Richard B Kaner

List of Publications by Year
in descending order

437 papers	77,574 citations	1094 112 h-index	470 271 g-index
469 all docs	469 docs citations	469 times ranked	59020 citing authors

#	Article	IF	Citations
1	Processable aqueous dispersions of graphene nanosheets. Nature Nanotechnology, 2008, 3, 101-105.	15.6	8,393
2	Honeycomb Carbon: A Review of Graphene. Chemical Reviews, 2010, 110, 132-145.	23.0	6,210
3	Laser Scribing of High-Performance and Flexible Graphene-Based Electrochemical Capacitors. Science, 2012, 335, 1326-1330.	6.0	3,627
4	Design and Mechanisms of Asymmetric Supercapacitors. Chemical Reviews, 2018, 118, 9233-9280.	23.0	2,379
5	High-throughput solution processing of large-scale graphene. Nature Nanotechnology, 2009, 4, 25-29.	15.6	1,941
6	A Chemical Route to Graphene for Device Applications. Nano Letters, 2007, 7, 3394-3398.	4.5	1,881
7	Polyaniline Nanofibers:Â Facile Synthesis and Chemical Sensors. Journal of the American Chemical Society, 2003, 125, 314-315.	6.6	1,602
8	Scalable fabrication of high-power graphene micro-supercapacitors for flexible and on-chip energy storage. Nature Communications, 2013, 4, 1475.	5.8	1,592
9	Graphene-Based Materials. Science, 2008, 320, 1170-1171.	6.0	1,359
10	Practical Chemical Sensors from Chemically Derived Graphene. ACS Nano, 2009, 3, 301-306.	7.3	1,342
11	A General Chemical Route to Polyaniline Nanofibers. Journal of the American Chemical Society, 2004, 126, 851-855.	6.6	1,301
12	Nanostructured Tungsten Oxide â€“ Properties, Synthesis, and Applications. Advanced Functional Materials, 2011, 21, 2175-2196.	7.8	1,198
13	Polyaniline Nanofiber Gas Sensors:â€‰ Examination of Response Mechanisms. Nano Letters, 2004, 4, 491-496.	4.5	1,028
14	Graphene-based materials for flexible supercapacitors. Chemical Society Reviews, 2015, 44, 3639-3665.	18.7	1,015
15	Low-Temperature Solution Processing of Grapheneâ^'Carbon Nanotube Hybrid Materials for High-Performance Transparent Conductors. Nano Letters, 2009, 9, 1949-1955.	4.5	960
16	Graphene for batteries, supercapacitors and beyond. Nature Reviews Materials, 2016, 1, .	23.3	925
17	Polyaniline Nanofibers: A Unique Polymer Nanostructure for Versatile Applications. Accounts of Chemical Research, 2009, 42, 135-145.	7.6	913
18	Towards establishing standard performance metrics for batteries, supercapacitors and beyond. Chemical Society Reviews, 2019, 48, 1272-1341.	18.7	824

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19	Polyaniline Nanofiber/Gold Nanoparticle Nonvolatile Memory. Nano Letters, 2005, 5, 1077-1080.	4.5	802
20	Synthesis of Ultra-Incompressible Superhard Rhenium Diboride at Ambient Pressure. Science, 2007, 316, 436-439.	6.0	735
21	Alkali-Fulleride Superconductors: Synthesis, Composition, and Diamagnetic Shielding. Science, 1991, 252, 1154-1157.	6.0	730
22	Structure of single-phase superconducting K3C60. Nature, 1991, 351, 632-634.	13.7	730
23	A Chemical Route to Carbon Nanoscrolls. Science, 2003, 299, 1361-1361.	6.0	707
24	MATERIALS SCIENCE: Designing Superhard Materials. Science, 2005, 308, 1268-1269.	6.0	657
25	Nanofiber Formation in the Chemical Polymerization of Aniline: A Mechanistic Study. Angewandte Chemie - International Edition, 2004, 43, 5817-5821.	7.2	654
26	A liquid metal reaction environment for the room-temperature synthesis of atomically thin metal oxides. Science, 2017, 358, 332-335.	6.0	576
27	A One-Step, Solvothermal Reduction Method for Producing Reduced Graphene Oxide Dispersions in Organic Solvents. ACS Nano, 2010, 4, 3845-3852.	7.3	565
28	Nanostructured Bulk Silicon as an Effective Thermoelectric Material. Advanced Functional Materials, 2009, 19, 2445-2452.	7.8	521
29	Nanostructured Polyaniline Sensors. Chemistry - A European Journal, 2004, 10, 1314-1319.	1.7	504
30	Engineering three-dimensional hybrid supercapacitors and microsupercapacitors for high-performance integrated energy storage. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 4233-4238.	3.3	500
31	Shape and Aggregation Control of Nanoparticles: Not Shaken, Not Stirred. Journal of the American Chemical Society, 2006, 128, 968-975.	6.6	490
32	Polyaniline nanofibers: broadening applications for conducting polymers. Chemical Society Reviews, 2017, 46, 1510-1525.	18.7	484
33	Graphene, a promising transparent conductor. Materials Today, 2010, 13, 52-59.	8.3	469
34	Oneâ€Ðimensional Conducting Polymer Nanostructures: Bulk Synthesis and Applications. Advanced Materials, 2009, 21, 1487-1499.	11.1	465
35	Twoâ€Ðimensional Molybdenum Trioxide and Dichalcogenides. Advanced Functional Materials, 2013, 23, 3952-3970.	7.8	443
36	Osmium Diboride, An Ultra-Incompressible, Hard Material. Journal of the American Chemical Society, 2005, 127, 7264-7265.	6.6	439

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37	Graphene/Polyaniline Nanocomposite for Hydrogen Sensing. Journal of Physical Chemistry C, 2010, 114, 16168-16173.	1.5	425
38	Palladium Nanoparticles Supported on Polyaniline Nanofibers as a Semiâ€Heterogeneous Catalyst in Water. Angewandte Chemie - International Edition, 2007, 46, 7251-7254.	7.2	414
39	Conjugated Polymer Films for Gas Separations. Science, 1991, 252, 1412-1415.	6.0	406
40	3D Freezeâ€Casting of Cellular Graphene Films for Ultrahighâ€Powerâ€Density Supercapacitors. Advanced Materials, 2016, 28, 6719-6726.	11.1	390
41	Intercalation and exfoliation routes to graphite nanoplatelets. Journal of Materials Chemistry, 2005, 15, 974.	6.7	383
42	The intrinsic nanofibrillar morphology of polyaniline. Chemical Communications, 2006, , 367-376.	2.2	374
43	Graphene-like nano-sheets for surface acoustic wave gas sensor applications. Chemical Physics Letters, 2009, 467, 344-347.	1.2	354
44	Highly Ordered Mesoporous CuCo₂O₄ Nanowires, a Promising Solution for High-Performance Supercapacitors. Chemistry of Materials, 2015, 27, 3919-3926.	3.2	353
45	Patterning and Electronic Tuning of Laser Scribed Graphene for Flexible All-Carbon Devices. ACS Nano, 2012, 6, 1395-1403.	7.3	341
46	Designing 3D Highly Ordered Nanoporous CuO Electrodes for High-Performance Asymmetric Supercapacitors. ACS Applied Materials & Interfaces, 2015, 7, 4851-4860.	4.0	340
47	Advancements in the Search for Superhard Ultraâ€Incompressible Metal Borides. Advanced Functional Materials, 2009, 19, 3519-3533.	7.8	313
48	Grapheneâ€Supported Hemin as a Highly Active Biomimetic Oxidation Catalyst. Angewandte Chemie - International Edition, 2012, 51, 3822-3825.	7.2	309
49	Tunable Plasmon Resonances in Twoâ€Dimensional Molybdenum Oxide Nanoflakes. Advanced Materials, 2014, 26, 3931-3937.	11.1	308
50	A Simple Route to Porous Graphene from Carbon Nanodots for Supercapacitor Applications. Advanced Materials, 2018, 30, 1704449.	11.1	302
51	Tungsten tetraboride, an inexpensive superhard material. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 10958-10962.	3.3	299
52	Facile synthesis of nanostructured CuCo2O4 as a novel electrode material for high-rate supercapacitors. Chemical Communications, 2014, 50, 1972.	2.2	277
53	The oxidation of aniline to produce â€œpolyanilineâ€: a process yielding many different nanoscale structures. Journal of Materials Chemistry, 2011, 21, 3534-3550.	6.7	269
54	Boron-carbon-nitrogen materials of graphite-like structure. Materials Research Bulletin, 1987, 22, 399-404.	2.7	264

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55	Rediscovering the Crystal Chemistry of Borides. Advanced Materials, 2017, 29, 1604506.	11.1	260
56	Synthesis of nanometre-thick MoO₃sheets. Nanoscale, 2010, 2, 429-433.	2.8	250
57	High-pressure synthesis, characterization, and equation of state of cubic C-BN solid solutions. Physical Review B, 1995, 51, 12149-12156.	1.1	236
58	Rapid solid-state synthesis of materials from molybdenum disulphide to refractories. Nature, 1991, 349, 510-512.	13.7	235
59	Hydrogen Sensors Based on Conductivity Changes in Polyaniline Nanofibersâ€. Journal of Physical Chemistry B, 2006, 110, 22266-22270.	1.2	235
60	Graphene Flash Memory. ACS Nano, 2011, 5, 7812-7817.	7.3	232
61	Synthesis of Refractory Ceramics via Rapid Metathesis Reactions between Solid-State Precursors. Chemistry of Materials, 1996, 8, 333-343.	3.2	228
62	Flash welding of conducting polymer nanofibres. Nature Materials, 2004, 3, 783-786.	13.3	224
63	Magnetic-field penetration depth in K3C60 measured by muon spin relaxation. Nature, 1991, 352, 605-607.	13.7	222
64	Flexible quasi-solid-state planar micro-supercapacitor based on cellular graphene films. Materials Horizons, 2017, 4, 1145-1150.	6.4	222
65	Nextâ€Generation Activated Carbon Supercapacitors: A Simple Step in Electrode Processing Leads to Remarkable Gains in Energy Density. Advanced Functional Materials, 2017, 27, 1605745.	7.8	220
66	Wafer-scale two-dimensional semiconductors from printed oxide skin of liquid metals. Nature Communications, 2017, 8, 14482.	5.8	219
67	Nanoscale Morphology, Dimensional Control, and Electrical Properties of Oligoanilines. Journal of the American Chemical Society, 2010, 132, 10365-10373.	6.6	217
68	Vapor-Phase Polymerization of Nanofibrillar Poly(3,4-ethylenedioxythiophene) for Supercapacitors. ACS Nano, 2014, 8, 1500-1510.	7.3	217
69	Carbon Nanotube/Polyaniline Composite Nanofibers: Facile Synthesis and Chemosensors. Nano Letters, 2011, 11, 954-959.	4.5	215
70	Polyaniline Nanofiber Composites with Metal Salts: Chemical Sensors for Hydrogen Sulfide. Small, 2005, 1, 624-627.	5.2	214
71	Lanthanum carbide (La2C80): a soluble dimetallofullerene. The Journal of Physical Chemistry, 1991, 95, 10561-10563.	2.9	213
72	A layered surface acoustic wave gas sensor based on a polyaniline/In2O3nanofibre composite. Nanotechnology, 2006, 17, 4488-4492.	1.3	213

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73	A novel graphite-like material of composition BC3, and nitrogenâ€“carbon graphites. Journal of the Chemical Society Chemical Communications, 1986, , 1758-1759.	2.0	208
74	Mechanochemical synthesis and thermoelectric properties of high quality magnesium silicide. Journal of Materials Chemistry, 2011, 21, 12259.	6.7	204
75	Graphite Nanoplatelet Reinforcement of Electrospun Polyacrylonitrile Nanofibers. Advanced Materials, 2005, 17, 77-80.	11.1	203
76	Nanostructured materials for thermoelectric applications. Chemical Communications, 2010, 46, 8311.	2.2	198
77	Pressure and field dependence of superconductivity inRb3C60. Physical Review Letters, 1992, 68, 1228-1231.	2.9	189
78	Pressure Dependence of Superconductivity in Single-Phase K3C60. Science, 1991, 252, 1829-1831.	6.0	186
79	Rapid Solid-State Precursor Synthesis of Materials. Science, 1992, 255, 1093-1097.	6.0	183
80	Correlation between hardness and elastic moduli of the ultraincompressible transition metal diborides RuB2, OsB2, and ReB2. Applied Physics Letters, 2008, 92, .	1.5	183
81	Direct preparation and processing of graphene/RuO 2 nanocomposite electrodes for high-performance capacitive energy storage. Nano Energy, 2015, 18, 57-70.	8.2	181
82	Soft Transfer Printing of Chemically Converted Graphene. Advanced Materials, 2009, 21, 2098-2102.	11.1	177
83	Continuity of Graphene on Polycrystalline Copper. Nano Letters, 2011, 11, 251-256.	4.5	175
84	Elevated Temperature Anodized Nb₂O₅: A Photoanode Material with Exceptionally Large Photoconversion Efficiencies. ACS Nano, 2012, 6, 4045-4053.	7.3	174
85	Integrated Triboelectric Nanogenerators in the Era of the Internet of Things. Advanced Science, 2019, 6, 1802230.	5.6	174
86	Photothermal Deoxygenation of Graphene Oxide for Patterning and Distributed Ignition Applications. Advanced Materials, 2010, 22, 419-423.	11.1	168
87	Monolithic Actuators from Flashâ€Welded Polyaniline Nanofibers. Advanced Materials, 2008, 20, 155-158.	11.1	167
88	Charge transfer effect in the polyaniline-gold nanoparticle memory system. Applied Physics Letters, 2007, 90, 053101.	1.5	164
89	Crystalline Liquid-like Behavior: Surface-Induced Secondary Grain Growth of Photovoltaic Perovskite Thin Film. Journal of the American Chemical Society, 2019, 141, 13948-13953.	6.6	163
90	Printable magnesiumÂion quasi-solid-state asymmetric supercapacitors for flexible solar-charging integrated units. Nature Communications, 2019, 10, 4913.	5.8	162

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91	Platinum/Graphene Nanosheet/SiC Contacts and Their Application for Hydrogen Gas Sensing. Journal of Physical Chemistry C, 2010, 114, 13796-13801.	1.5	160
92	Toward an Understanding of the Formation of Conducting Polymer Nanofibers. ACS Nano, 2008, 2, 1841-1848.	7.3	158
93	Hydrazine Detection by Polyaniline Using Fluorinated Alcohol Additives. Chemistry of Materials, 2005, 17, 1256-1260.	3.2	155
94	Thionine Functionalized 3D Graphene Aerogel: Combining Simplicity and Efficiency in Fabrication of a Metalâ€Free Redox Supercapacitor. Advanced Energy Materials, 2018, 8, 1802869.	10.2	153
95	Mechanochemical Route to the Conducting Polymer Polyaniline. Macromolecules, 2005, 38, 317-321.	2.2	152
96	Processable stabilizer-free polyaniline nanofiber aqueous colloids. Chemical Communications, 2005, , 3286.	2.2	151
97	Thermal Properties of Polyaniline and Poly(aniline-co-o-ethylaniline). Macromolecules, 1995, 28, 6522-6527.	2.2	145
98	High Surface Area Tunnels in Hexagonal WO₃. Nano Letters, 2015, 15, 4834-4838.	4.5	144
99	Trilayer Metalâ€“Organic Frameworks as Multifunctional Electrocatalysts for Energy Conversion and Storage Applications. Journal of the American Chemical Society, 2022, 144, 3411-3428.	6.6	142
100	Design of hard crystals. International Journal of Refractory Metals and Hard Materials, 2006, 24, 1-5.	1.7	136
101	Fabrication and characterization of iron oxide nanoparticles filled polypyrrole nanocomposites. Journal of Nanoparticle Research, 2009, 11, 1441-1452.	0.8	136
102	Rapid Solid-State Synthesis of Refractory Nitrides. Inorganic Chemistry, 1994, 33, 5693-5700.	1.9	135
103	Size Control of Gold Nanoparticles Grown on Polyaniline Nanofibers for Bistable Memory Devices. ACS Nano, 2011, 5, 3469-3474.	7.3	134
104	Endohedral rare-earth fullerene complexes. The Journal of Physical Chemistry, 1992, 96, 6869-6871.	2.9	133
105	Doped and dedoped polyaniline nanofiber based conductometric hydrogen gas sensors. Sensors and Actuators A: Physical, 2007, 139, 53-57.	2.0	132
106	Direct Laser Writing of Graphene Electronics. ACS Nano, 2014, 8, 8725-8729.	7.3	123
107	Wafer-Scale Synthesis of Semiconducting SnO Monolayers from Interfacial Oxide Layers of Metallic Liquid Tin. ACS Nano, 2017, 11, 10974-10983.	7.3	122
108	Polypyrrole nanofiber surface acoustic wave gas sensors. Sensors and Actuators B: Chemical, 2008, 134, 826-831.	4.0	119

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109	Preparation and Properties of Metallic, Superhard Rhenium Diboride Crystals. Journal of the American Chemical Society, 2008, 130, 16953-16958.	6.6	119
110	Direct microscopic observation of membrane formation by nonsolvent induced phase separation. Journal of Membrane Science, 2013, 431, 212-220.	4.1	117
111	Oh, the Places Youâ€™ll Go with Graphene. Accounts of Chemical Research, 2013, 46, 2244-2253.	7.6	114
112	Structure of Rb:C60compounds. Physical Review B, 1992, 45, 543-546.	1.1	113
113	Low-Fouling Antibacterial Reverse Osmosis Membranes via Surface Grafting of Graphene Oxide. ACS Applied Materials & Interfaces, 2016, 8, 14334-14338.	4.0	113
114	Boosting the capacitance and voltage of aqueous supercapacitors via redox charge contribution from both electrode and electrolyte. Nano Today, 2017, 15, 15-25.	6.2	108
115	Aluminumâ€ionâ€intercalation Supercapacitors with Ultrahigh Areal Capacitance and Highly Enhanced Cycling Stability: Power Supply for Flexible Electrochromic Devices. Small, 2017, 13, 1700380.	5.2	107
116	Enantioselective Discrimination of D- and L-Phenylalanine by Chiral Polyaniline Thin Films. Advanced Materials, 2003, 15, 1158-1161.	11.1	106
117	Toward Inexpensive Superhard Materials: Tungsten Tetraboride-Based Solid Solutions. Journal of the American Chemical Society, 2012, 134, 20660-20668.	6.6	105
118	The use of an electrocatalytic redox electrolyte for pushing the energy density boundary of a flexible polyaniline electrode to a new limit. Nano Energy, 2018, 44, 489-498.	8.2	105
119	Microwave exfoliation of a graphite intercalation compound. Carbon, 2007, 45, 1367-1369.	5.4	104
120	Unique surface patterns emerging during solidification of liquid metal alloys. Nature Nanotechnology, 2021, 16, 431-439.	15.6	104
121	Solution-processed transparent electrodes. MRS Bulletin, 2011, 36, 749-755.	1.7	103
122	3D Crumpled Ultrathin 1T MoS₂ for Inkjet Printing of Mg-Ion Asymmetric Micro-supercapacitors. ACS Nano, 2020, 14, 7308-7318.	7.3	100
123	Morphological and Dimensional Control via Hierarchical Assembly of Doped Oligoaniline Single Crystals. Journal of the American Chemical Society, 2012, 134, 9251-9262.	6.6	99
124	Gas separation membranes: A novel application for conducting polymers. Synthetic Metals, 1991, 41, 1151-1154.	2.1	97
125	Giant vibrational resonances inA6C60compounds. Physical Review B, 1992, 46, 1937-1940.	1.1	96
126	Pore-structure, hydrophilicity, and particle filtration characteristics of polyanilineâ€“polysulfone ultrafiltration membranes. Journal of Materials Chemistry, 2010, 20, 4621.	6.7	95

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127	Ultra-sensitive chemosensors for Fe(iii) and explosives based on highly fluorescent oligofluoranthene. Chemical Science, 2013, 4, 1970.	3.7	94
128	Chemical Vapor Deposition of Graphene on Copper from Methane, Ethane and Propane: Evidence for Bilayer Selectivity. Small, 2012, 8, 1415-1422.	5.2	93
129	Ultraincompressible, Superhard Materials. Annual Review of Materials Research, 2016, 46, 465-485.	4.3	92
130	A chiral recognition polymer based on polyaniline. Synthetic Metals, 1999, 101, 44-47.	2.1	91
131	Facile Synthesis of Water-Dispersible Conducting Polymer Nanospheres. ACS Nano, 2010, 4, 5193-5202.	7.3	90
132	Exploring the high-pressure behavior of superhard tungsten tetraboride. Physical Review B, 2012, 85, .	1.1	90
133	Integration of molecular and enzymatic catalysts on graphene for biomimetic generation of antithrombotic species. Nature Communications, 2014, 5, 3200.	5.8	90
134	A molecular cross-linking approach for hybrid metal oxides. Nature Materials, 2018, 17, 341-348.	13.3	90
135	A Templateâ€Free Route to Polypyrrole Nanofibers. Macromolecular Rapid Communications, 2007, 28, 2289-2293.	2.0	89
136	Polyaniline nanofiber composites with amines: Novel materials for phosgene detection. Nano Research, 2009, 2, 135-142.	5.8	89
137	Ultrathin Grapheneâ€"Protein Supercapacitors for Miniaturized Bioelectronics. Advanced Energy Materials, 2017, 7, 1700358.	10.2	88
138	Synthesis of Graphene Nanoribbons via the Topochemical Polymerization and Subsequent Aromatization of a Diacetylene Precursor. CheM, 2016, 1, 78-90.	5.8	87
139	Optical properties of the alkali-metal-doped superconducting fullerenes:K3C60andRb3C60. Physical Review B, 1994, 49, 7012-7025.	1.1	86
140	Laser-scribed graphene presents an opportunity to print a new generation of disposable electrochemical sensors. Nanoscale, 2014, 6, 13613-13622.	2.8	86
141	Oligotriphenylene Nanofiber Sensors for Detection of Nitroâ€Based Explosives. Advanced Functional Materials, 2012, 22, 726-735.	7.8	85
142	Self-healing flexible/stretchable energy storage devices. Materials Today, 2021, 44, 78-104.	8.3	85
143	Polyaniline Nanofiber Based Surface Acoustic Wave Gas Sensorsâ€"Effect of Nanofiber Diameter on $hbox{H}_{2}$ Response. IEEE Sensors Journal, 2007, 7, 213-218.	2.4	84
144	Assembly of Nanofluidic MXene Fibers with Enhanced Ionic Transport and Capacitive Charge Storage by Flake Orientation. ACS Nano, 2021, 15, 7821-7832.	7.3	83

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145	Normal-State Magnetic Properties of K ₃ C ₆₀. Europhysics Letters, 1992, 18, 79-84.	0.7	82
146	Structure of superhard tungsten tetraboride: A missing link between MB ₂ and MB ₁₂ higher borides. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 3223-3228.	3.3	82
147	An integrated electrochemical device based on earth-abundant metals for both energy storage and conversion. Energy Storage Materials, 2018, 11, 282-293.	9.5	82
148	Optical response of the superconducting state ofK3C60andRb3C60. Physical Review Letters, 1992, 69, 2987-2990.	2.9	80
149	A polyaniline/WO3 nanofiber composite-based ZnO/64Â° YX LiNbO3 SAW hydrogen gas sensor. Synthetic Metals, 2008, 158, 29-32.	2.1	80
150	Substituted Polyaniline Nanofibers Produced via Rapid Initiated Polymerization. Macromolecules, 2008, 41, 7405-7410.	2.2	80
151	Sulfonated Polyaniline Nanostructures Synthesized via Rapid Initiated Copolymerization with Controllable Morphology, Size, and Electrical Properties. Macromolecules, 2012, 45, 1570-1579.	2.2	80
152	Flash Converted Graphene for Ultraâ€High Power Supercapacitors. Advanced Energy Materials, 2015, 5, 1500786.	10.2	80
153	Rapid synthesis of transition-metal borides by solid-state metathesis. Journal of Materials Research, 1995, 10, 353-361.	1.2	78
154	How nucleation affects the aggregation of nanoparticles. Journal of Materials Chemistry, 2007, 17, 2279.	6.7	78
155	Synthesis of N = 8 Armchair Graphene Nanoribbons from Four Distinct Polydiacetylenes. Journal of the American Chemical Society, 2017, 139, 15878-15890.	6.6	78
156	Polyaniline Membranes for Pervaporation of Carboxylic Acids and Water. Macromolecules, 1998, 31, 5456-5464.	2.2	77
157	Perspective: Superhard metal borides: A look forward. APL Materials, 2018, 6, 070901.	2.2	77
158	Advantages of eutectic alloys for creating catalysts in the realm of nanotechnology-enabled metallurgy. Nature Communications, 2019, 10, 4645.	5.8	76
159	Polyaniline sol-gels and their third-order nonlinear optical effects. Synthetic Metals, 1991, 43, 3183-3187.	2.1	75
160	Superhard Monoborides: Hardness Enhancement through Alloying in W_{1â^'}_xTa_xB. Advanced Materials, 2016, 28, 6993-6998.	11.1	75
161	Nucleation and Growth of Polyaniline Nanofibers onto Liquid Metal Nanoparticles. Chemistry of Materials, 2020, 32, 4808-4819.	3.2	75
162	Fabrication of Low-Fouling Ultrafiltration Membranes Using a Hydrophilic, Self-Doping Polyaniline Additive. Chemistry of Materials, 2013, 25, 3597-3602.	3.2	74

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163	Self-Assembly and Cross-Linking of Conducting Polymers into 3D Hydrogel Electrodes for Supercapacitor Applications. ACS Applied Energy Materials, 2020, 3, 923-932.	2.5	73
164	A general synthetic route to nanofibers of polyaniline derivatives. Chemical Communications, 2006, , 3915.	2.2	72
165	Incompressibility and Hardness of Solid Solution Transition Metal Diborides: Os1â^'xRuxB2. Chemistry of Materials, 2009, 21, 1915-1921.	3.2	70
166	High sensitivity DNA detection using gold nanoparticle functionalised polyaniline nanofibres. Biosensors and Bioelectronics, 2011, 26, 2613-2618.	5.3	70
167	Enhanced Gas Permeation through Graphene Nanocomposites. Journal of Physical Chemistry C, 2015, 119, 13700-13712.	1.5	70
168	Intercalation and Solution Processing of Bismuth Telluride and Bismuth Selenide. Advanced Materials, 2001, 13, 797-800.	11.1	69
169	Monolithically Integrated Self-Charging Power Pack Consisting of a Silicon Nanowire Array/Conductive Polymer Hybrid Solar Cell and a Laser-Scribed Graphene Supercapacitor. ACS Applied Materials & Interfaces, 2018, 10, 15609-15615.	4.0	69
170	Solid-state metathesis as a quick route to transition-metal mixed dichalcogenides. Inorganic Chemistry, 1992, 31, 2127-2132.	1.9	67
171	Conductometric Hydrogen Gas Sensor Based on Polypyrrole Nanofibers. IEEE Sensors Journal, 2008, 8, 365-370.	2.4	66
172	Hydrogen Detection by Polyaniline Nanofibers on Gold and Platinum Electrodes. Journal of Physical Chemistry C, 2009, 113, 6444-6449.	1.5	66
173	The effects of thionyl chloride on the properties of graphene and grapheneâ€“carbon nanotube composites. Journal of Materials Chemistry, 2011, 21, 3391.	6.7	66
174	Nile Blue Functionalized Graphene Aerogel as a Pseudocapacitive Negative Electrode Material across the Full pH Range. ACS Nano, 2019, 13, 12567-12576.	7.3	66
175	Lithium intercalation and exfoliation of layered bismuth selenide and bismuth telluride. Journal of Materials Chemistry, 2009, 19, 2588.	6.7	65
176	Plastics that Conduct Electricity. Scientific American, 1988, 258, 106-111.	1.0	64
177	Full elastic tensor of a crystal of the superhard compound ReB2. Acta Materialia, 2010, 58, 1530-1535.	3.8	64
178	Extrinsic Hardening of Superhard Tungsten Tetraboride Alloys with Group 4 Transition Metals. Journal of the American Chemical Society, 2016, 138, 5714-5721.	6.6	64
179	Ultrafast rechargeable Zn micro-batteries endowing a wearable solar charging system with high overall efficiency. Energy and Environmental Science, 2021, 14, 1602-1611.	15.6	64
180	Lithium-Ion Insertion Properties of Solution-Exfoliated Germanane. ACS Nano, 2017, 11, 7995-8001.	7.3	63

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181	Asymmetric supercapacitors: An alternative to activated carbon negative electrodes based on earth abundant elements. Materials Today Energy, 2019, 12, 26-36.	2.5	63
182	Liquidâ€Metalâ€Templated Synthesis of 2D Graphitic Materials at Room Temperature. Advanced Materials, 2020, 32, e2001997.	11.1	63
183	Structure of Ultralong Polyaniline Nanofibers Using Initiators. Macromolecules, 2011, 44, 2735-2742.	2.2	62
184	Excitation dependent bidirectional electron transfer in phthalocyanine-functionalised MoS₂nanosheets. Nanoscale, 2016, 8, 16276-16283.	2.8	62
185	Compact, flexible conducting polymer/graphene nanocomposites for supercapacitors of high volumetric energy density. Composites Science and Technology, 2018, 160, 50-59.	3.8	62
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