Ray H Baughman

List of Publications by Year
in descending order

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293	45,569	3159 92	1934 207
papers	citations	h-index	g-index

302	302	302	39033
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Carbon Nanotubes--the Route Toward Applications. Science, 2002, 297, 787-792.	12.6	9,458
2	Carbon Nanotubes: Present and Future Commercial Applications. Science, 2013, 339, 535-539.	12.6	4,612
3	Strong, Transparent, Multifunctional, Carbon Nanotube Sheets. Science, 2005, 309, 1215-1219.	12.6	1,581
4	Multifunctional Carbon Nanotube Yarns by Downsizing an Ancient Technology. Science, 2004, 306, 1358-1361.	12.6	1,579
5	Super-tough carbon-nanotube fibres. Nature, 2003, 423, 703-703.	27.8	1,394
6	Artificial Muscles from Fishing Line and Sewing Thread. Science, 2014, 343, 868-872.	12.6	1,006
7	Carbon Structures with Three-Dimensional Periodicity at Optical Wavelengths. , 1998, 282, 897-901.		1,005
8	Polymer artificial muscles. Materials Today, 2007, 10, 30-38.	14.2	787
9	Negative Poisson's ratios as a common feature of cubic metals. Nature, 1998, 392, 362-365.	27.8	635
10	Direct electron transfer of glucose oxidase on carbon nanotubes. Nanotechnology, 2002, 13, 559-564.	2.6	596
11	Electrically, Chemically, and Photonically Powered Torsional and Tensile Actuation of Hybrid Carbon Nanotube Yarn Muscles. Science, 2012, 338, 928-932.	12.6	585
12	Giant-Stroke, Superelastic Carbon Nanotube Aerogel Muscles. Science, 2009, 323, 1575-1578.	12.6	518
13	Torsional Carbon Nanotube Artificial Muscles. Science, 2011, 334, 494-497.	12.6	495
14	Controlled Assembly of Carbon Nanotubes by Designed Amphiphilic Peptide Helices. Journal of the American Chemical Society, 2003, 125, 1770-1777.	13.7	481
15	Ultrafast charge and discharge biscrolled yarn supercapacitors for textiles and microdevices. Nature Communications, 2013, 4, 1970.	12.8	475
16	Three-dimensionally bonded spongy graphene material with super compressive elasticity and near-zero Poissonâ€™s ratio. Nature Communications, 2015, 6, 6141.	12.8	458
17	Harvesting Waste Thermal Energy Using a Carbon-Nanotube-Based Thermo-Electrochemical Cell. Nano Letters, 2010, 10, 838-846.	9.1	431
18	Superior Rechargeability and Efficiency of Lithiumâ€“Oxygen Batteries: Hierarchical Air Electrode Architecture Combined with a Soluble Catalyst. Angewandte Chemie - International Edition, 2014, 53, 3926-3931.	13.8	407

#	Article	IF	Citations
19	Elastomeric Conductive Composites Based on Carbon Nanotube Forests. Advanced Materials, 2010, 22, 2663-2667.	21.0	367
20	Synergistic toughening of composite fibres by self-alignment of reduced graphene oxide and carbon nanotubes. Nature Communications, 2012, 3, 650.	12.8	354
21	Flexible Supercapacitor Made of Carbon Nanotube Yarn with Internal Pores. Advanced Materials, 2014, 26, 2059-2065.	21.0	345
22	Biscrolling Nanotube Sheets and Functional Guests into Yarns. Science, 2011, 331, 51-55.	12.6	338
23	Harvesting electrical energy from carbon nanotube yarn twist. Science, 2017, 357, 773-778.	12.6	306
24	Enhanced Power and Rechargeability of a Liâ^'O₂ Battery Based on a Hierarchicalâ€Fibril CNT Electrode. Advanced Materials, 2013, 25, 1348-1352.	21.0	299
25	Structure and Dynamics of Carbon Nanoscrolls. Nano Letters, 2004, 4, 881-884.	9.1	296
26	Super-tough MXene-functionalized graphene sheets. Nature Communications, 2020, 11, 2077.	12.8	289
27	Preparation and Characterization of Individual Peptide-Wrapped Single-Walled Carbon Nanotubes. Journal of the American Chemical Society, 2004, 126, 7222-7227.	13.7	268
28	New twist on artificial muscles. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 11709-11716.	7.1	254
29	Improving the mechanical properties of single-walled carbon nanotube sheets by intercalation of polymeric adhesives. Applied Physics Letters, 2003, 82, 1682-1684.	3.3	253
30	V2O5 nanofibre sheet actuators. Nature Materials, 2003, 2, 316-319.	27.5	248
31	Continuous carbon nanotube composite fibers: properties, potential applications, and problemsElectronic supplementary information (ESI) available: frontispiece figure. See http://www.rsc.org/suppdata/jm/b3/b312092a/. Journal of Materials Chemistry, 2004, 14, 1.	6.7	247
32	Sign Change of Poisson's Ratio for Carbon Nanotube Sheets. Science, 2008, 320, 504-507.	12.6	245
33	High-efficiency electrochemical thermal energy harvester using carbon nanotube aerogel sheet electrodes. Nature Communications, 2016, 7, 10600.	12.8	244
34	Electro-optic Behavior of Liquid-Crystal-Filled Silica Opal Photonic Crystals: Effect of Liquid-Crystal Alignment. Physical Review Letters, 2001, 86, 4052-4055.	7.8	237
35	MATERIALS SCIENCE: Playing Nature's Game with Artificial Muscles. Science, 2005, 308, 63-65.	12.6	237
36	Electrochemical studies of single-wall carbon nanotubes in aqueous solutions. Journal of Electroanalytical Chemistry, 2000, 488, 92-98.	3.8	234

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37	Crystalline networks with unusual predicted mechanical and thermal properties. Nature, 1993, 365, 735-737.	27.8	224
38	Stretchable, Weavable Coiled Carbon Nanotube/MnO2/Polymer Fiber Solid-State Supercapacitors. Scientific Reports, 2015, 5, 9387.	3.3	220
39	Sheath-run artificial muscles. Science, 2019, 365, 150-155.	12.6	218
40	Twistable and Stretchable Sandwich Structured Fiber for Wearable Sensors and Supercapacitors. Nano Letters, 2016, 16, 7677-7684.	9.1	202
41	Moisture Sensitive Smart Yarns and Textiles from Selfâ€Balanced Silk Fiber Muscles. Advanced Functional Materials, 2019, 29, 1808241.	14.9	200
42	Thermal conductivity of multi-walled carbon nanotube sheets: radiation losses and quenching of phonon modes. Nanotechnology, 2010, 21, 035709.	2.6	199
43	Wovenâ€Yarn Thermoelectric Textiles. Advanced Materials, 2016, 28, 5038-5044.	21.0	195
44	Elastomeric and Dynamic MnO₂/CNT Coreâ€“Shell Structure Coiled Yarn Supercapacitor. Advanced Energy Materials, 2016, 6, 1502119.	19.5	192
45	Knitted Carbon-Nanotube-Sheath/Spandex-Core Elastomeric Yarns for Artificial Muscles and Strain Sensing. ACS Nano, 2016, 10, 9129-9135.	14.6	189
46	Electrical Power From Nanotube and Graphene Electrochemical Thermal Energy Harvesters. Advanced Functional Materials, 2012, 22, 477-489.	14.9	180
47	Thermal transport in MWCNT sheets and yarns. Carbon, 2007, 45, 2880-2888.	10.3	179
48	Carbon Nanotube â€“ Reduced Graphene Oxide Composites for Thermal Energy Harvesting Applications. Advanced Materials, 2013, 25, 6602-6606.	21.0	178
49	Importance of Aromatic Content for Peptide/Single-Walled Carbon Nanotube Interactions. Journal of the American Chemical Society, 2005, 127, 12323-12328.	13.7	176
50	Electromechanical Actuators Based on Graphene and Graphene/Fe₃O₄ Hybrid Paper. Advanced Functional Materials, 2011, 21, 3778-3784.	14.9	170
51	High Power Density Electrochemical Thermocells for Inexpensively Harvesting Lowâ€Grade Thermal Energy. Advanced Materials, 2017, 29, 1605652.	21.0	166
52	Resonance Raman study of the thermochromic phase transition of a polydiacetylene. Journal of the American Chemical Society, 1976, 98, 481-487.	13.7	164
53	Highâ€Performance Biscrolled MXene/Carbon Nanotube Yarn Supercapacitors. Small, 2018, 14, e1802225.	10.0	158
54	Diameter-Selective Solubilization of Single-Walled Carbon Nanotubes by Reversible Cyclic Peptides. Journal of the American Chemical Society, 2005, 127, 9512-9517.	13.7	157

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55	Robust cell migration and neuronal growth on pristine carbon nanotube sheets and yarns. Journal of Biomaterials Science, Polymer Edition, 2007, 18, 1245-1261.	3.5	154
56	A new catalyst-embedded hierarchical air electrode for high-performance Liâ€“O2 batteries. Energy and Environmental Science, 2013, 6, 3570.	30.8	152
57	Electrochemical Characterization of Single-Walled Carbon Nanotube Electrodes. Journal of the Electrochemical Society, 2000, 147, 4580.	2.9	149
58	High-power biofuel cell textiles from woven biscrolled carbon nanotube yarns. Nature Communications, 2014, 5, 3928.	12.8	147
59	Improvement of system capacitance via weavable superelastic biscrolled yarn supercapacitors. Nature Communications, 2016, 7, 13811.	12.8	146
60	Electromechanical Actuator with Controllable Motion, Fast Response Rate, and High-Frequency Resonance Based on Graphene and Polydiacetylene. ACS Nano, 2012, 6, 4508-4519.	14.6	141
61	Fuel-Powered Artificial Muscles. Science, 2006, 311, 1580-1583.	12.6	140
62	Carbon nanotube/graphene nanocomposite as efficient counter electrodes in dye-sensitized solar cells. Nanotechnology, 2012, 23, 085201.	2.6	135
63	Intelligently Actuating Liquid Crystal Elastomerâ€Carbon Nanotube Composites. Advanced Functional Materials, 2019, 29, 1905063.	14.9	135
64	Torsional refrigeration by twisted, coiled, and supercoiled fibers. Science, 2019, 366, 216-221.	12.6	133
65	Downsized Sheathâ€“Core Conducting Fibers for Weavable Superelastic Wires, Biosensors, Supercapacitors, and Strain Sensors. Advanced Materials, 2016, 28, 4998-5007.	21.0	131
66	Auxetic materials: Avoiding the shrink. Nature, 2003, 425, 667-667.	27.8	123
67	Pool Boiling Experiments on Multiwalled Carbon Nanotube (MWCNT) Forests. Journal of Heat Transfer, 2006, 128, 1335-1342.	2.1	123
68	Electron field emission from transparent multiwalled carbon nanotube sheets for inverted field emission displays. Carbon, 2010, 48, 41-46.	10.3	123
69	Underwater Sound Generation Using Carbon Nanotube Projectors. Nano Letters, 2010, 10, 2374-2380.	9.1	123
70	A laser Raman study of the stress dependence of vibrational frequencies of a monocrystalline polydiacetylene. Journal of Chemical Physics, 1977, 66, 2731-2736.	3.0	122
71	Electrochemical actuation of carbon nanotube yarns. Smart Materials and Structures, 2007, 16, S243-S249.	3.5	120
72	Hybrid carbon nanotube yarn artificial muscle inspired by spider dragline silk. Nature Communications, 2014, 5, 3322.	12.8	120

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73	Transparent carbon nanotube sheets as 3-D charge collectors in organic solar cells. Solar Energy Materials and Solar Cells, 2007, 91, 416-419.	6.2	119
74	CHEMISTRY: Dangerously Seeking Linear Carbon. Science, 2006, 312, 1009-1110.	12.6	117
75	High-strength scalable graphene sheets by freezing stretch-induced alignment. Nature Materials, 2021, 20, 624-631.	27.5	117
76	Multifunctional carbon nanotube yarns and transparent sheets: Fabrication, properties, and applications. Physica B: Condensed Matter, 2007, 394, 339-343.	2.7	116
77	Structural Model for Dry-Drawing of Sheets and Yarns from Carbon Nanotube Forests. ACS Nano, 2011, 5, 985-993.	14.6	116
78	Optical, Electrical, and Electromechanical Properties of Hybrid Graphene/Carbon Nanotube Films. Advanced Materials, 2015, 27, 3053-3059.	21.0	114
79	Sequentially bridged graphene sheets with high strength, toughness, and electrical conductivity. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 5359-5364.	7.1	114
80	Highly Conductive Carbon Nanotubeâ€Graphene Hybrid Yarn. Advanced Functional Materials, 2014, 24, 5859-5865.	14.9	113
81	Spinnable carbon nanotube forests grown on thin, flexible metallic substrates. Carbon, 2010, 48, 3621-3627.	10.3	112
82	Stretchable Triboelectric Fiber for Self-powered Kinematic Sensing Textile. Scientific Reports, 2016, 6, 35153.	3.3	111
83	Electrochemically Powered, Energyâ€Conserving Carbon Nanotube Artificial Muscles. Advanced Materials, 2017, 29, 1700870.	21.0	110
84	Unipolar stroke, electroosmotic pump carbon nanotube yarn muscles. Science, 2021, 371, 494-498.	12.6	110
85	Microscopically Buckled and Macroscopically Coiled Fibers for Ultraâ€Stretchable Supercapacitors. Advanced Energy Materials, 2017, 7, 1602021.	19.5	106
86	Ordered Mesoporous Nickel Sphere Arrays for Highly Efficient Electrocatalytic Water Oxidation. ACS Catalysis, 2016, 6, 1446-1450.	11.2	105
87	Compact and low-cost humanoid hand powered by nylon artificial muscles. Bioinspiration and Biomimetics, 2017, 12, 026004.	2.9	105
88	Temperature-independent capacitance of carbon-based supercapacitor from â˜'100 to 60â€¯Â°C. Energy Storage Materials, 2019, 22, 323-329.	18.0	104
89	Biomolecule based fiber supercapacitor for implantable device. Nano Energy, 2018, 47, 385-392.	16.0	103
90	All-Solid-State Carbon Nanotube Torsional and Tensile Artificial Muscles. Nano Letters, 2014, 14, 2664-2669.	9.1	101

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91	Strong, Twistâ€Stable Carbon Nanotube Yarns and Muscles by Tension Annealing at Extreme Temperatures. Advanced Materials, 2016, 28, 6598-6605.	21.0	100
92	A Biâ€Sheath Fiber Sensor for Giant Tensile and Torsional Displacements. Advanced Functional Materials, 2017, 27, 1702134.	14.9	100
93	Tunable, Fast, Robust Hydrogel Actuators Based on Evaporation-Programmed Heterogeneous Structures. Chemistry of Materials, 2017, 29, 9793-9801.	6.7	98
94	Laser-like emission in opal photonic crystals. Optics Communications, 1999, 162, 241-246.	2.1	92
95	A Reel-Wound Carbon Nanotube Polarizer for Terahertz Frequencies. Nano Letters, 2011, 11, 4227-4231.	9.1	91
96	Electrochemical Properties of Single-Wall Carbon Nanotube Electrodes. Journal of the Electrochemical Society, 2003, 150, E409.	2.9	90
97	The Interfacial Shear Strength of Carbon Nanotube Sheet Modified Carbon Fiber Composites. Conference Proceedings of the Society for Experimental Mechanics, 2021, , 25-32.	0.5	90
98	Electrochemical quartz crystal microbalance studies of single-wall carbon nanotubes in aqueous and non-aqueous solutions. Electrochimica Acta, 2000, 46, 509-517.	5.2	88
99	Variations of the Geometries and Band Gaps of Single-Walled Carbon Nanotubes and the Effect of Charge Injection. Journal of Physical Chemistry B, 2003, 107, 6924-6931.	2.6	88
100	Dimensional Changes as a Function of Charge Injection in Single-Walled Carbon Nanotubes. Journal of the American Chemical Society, 2002, 124, 15076-15080.	13.7	87
101	Highly conducting charge-transfer complexes of a processible polymer: poly(p-phenylene sulphide). Journal of the Chemical Society Chemical Communications, 1980, , 348.	2.0	86
102	Efficient, Absorptionâ€Powered Artificial Muscles Based on Carbon Nanotube Hybrid Yarns. Small, 2015, 11, 3113-3118.	10.0	85
103	Multiwalled carbon nanotube sheets as transparent electrodes in high brightness organic light-emitting diodes. Applied Physics Letters, 2008, 93, .	3.3	84
104	Flexible, stretchable and weavable piezoelectric fiber. Advanced Engineering Materials, 2015, 17, 1270-1275.	3.5	84
105	Hybrid Nanomembranes for High Power and High Energy Density Supercapacitors and Their Yarn Application. ACS Nano, 2012, 6, 327-334.	14.6	83
106	Towards ionic liquid-based thermoelectrochemical cells for the harvesting of thermal energy. Electrochimica Acta, 2013, 113, 87-93.	5.2	81
107	Niobium Nanowire Yarns and their Application as Artificial Muscles. Advanced Functional Materials, 2013, 23, 4311-4316.	14.9	81
108	Molecular, Supramolecular, and Macromolecular Motors and Artificial Muscles. MRS Bulletin, 2009, 34, 671-681.	3.5	74

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109	Electro-reflectance spectra of one-dimensional excitons in polydiacetylene crystals. Chemical Physics, 1984, 88, 437-442.	1.9	73
110	The Optical Properties of Porous Opal Crystals Infiltrated with Organic Molecules. Japanese Journal of Applied Physics, 1997, 36, L714-L717.	1.5	73
111	Strong, Conductive, Foldable Graphene Sheets by Sequential Ionic and Ï€ Bridging. Advanced Materials, 2018, 30, e1802733.	21.0	73
112	Fibers of reduced graphene oxide nanoribbons. Nanotechnology, 2012, 23, 235601.	2.6	71
113	Fullereneynes: a new family of porous fullerenes. Chemical Physics Letters, 1993, 204, 8-14.	2.6	67
114	Amphiphilic Helical Peptide Enhances the Uptake of Single-Walled Carbon Nanotubes by Living Cells. Experimental Biology and Medicine, 2007, 232, 1236-1244.	2.4	67
115	Ranking the affinity of aromatic residues for carbon nanotubes by using designed surfactant peptides. Journal of Peptide Science, 2008, 14, 139-151.	1.4	67
116	Oriented Graphene Nanoribbon Yarn and Sheet from Aligned Multiâ€Walled Carbon Nanotube Sheets. Advanced Materials, 2012, 24, 5695-5701.	21.0	67
117	Enhanced rate performance of flexible and stretchable linear supercapacitors based on polyaniline@Au@carbon nanotube with ultrafast axial electron transport. Journal of Power Sources, 2017, 340, 302-308.	7.8	67
118	Bio-inspired, Moisture-Powered Hybrid Carbon Nanotube Yarn Muscles. Scientific Reports, 2016, 6, 23016.	3.3	66
119	Actuators of individual carbon nanotubes. Current Applied Physics, 2002, 2, 311-314.	2.4	64
120	Artificial Muscles Based on Polypyrrole/Carbon Nanotube Laminates. Advanced Materials, 2011, 23, 2966-2970.	21.0	64
121	Electrical Stimulation of Myoblast Proliferation and Differentiation on Aligned Nanostructured Conductive Polymer Platforms. Advanced Healthcare Materials, 2012, 1, 801-808.	7.6	61
122	Template synthesis of ordered arrays of mesoporous titania spheres. Chemical Communications, 2010, 46, 1872-1874.	4.1	59
123	Harvesting temperature fluctuations as electrical energy using torsional and tensile polymer muscles. Energy and Environmental Science, 2015, 8, 3336-3344.	30.8	57
124	iGrab: hand orthosis powered by twisted and coiled polymer muscles. Smart Materials and Structures, 2017, 26, 105048.	3.5	57
125	Arbitrarily Shaped Fiber Assemblies from Spun Carbon Nanotube Gel Fibers. Advanced Functional Materials, 2007, 17, 2918-2924.	14.9	55
126	Electrodeposition of Î±-MnO2/Î³-MnO2 on Carbon Nanotube for Yarn Supercapacitor. Scientific Reports, 2019, 9, 11271.	3.3	55

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127	Additive Functionalization and Embroidery for Manufacturing Wearable and Washable Textile Supercapacitors. Advanced Functional Materials, 2020, 30, 1910541.	14.9	55
128	MATERIALS SCIENCE: Muscles Made from Metal. Science, 2003, 300, 268-269.	12.6	54
129	Auâ€Doped Polyacrylonitrileâ€“Polyaniline Coreâ€“Shell Electrospun Nanofibers Having High Fieldâ€Effect Mobilities. Small, 2011, 7, 597-600.	10.0	54
130	Increasing the efficiency of thermoacoustic carbon nanotube sound projectors. Nanotechnology, 2013, 24, 235501.	2.6	54
131	Increased actuation rate of electromechanical carbon nanotube actuators using potential pulses with resistance compensation. Smart Materials and Structures, 2003, 12, 549-555.	3.5	53
132	Preparation and electrochemical characterization of porous SWNTâ€“PPy nanocomposite sheets for supercapacitor applications. Synthetic Metals, 2008, 158, 638-641.	3.9	53
133	Peptide cross-linking modulated stability and assembly of peptide-wrapped single-walled carbon nanotubes. Journal of Materials Chemistry, 2005, 15, 1734.	6.7	52
134	Bulk FePt-based nanocomposite magnets with enhanced exchange coupling. Journal of Applied Physics, 2007, 102, 023908.	2.5	52
135	The Power of Fiber Twist. Accounts of Chemical Research, 2021, 54, 2624-2636.	15.6	52
136	Metal Sphere Photonic Crystals by Nanomolding. Journal of the American Chemical Society, 2001, 123, 763-764.	13.7	51
137	Fractionation of SWNT/nucleic acid complexes by agarose gel electrophoresis. Nanotechnology, 2006, 17, 4263-4269.	2.6	51
138	Carbon Nanotube Electroactive Polymer Materials: Opportunities and Challenges. MRS Bulletin, 2008, 33, 215-224.	3.5	51
139	Structure and process-dependent properties of solid-state spun carbon nanotube yarns. Journal of Physics Condensed Matter, 2010, 22, 334221.	1.8	51
140	NMR, Calorimetric, and Diffraction Study of Molecular Motion in Crystalline Carboranes. Journal of Chemical Physics, 1970, 53, 3781-3789.	3.0	50
141	Preparation and characterization of hybrid conducting polymerâ€“carbon nanotube yarn. Nanoscale, 2012, 4, 940-945.	5.6	50
142	Carbon Nanotube Yarnâ€Based Glucose Sensing Artificial Muscle. Small, 2016, 12, 2085-2091.	10.0	50
143	Largeâ€Stroke Electrochemical Carbon Nanotube/Graphene Hybrid Yarn Muscles. Small, 2018, 14, e1801883.	10.0	50
144	Electrochemical graphene/carbon nanotube yarn artificial muscles. Sensors and Actuators B: Chemical, 2019, 286, 237-242.	7.8	50

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145	Polarâ€Electrodeâ€Bridged Electroluminescent Displays: 2D Sensors Remotely Communicating Optically. Advanced Materials, 2017, 29, 1703552.	21.0	49
146	Alternative Nanostructures for Thermophones. ACS Nano, 2015, 9, 4743-4756.	14.6	48
147	Humidity- and Water-Responsive Torsional and Contractile Lotus Fiber Yarn Artificial Muscles. ACS Applied Materials & Interfaces, 2021, 13, 6642-6649.	8.0	47
148	Directional growth of polypyrrole and polythiophene wires. Applied Physics Letters, 2009, 94, 033104.	3.3	46
149	Biothermal sensing of a torsional artificial muscle. Nanoscale, 2016, 8, 3248-3253.	5.6	46
150	Highly loaded MXene/carbon nanotube yarn electrodes for improved asymmetric supercapacitor performance. MRS Communications, 2019, 9, 114-121.	1.8	45
151	Wearable Energy Generating and Storing Textile Based on Carbon Nanotube Yarns. Advanced Functional Materials, 2020, 30, 2000411.	14.9	45
152	Simple and strong: twisted silver painted nylon artificial muscle actuated by Joule heating. Proceedings of SPIE, 2014, , .	0.8	44
153	General Synthesis of 3D Ordered Macro-/Mesoporous Materials by Templating Mesoporous Silica Confined in Opals. Chemistry of Materials, 2018, 30, 1617-1624.	6.7	44
154	Weavable asymmetric carbon nanotube yarn supercapacitor for electronic textiles. RSC Advances, 2018, 8, 13112-13120.	3.6	43
155	Three-dimensionally ordered macro-/mesoporous Ni as a highly efficient electrocatalyst for the hydrogen evolution reaction. Journal of Materials Chemistry A, 2015, 3, 11367-11375.	10.3	42
156	Hydrogen-fuel-powered bell segments of biomimetic jellyfish. Smart Materials and Structures, 2012, 21, 045013.	3.5	41
157	Load transfer between cross-linked walls of a carbon nanotube. Physical Review B, 2010, 81, .	3.2	39
158	Mirage effect from thermally modulated transparent carbon nanotube sheets. Nanotechnology, 2011, 22, 435704.	2.6	39
159	Catalytic Twistâ€Spun Yarns of Nitrogenâ€Doped Carbon Nanotubes. Advanced Functional Materials, 2012, 22, 1069-1075.	14.9	38
160	Regulation of morphogenesis and neural differentiation of human mesenchymal stem cells using carbon nanotube sheets. Integrative Biology (United Kingdom), 2012, 4, 587.	1.3	37
161	Probe Sensor Using Nanostructured Multi-Walled Carbon Nanotube Yarn for Selective and Sensitive Detection of Dopamine. Sensors, 2017, 17, 884.	3.8	37
162	Stretchable Fiber Biofuel Cell by Rewrapping Multiwalled Carbon Nanotube Sheets. Nano Letters, 2018, 18, 5272-5278.	9.1	37

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163	Self-Powered Coiled Carbon-Nanotube Yarn Sensor for Gastric Electronics. ACS Sensors, 2019, 4, 2893-2899.	7.8	37
164	Using ultra-thin interlaminar carbon nanotube sheets to enhance the mechanical and electrical properties of carbon fiber reinforced polymer composites. Composites Part B: Engineering, 2021, 216, 108842.	12.0	36
165	Carbon Nanotube/Platinum (Pt) Sheet as an Improved Cathode for Microbial Fuel Cells. Energy & Fuels, 2010, 24, 5897-5902.	5.1	35
166	Photoinduced Optical Transparency in Dye-Sensitized Solar Cells Containing Graphene Nanoribbons. Journal of Physical Chemistry C, 2011, 115, 25125-25131.	3.1	35
167	Ag/MnO2 Composite Sheath-Core Structured Yarn Supercapacitors. Scientific Reports, 2018, 8, 13309.	3.3	34
168	Biscrolled Carbon Nanotube Yarn Structured Silver-Zinc Battery. Scientific Reports, 2018, 8, 11150.	3.3	34
169	Enhancing the Work Capacity of Electrochemical Artificial Muscles by Coiling Plies of Twist-Released Carbon Nanotube Yarns. ACS Applied Materials & Interfaces, 2019, 11, 13533-13537.	8.0	34
170	Nylon-muscle-actuated robotic finger. Proceedings of SPIE, 2015, , .	0.8	32
171	Enhancing the strength, toughness, and electrical conductivity of twist-spun carbon nanotube yarns by Ï€ bridging. Carbon, 2019, 150, 268-274.	10.3	32
172	Bio-inspired Hybrid Carbon Nanotube Muscles. Scientific Reports, 2016, 6, 26687.	3.3	31
173	Thermal management of thermoacoustic sound projectors using a free-standing carbon nanotube aerogel sheet as a heat source. Nanotechnology, 2014, 25, 405704.	2.6	30
174	Selfâ€Powered, Electrochemical Carbon Nanotube Pressure Sensors for Wave Monitoring. Advanced Functional Materials, 2020, 30, 2004564.	14.9	30
175	Predicted Confinement-Enhanced Stability and Extraordinary Mechanical Properties for Carbon Nanotube Wrapped Chains of Linear Carbon. ACS Nano, 2020, 14, 17071-17079.	14.6	29
176	Electrochemically Tuned Properties for Electrolyteâ€Free Carbon Nanotube Sheets. Advanced Functional Materials, 2009, 19, 2266-2272.	14.9	27
177	Mechanoelectrical Force Sensors Using Twisted Yarns of Carbon Nanotubes. IEEE/ASME Transactions on Mechatronics, 2011, 16, 90-97.	5.8	27
178	Primary Liver Cells Cultured on Carbon Nanotube Substrates for Liver Tissue Engineering and Drug Discovery Applications. ACS Applied Materials & Interfaces, 2014, 6, 10373-10380.	8.0	27
179	Superconductivity in Pb inverse opal. Physica C: Superconductivity and Its Applications, 2007, 453, 15-23.	1.2	26
180	Aligned, isotropic and patterned carbon nanotube substrates that control the growth and alignment of Chinese hamster ovary cells. Nanotechnology, 2011, 22, 205102.	2.6	26

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181	Carbon nanotubesâ€“elastomer actuator driven electrothermally by low-voltage. Nanoscale Advances, 2019, 1, 965-968.	4.6	26
182	Carbon Nanotube Yarn Actuators: An Electrochemical Impedance Model. Journal of the Electrochemical Society, 2009, 156, K97.	2.9	25
183	Optical characteristics of SiO2 photonic band-gap crystal with ferroelectric perovskite oxide. Applied Physics Letters, 2002, 81, 4440-4442.	3.3	24
184	Dimensional change as a function of charge injection in graphite intercalation compounds: â€ƒA density functional theory study. Physical Review B, 2003, 68, .	3.2	24
185	Highly stretchable hybrid nanomembrane supercapacitors. RSC Advances, 2016, 6, 24756-24759.	3.6	24
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