Meng-Qiang Zhao

List of Publications by Citations

125 papers	20,528 citations	56 h-index	132 g-index
132 ext. papers	23,940 ext. citations	11.9 avg, IF	7.01 L-index

#	Paper	IF	Citations
125	Conductive two-dimensional titanium carbide ‘clay’ with high volumetric capacitance. *Nature*, **2014**, 516, 78-81	50.4	2849
124	Flexible and conductive MXene films and nanocomposites with high capacitance. *Proceedings of the National Academy of Sciences of the United States of America*, **2014**, 111, 16676-81	11.5	1204
123	Ultra-high-rate pseudocapacitive energy storage in two-dimensional transition metal carbides. *Nature Energy*, **2017**, 2,	62.3	1071
122	Flexible MXene/carbon nanotube composite paper with high volumetric capacitance. *Advanced Materials*, **2015**, 27, 339-45	24	860
121	Synthesis and Characterization of 2D Molybdenum Carbide (MXene). *Advanced Functional Materials*, **2016**, 26, 3118-3127	15.6	640
120	Thickness-independent capacitance of vertically aligned liquid-crystalline MXenes. *Nature*, **2018**, 557, 409-412	50.4	627
119	Pseudocapacitive Electrodes Produced by Oxidant-Free Polymerization of Pyrrole between the Layers of 2D Titanium Carbide (MXene). *Advanced Materials*, **2016**, 28, 1517-22	24	614
118	Amine-Assisted Delamination of Nb2C MXene for Li-Ion Energy Storage Devices. *Advanced Materials*, **2015**, 27, 3501-6	24	555
117	Unstacked double-layer templated graphene for high-rate lithium-sulphur batteries. *Nature Communications*, **2014**, 5, 3410	17.4	551
116	Nitrogen-doped graphene/carbon nanotube hybrids: in situ formation on bifunctional catalysts and their superior electrocatalytic activity for oxygen evolution/reduction reaction. *Small*, **2014**, 10, 2251-9	11	525
115	Porous heterostructured MXene/carbon nanotube composite paper with high volumetric capacity for sodium-based energy storage devices. *Nano Energy*, **2016**, 26, 513-523	17.1	505
114	Nitrogen-doped aligned carbon nanotube/graphene sandwiches: facile catalytic growth on bifunctional natural catalysts and their applications as scaffolds for high-rate lithium-sulfur batteries. *Advanced Materials*, **2014**, 26, 6100-5	24	492
113	Synthesis of two-dimensional titanium nitride Ti4N3 (MXene). *Nanoscale*, **2016**, 8, 11385-91	7.7	487
112	Hierarchical Nanocomposites Derived from Nanocarbons and Layered Double Hydroxides - Properties, Synthesis, and Applications. *Advanced Functional Materials*, **2012**, 22, 675-694	15.6	477
111	Hollow MXene Spheres and 3D Macroporous MXene Frameworks for Na-Ion Storage. *Advanced Materials*, **2017**, 29, 1702410	24	465
110	Graphene/single-walled carbon nanotube hybrids: one-step catalytic growth and applications for high-rate Li-S batteries. *ACS Nano*, **2012**, 6, 10759-69	16.7	462
109	Nanoarchitectured Graphene/CNT@Porous Carbon with Extraordinary Electrical Conductivity and Interconnected Micro/Mesopores for Lithium-Sulfur Batteries. *Advanced Functional Materials*, **2014**, 24, 2772-2781	15.6	452

108	All-MXene (2D titanium carbide) solid-state microsupercapacitors for on-chip energy storage. *Energy and Environmental Science*, **2016**, 9, 2847-2854	35.4	428
107	Fabrication of Ti3C2Tx MXene Transparent Thin Films with Tunable Optoelectronic Properties. *Advanced Electronic Materials*, **2016**, 2, 1600050	6.4	407
106	MoS2 Nanosheets Vertically Aligned on Carbon Paper: A Freestanding Electrode for Highly Reversible Sodium-Ion Batteries. *Advanced Energy Materials*, **2016**, 6, 1502161	21.8	402
105	MoS -on-MXene Heterostructures as Highly Reversible Anode Materials for Lithium-Ion Batteries. *Angewandte Chemie - International Edition*, **2018**, 57, 1846-1850	16.4	375
104	Aligned carbon nanotube/sulfur composite cathodes with high sulfur content for lithium–sulfur batteries. *Nano Energy*, **2014**, 4, 65-72	17.1	328
103	Porous Two-Dimensional Transition Metal Carbide (MXene) Flakes for High-Performance Li-Ion Storage. *ChemElectroChem*, **2016**, 3, 689-693	4.3	298
102	Carbon nanotube mass production: principles and processes. *ChemSusChem*, **2011**, 4, 864-89	8.3	288
101	Nanodiamonds suppress the growth of lithium dendrites. *Nature Communications*, **2017**, 8, 336	17.4	257
100	Layered Orthorhombic Nb2O5@Nb4C3Tx and TiO2@Ti3C2Tx Hierarchical Composites for High Performance Li-ion Batteries. *Advanced Functional Materials*, **2016**, 26, 4143-4151	15.6	244
99	2D titanium carbide and transition metal oxides hybrid electrodes for Li-ion storage. *Nano Energy*, **2016**, 30, 603-613	17.1	229
98	Entrapment of sulfur in hierarchical porous graphene for lithium–sulfur batteries with high rate performance from −40 to 60 °C. *Nano Energy*, **2013**, 2, 314-321	17.1	204
97	Synthesis and Charge Storage Properties of Hierarchical Niobium Pentoxide/Carbon/Niobium Carbide (MXene) Hybrid Materials. *Chemistry of Materials*, **2016**, 28, 3937-3943	9.6	172
96	High mass loading, binder-free MXene anodes for high areal capacity Li-ion batteries. *Electrochimica Acta*, **2015**, 163, 246-251	6.7	169
95	Embedded high density metal nanoparticles with extraordinary thermal stability derived from guest-host mediated layered double hydroxides. *Journal of the American Chemical Society*, **2010**, 132, 14739-41	16.4	161
94	Binder-free activated carbon/carbon nanotube paper electrodes for use in supercapacitors. *Nano Research*, **2011**, 4, 870-881	10	154
93	Size-Dependent Physical and Electrochemical Properties of Two-Dimensional MXene Flakes. *ACS Applied Materials & Interfaces*, **2018**, 10, 24491-24498	9.5	150
92	Two-Dimensional Titanium Carbide MXene As a Cathode Material for Hybrid Magnesium/Lithium-Ion Batteries. *ACS Applied Materials & Interfaces*, **2017**, 9, 4296-4300	9.5	149
91	Interaction of Polar and Nonpolar Polyfluorenes with Layers of Two-Dimensional Titanium Carbide (MXene): Intercalation and Pseudocapacitance. *Chemistry of Materials*, **2017**, 29, 2731-2738	9.6	128

90	Ti3C2Tx (MXene)–polyacrylamide nanocomposite films. *RSC Advances*, **2016**, 6, 72069-72073	3.7	112
89	Hierarchical Composites of Single/Double-Walled Carbon Nanotubes Interlinked Flakes from Direct Carbon Deposition on Layered Double Hydroxides. *Advanced Functional Materials*, **2010**, 20, 677-685	15.6	109
88	Charge transfer induced polymerization of EDOT confined between 2D titanium carbide layers. *Journal of Materials Chemistry A*, **2017**, 5, 5260-5265	13	107
87	The catalytic pathways of hydrohalogenation over metal-free nitrogen-doped carbon nanotubes. *ChemSusChem*, **2014**, 7, 723-8	8.3	106
86	Energy-Absorbing Hybrid Composites Based on Alternate Carbon-Nanotube and Inorganic Layers. *Advanced Materials*, **2009**, 21, 2876-2880	24	106
85	Towards high purity graphene/single-walled carbon nanotube hybrids with improved electrochemical capacitive performance. *Carbon*, **2013**, 54, 403-411	10.4	100
84	Hierarchical vine-tree-like carbon nanotube architectures: In-situ CVD self-assembly and their use as robust scaffolds for lithium-sulfur batteries. *Advanced Materials*, **2014**, 26, 7051-8	24	97
83	Vertically aligned carbon nanotube arrays grown on a lamellar catalyst by fluidized bed catalytic chemical vapor deposition. *Carbon*, **2009**, 47, 2600-2610	10.4	94
82	Carbon-nanotube-array double helices. *Angewandte Chemie - International Edition*, **2010**, 49, 3642-5	16.4	90
81	Radial growth of vertically aligned carbon nanotube arrays from ethylene on ceramic spheres. *Carbon*, **2008**, 46, 1152-1158	10.4	87
80	Synthesis of carbon/sulfur nanolaminates by electrochemical extraction of titanium from Ti_3SiC_2. *Angewandte Chemie - International Edition*, **2015**, 54, 4810-4	16.4	81
79	Mass production of aligned carbon nanotube arrays by fluidized bed catalytic chemical vapor deposition. *Carbon*, **2010**, 48, 1196-1209	10.4	77
78	Hierarchical carbon nanotube membrane with high packing density and tunable porous structure for high voltage supercapacitors. *Carbon*, **2012**, 50, 5167-5175	10.4	76
77	A Review of Advanced Energy Materials for Magnesium–Sulfur Batteries. *Energy and Environmental Materials*, **2018**, 1, 100-112	13	74
76	Composite Cathodes Containing SWCNT@S Coaxial Nanocables: Facile Synthesis, Surface Modification, and Enhanced Performance for Li-Ion Storage. *Particle and Particle Systems Characterization*, **2013**, 30, 158-165	3.1	68
75	Layered double hydroxides as catalysts for the efficient growth of high quality single-walled carbon nanotubes in a fluidized bed reactor. *Carbon*, **2010**, 48, 3260-3270	10.4	67
74	Improvement of oil adsorption performance by a sponge-like natural vermiculite-carbon nanotube hybrid. *Applied Clay Science*, **2011**, 53, 1-7	5.2	61
73	Scalable Manufacturing of Large and Flexible Sheets of MXene/Graphene Heterostructures. *Advanced Materials Technologies*, **2019**, 4, 1800639	6.8	60

72	Voltage-Gated Ions Sieving through 2D MXene Ti3C2Tx Membranes. *ACS Applied Nano Materials*, **2018**, 1, 3644-3652	5.6	58
71	Enhanced electrochemical performance of hydrous RuO2/mesoporous carbon nanocomposites via nitrogen doping. *ACS Applied Materials & Interfaces*, **2014**, 6, 9751-9	9.5	57
70	Dramatic enhancements in toughness of polyimide nanocomposite via long-CNT-induced long-range creep. *Journal of Materials Chemistry*, **2012**, 22, 7050		57
69	MoS2-on-MXene Heterostructures as Highly Reversible Anode Materials for Lithium-Ion Batteries. *Angewandte Chemie*, **2018**, 130, 1864-1868	3.6	56
68	Origin of Nanoscale Friction Contrast between Supported Graphene, MoS, and a Graphene/MoS Heterostructure. *Nano Letters*, **2019**, 19, 5496-5505	11.5	55
67	Resilient aligned carbon nanotube/graphene sandwiches for robust mechanical energy storage. *Nano Energy*, **2014**, 7, 161-169	17.1	54
66	Magnesium-Ion Storage Capability of MXenes. *ACS Applied Energy Materials*, **2019**, 2, 1572-1578	6.1	53
65	Process intensification by CO2 for high quality carbon nanotube forest growth: Double-walled carbon nanotube convexity or single-walled carbon nanotube bowls?. *Nano Research*, **2009**, 2, 872-881	10	43
64	Robust growth of herringbone carbon nanofibers on layered double hydroxide derived catalysts and their applications as anodes for Li-ion batteries. *Carbon*, **2013**, 62, 393-404	10.4	42
63	Fluidized-bed CVD of unstacked double-layer templated graphene and its application in supercapacitors. *AICHE Journal*, **2015**, 61, 747-755	3.6	40
62	Self-organization of nitrogen-doped carbon nanotubes into double-helix structures. *Carbon*, **2012**, 50, 5323-5330	10.4	40
61	Nitrogen-doped herringbone carbon nanofibers with large lattice spacings and abundant edges: Catalytic growth and their applications in lithium ion batteries and oxygen reduction reactions. *Catalysis Today*, **2015**, 249, 244-251	5.3	39
60	Demonstration of Li-Ion Capacity of MAX Phases. *ACS Energy Letters*, **2016**, 1, 1094-1099	20.1	37
59	Space confinement and rotation stress induced self-organization of double-helix nanostructure: a nanotube twist with a moving catalyst head. *ACS Nano*, **2012**, 6, 4520-9	16.7	35
58	Coupled process of plastics pyrolysis and chemical vapor deposition for controllable synthesis of vertically aligned carbon nanotube arrays. *Applied Physics A: Materials Science and Processing*, **2010**, 100, 533-540	2.6	35
57	Monodisperse embedded nanoparticles derived from an atomic metal-dispersed precursor of layered double hydroxide for architectured carbon nanotube formation. *Journal of Materials Chemistry A*, **2014**, 2, 1686	13	34
56	Synthesis and Physical Properties of Phase-Engineered Transition Metal Dichalcogenide Monolayer Heterostructures. *ACS Nano*, **2017**, 11, 8619-8627	16.7	34
55	Effect of Synthesis on Performance of MXene/Iron Oxide Anode Material for Lithium-Ion Batteries. *Langmuir*, **2018**, 34, 11325-11334	4	34

54	The release of free standing vertically-aligned carbon nanotube arrays from a substrate using CO2 oxidation. *Carbon*, **2010**, 48, 1441-1450	10.4	33
53	Crystalline Bilayer Graphene with Preferential Stacking from Ni-Cu Gradient Alloy. *ACS Nano*, **2018**, 12, 2275-2282	16.7	32
52	Carbon nanotubes for supercapacitors: Consideration of cost and chemical vapor deposition techniques. *Journal of Natural Gas Chemistry*, **2012**, 21, 233-240		32
51	Efficient synthesis of aligned nitrogen-doped carbon nanotubes in a fluidized-bed reactor. *Catalysis Today*, **2012**, 186, 83-92	5.3	32
50	Modulating the diameter of carbon nanotubes in array form via floating catalyst chemical vapor deposition. *Applied Physics A: Materials Science and Processing*, **2009**, 94, 853-860	2.6	32
49	Emerging double helical nanostructures. *Nanoscale*, **2014**, 6, 9339-54	7.7	31
48	A review of the large-scale production of carbon nanotubes: The practice of nanoscale process engineering. *Science Bulletin*, **2012**, 57, 157-166		31
47	Synthesis of high quality single-walled carbon nanotubes on natural sepiolite and their use for phenol absorption. *Carbon*, **2011**, 49, 1568-1580	10.4	29
46	A two-step shearing strategy to disperse long carbon nanotubes from vertically aligned multiwalled carbon nanotube arrays for transparent conductive films. *Langmuir*, **2010**, 26, 2798-804	4	28
45	Highly active single-layer MoS catalysts synthesized by swift heavy ion irradiation. *Nanoscale*, **2018**, 10, 22908-22916	7.7	26
44	In Situ Monitoring the Role of Working Metal Catalyst Nanoparticles for Ultrahigh Purity Single-Walled Carbon Nanotubes. *Advanced Functional Materials*, **2013**, 23, 5066-5073	15.6	25
43	Stretchable single-walled carbon nanotube double helices derived from molybdenum-containing layered double hydroxides. *Carbon*, **2011**, 49, 2148-2152	10.4	25
42	Controlled Growth of Large-Area Bilayer Tungsten Diselenides with Lateral P-N Junctions. *ACS Nano*, **2019**, 13, 10490-10498	16.7	24
41	Direct writing on graphene ŞpaperŞby manipulating electrons as Şnvisible inkŞ *Nanotechnology*, **2013**, 24, 275301	3.4	23
40	Fluffy carbon nanotubes produced by shearing vertically aligned carbon nanotube arrays. *Carbon*, **2009**, 47, 538-541	10.4	23
39	Spontaneous formation of double helical structure due to interfacial adhesion. *Applied Physics Letters*, **2012**, 100, 263104	3.4	22
38	Carbon-Nanotube-Array Double Helices. *Angewandte Chemie*, **2010**, 122, 3724-3727	3.6	20
37	Synthesis of Carbon/Sulfur Nanolaminates by Electrochemical Extraction of Titanium from Ti2SC. *Angewandte Chemie*, **2015**, 127, 4892-4896	3.6	19

36	Advanced materials from natural materials: synthesis of aligned carbon nanotubes on wollastonites. *ChemSusChem*, **2010**, 3, 453-9	8.3	19
35	Preferential growth of short aligned, metallic-rich single-walled carbon nanotubes from perpendicular layered double hydroxide film. *Nanoscale*, **2012**, 4, 2470-7	7.7	18
34	Customized casting of unstacked graphene with high surface area (>1300 m2g−1) and its application in oxygen reduction reaction. *Carbon*, **2015**, 93, 702-712	10.4	17
33	Rational recipe for bulk growth of graphene/carbon nanotube hybrids: New insights from in-situ characterization on working catalysts. *Carbon*, **2015**, 95, 292-301	10.4	17
32	Selective Synthesis of Single/Double/Multi-walled Carbon Nanotubes on MgO-Supported Fe Catalyst. *Chinese Journal of Catalysis*, **2008**, 29, 1138-1144	11.3	17
31	Patterning of hydrophobic three-dimensional carbon nanotube architectures by a pattern transfer approach. *Nanoscale*, **2010**, 2, 1401-4	7.7	16
30	Controllable bulk growth of few-layer graphene/single-walled carbon nanotube hybrids containing Fe@C nanoparticles in a fluidized bed reactor. *Carbon*, **2014**, 67, 554-563	10.4	15
29	Comparison of vertically aligned carbon nanotube array intercalated production among vermiculites in fixed and fluidized bed reactors. *Powder Technology*, **2010**, 198, 285-291	5.2	15
28	High strength composites using interlocking carbon nanotubes in a polyimide matrix. *Carbon*, **2013**, 60, 102-108	10.4	12
27	Fabrication of double- and multi-walled carbon nanotube transparent conductive films by filtration-transfer process and their property improvement by acid treatment. *Applied Physics A: Materials Science and Processing*, **2011**, 103, 403-411	2.6	12
26	Ambipolar transport in CVD grown MoSe2 monolayer using an ionic liquid gel gate dielectric. *AIP Advances*, **2018**, 8, 035014	1.5	11
25	Nanoscale Friction Behavior of Transition-Metal Dichalcogenides: Role of the Chalcogenide. *ACS Nano*, **2020**, 14, 16013-16021	16.7	11
24	Synthesis and nano-engineering of MXenes for energy conversion and storage applications: Recent advances and perspectives. *Coordination Chemistry Reviews*, **2022**, 454, 214339	23.2	10
23	Recoil Effect and Photoemission Splitting of Trions in Monolayer MoS. *ACS Nano*, **2017**, 11, 10808-10815	16.7	9
22	Large scale intercalated growth of short aligned carbon nanotubes among vermiculite layers in a fluidized bed reactor. *Journal of Physics and Chemistry of Solids*, **2010**, 71, 624-626	3.9	9
21	Micro-/Mesoporous Zinc–Manganese Oxide/Graphene Hybrids with High Specific Surface Area: A High-Capacity, Superior-Rate, and Ultralong-Life Anode for Lithium Storage. *ChemElectroChem*, **2017**, 4, 230-235	4.3	8
20	MoS-enabled dual-mode optoelectronic biosensor using a water soluble variant of -opioid receptor for opioid peptide detection. *2D Materials*, **2020**, 7,	5.9	8
19	Very fast growth of millimeter-tall aligned carbon nanotubes between two stacked substrates coated with a metal catalyst. *Carbon*, **2011**, 49, 1395-1400	10.4	7

18	Effect of varying the gate voltage scan rate in a MoS2/ferroelectric polymer field effect transistor. *Ferroelectrics*, **2019**, 550, 1-11	0.6	5
17	Phase Transition in a Memristive Suspended MoS Monolayer Probed by Opto- and Electro-Mechanics. *ACS Nano*, **2020**, 14, 13611-13618	16.7	5
16	Rapid Growth of Monolayer MoSe2 Films for Large-Area Electronics. *Advanced Electronic Materials*, **2021**, 7, 2001219	6.4	5
15	Controlled doping of graphene by impurity charge compensation via a polarized ferroelectric polymer. *Journal of Applied Physics*, **2020**, 127, 125503	2.5	4
14	Calculation for liquid-liquid equilibria of quaternary alkane-ethyl acetate-methanol-water systems used in counter-current chromatography. *Journal of Chromatography A*, **2007**, 1151, 60-4	4.5	4
13	Ultrathin WS2-on-Glass Photonic Crystal for Self-Resonant Exciton-Polaritonics. *Advanced Optical Materials*, **2020**, 8, 1901988	8.1	3
12	Monolayer Excitonic Emission for Imaging Spatial Dispersion of Photonic Crystals. *ACS Photonics*, **2019**, 6, 2312-2319	6.3	3
11	Carbon: Nanoarchitectured Graphene/CNT@Porous Carbon with Extraordinary Electrical Conductivity and Interconnected Micro/Mesopores for Lithium-Sulfur Batteries (Adv. Funct. Mater. 19/2014). *Advanced Functional Materials*, **2014**, 24, 2920-2920	15.6	3
10	Lithium-Sulfur Batteries: Hierarchical Vine-Tree-Like Carbon Nanotube Architectures: In-Situ CVD Self-Assembly and Their Use as Robust Scaffolds for Lithium-Sulfur Batteries (Adv. Mater. 41/2014). *Advanced Materials*, **2014**, 26, 6986-6986	24	3
9	Lithium-Sulfur Batteries: Nitrogen-Doped Aligned Carbon Nanotube/Graphene Sandwiches: Facile Catalytic Growth on Bifunctional Natural Catalysts and Their Applications as Scaffolds for High-Rate Lithium-Sulfur Batteries (Adv. Mater. 35/2014). *Advanced Materials*, **2014**, 26, 6199-6199	24	3
8	Helical Nanoarchitecture **2014**, 193-230		3
7	High-yield Synthesis of Nanohybrid Shish-kebab Polyethylene-carbon Nanotube Structure. *Chinese Journal of Chemical Engineering*, **2013**, 21, 37-43	3.2	3
6	Recentadvances in the propertiesand synthesis of bilayer graphene and transition metal dichalcogenides. *JPhys Materials*, **2020**, 3, 042003	4.2	2
5	The roles of MXenes in developing advanced lithium metal anodes. *Journal of Energy Chemistry*, **2022**, 69, 132-149	12	0
4	Multi-order phononic frequency comb generation within a MoS2 electromechanical resonator. *Applied Physics Letters*, **2021**, 119, 173102	3.4	0
3	Rectifying effect in a MoS2 monolayer crossed with an electro-spun PEDOT-PSS nano-ribbon. *SN Applied Sciences*, **2019**, 1, 1	1.8	
2	Innentitelbild: Synthesis of Carbon/Sulfur Nanolaminates by Electrochemical Extraction of Titanium from Ti2SC (Angew. Chem. 16/2015). *Angewandte Chemie*, **2015**, 127, 4764-4764	3.6	
1	Large scale synthesis of vertical aligned CNT array on irregular quartz particles. *Materials Research Society Symposia Proceedings*, **2008**, 1081, 1		