Quan Xu

List of Publications by Year
in descending order

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128 papers	7,329 citations	66234 42 h-index	58464 82 g-index
129 all docs	129 docs citations	129 times ranked	10452 citing authors

#	Article	IF	Citations
1	Coated proppants with self-suspension and tracer slow-release functions. Journal of Petroleum Science and Engineering, 2022, 208, 109645.	2.1	7
2	Highly fluorescence Ta4C3 MXene quantum dots as fluorescent nanoprobe for heavy ion detection and stress monitoring of fluorescent hydrogels. Chinese Chemical Letters, 2022, 33, 1850-1854.	4.8	23
3	Gecko inspired reversible adhesion via quantum dots enabled photo-detachment. Chemical Engineering Journal, 2022, 431, 134081.	6.6	15
4	Energy Saving and Energy Generation Smart Window with Active Control and Antifreezing Functions. Advanced Science, 2022, 9, e2105184.	5.6	32
5	Syntheses, mechanisms, and applications of bio-inspired self-cleaning surfaces. , 2022, , 367-392.		1
6	Shaly detritus embedded epoxy-resin coated proppants. Petroleum Science, 2022, 19, 1735-1744.	2.4	1
7	Synergistic effect of combined hydrothermal carbonization of Fenton's reagent and biomass enhances the adsorption and combustion characteristics of sludge towards eco-friendly and efficient sludge treatment. Science of the Total Environment, 2022, 825, 153854.	3.9	15
8	Transparent stretchable hydrogel sensors: materials, design and applications. Journal of Materials Chemistry C, 2022, 10, 13351-13371.	2.7	42
9	Barium charge transferred doped carbon dots with ultra-high quantum yield photoluminescence of 99.6% and applications. Chinese Chemical Letters, 2021, 32, 861-865.	4.8	34
10	Reversible adhesion surface coating proppant. Chinese Chemical Letters, 2021, 32, 553-556.	4.8	7
11	Nano friction and adhesion properties on Ti3C2 and Nb2C MXene studied by AFM. Tribology International, 2021, 153, 106646.	3.0	48
12	Comparison of toxicity of Ti₃C₂ and Nb₂C Mxene quantum dots (QDs) to human umbilical vein endothelial cells. Journal of Applied Toxicology, 2021, 41, 745-754.	1.4	46
13	Mass production of highly fluorescent full color carbon dots from the petroleum coke. Chinese Chemical Letters, 2021, 32, 1532-1536.	4.8	34
14	2D PtS nanorectangles/g-C₃N₄nanosheets with a metal sulfideâ€“support interaction effect for high-efficiency photocatalytic H₂evolution. Materials Horizons, 2021, 8, 612-618.	6.4	34
15	Nearâ€infrared emission Cu, Nâ€doped carbon dots for human umbilical vein endothelial cell labeling and their biocompatibility in vitro. Journal of Applied Toxicology, 2021, 41, 789-798.	1.4	15
16	Yellow emission N-doped fluorescent carbon dots as fluorescent nanoprobes for the detection of L-threonine in real samples. New Journal of Chemistry, 2021, 45, 10798-10801.	1.4	5
17	Efficient application of carbon-based nanomaterials for high-performance perovskite solar cells. Rare Metals, 2021, 40, 2747-2762.	3.6	6
18	Characteristics of micro-fracturing in shales induced by dilute acid. Journal of Natural Gas Science and Engineering, 2021, 88, 103855.	2.1	8

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19	Recent development in friction of 2D materials: from mechanisms to applications. Nanotechnology, 2021, 32, 312002.	1.3	42
20	Ultra-low CNTs filled high-performance fast self-healing triboelectric nanogenerators for wearable electronics. Composites Science and Technology, 2021, 208, 108733.	3.8	45
21	Dualâ€Metal Sites Boosting Polarization of Nitrogen Molecules for Efficient Nitrogen Photofixation. Advanced Science, 2021, 8, 2100302.	5.6	32
22	Promoting potential direct interspecies electron transfer (DIET) and methanogenesis with nitrogen and zinc doped carbon quantum dots. Journal of Hazardous Materials, 2021, 410, 124886.	6.5	22
23	Photo-Detachable Self-Cleaning Surfaces Inspired by Gecko Toepads. Langmuir, 2021, 37, 8410-8416.	1.6	6
24	Hydrophobic epoxy resin coated proppants with ultra-high self-suspension ability and enhanced liquid conductivity. Petroleum Science, 2021, 18, 1753-1759.	2.4	11
25	Two-dimensional quantum dots for biological applications. Nano Research, 2021, 14, 3820-3839.	5.8	50
26	Surface wettability effect on aqueous lubrication: Van der Waals and hydration force competition induced adhesive friction. Journal of Colloid and Interface Science, 2021, 599, 667-675.	5.0	25
27	Quantum dots in cell imaging and their safety issues. Journal of Materials Chemistry B, 2021, 9, 5765-5779.	2.9	57
28	Unconventional smart windows: Materials, structures and designs. Nano Energy, 2021, 90, 106613.	8.2	71
29	Performance and Microbial Community Analysis of Anaerobic Digestion of Vinegar Residue with Adding of Acetylene Black or Hydrochar. Waste and Biomass Valorization, 2020, 11, 3315-3325.	1.8	17
30	Nanoscale mechanical property of marine and continental organic kerogen in shale. Chinese Chemical Letters, 2020, 31, 509-512.	4.8	9
31	Changes in microbial community and methanogenesis during high-solid anaerobic digestion of ensiled corn stover. Journal of Cleaner Production, 2020, 242, 118479.	4.6	25
32	Near infrared molybdenum oxide quantum dots with high photoluminescence and photothermal performance. Chinese Chemical Letters, 2020, 31, 1616-1619.	4.8	10
33	Effects of temperature, hydrogen/carbon monoxide ratio and trace element addition on methane production performance from syngas biomethanation. Bioresource Technology, 2020, 295, 122296.	4.8	21
34	Bionic PDMS-CDs surface with thermal controllable adhesion. Materials Letters, 2020, 263, 127267.	1.3	2
35	Redâ€Carbonâ€Quantumâ€Dotâ€Doped SnO₂ Composite with Enhanced Electron Mobility for Efficient and Stable Perovskite Solar Cells. Advanced Materials, 2020, 32, e1906374.	11.1	230
36	Biomimicry Surface-Coated Proppant with Self-Suspending and Targeted Adsorption Ability. ACS Omega, 2020, 5, 25824-25831.	1.6	5

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37	Progress in Bioinspired Dry and Wet Gradient Materials from Design Principles to Engineering Applications. IScience, 2020, 23, 101749.	1.9	20
38	Machine learning-guided synthesis of advanced inorganic materials. Materials Today, 2020, 41, 72-80.	8.3	70
39	Deep Understanding of the Methanogenic Community and Their Interaction in Batch High-Solid Anaerobic Digestion of Ensiled Straw with Leachate Circulation. Energy & Fuels, 2020, 34, 10980-10988.	2.5	2
40	Robust and conductive hydrogel based on mussel adhesive chemistry for remote monitoring of body signals. Friction, 2020, , 1.	3.4	7
41	Near-infrared light-driven photofixation of nitrogen over Ti3C2Tx/TiO2 hybrid structures with superior activity and stability. Applied Catalysis B: Environmental, 2020, 273, 119072.	10.8	86
42	Functionally Graded Gecko Setae and the Biomimics with Robust Adhesion and Durability. ACS Applied Polymer Materials, 2020, 2, 2658-2666.	2.0	18
43	Hydrogel smart windows. Journal of Materials Chemistry A, 2020, 8, 10007-10025.	5.2	154
44	Highly green fluorescent Nb₂C MXene quantum dots. Chemical Communications, 2020, 56, 6648-6651.	2.2	49
45	Gecko-inspired composite micro-pillars with both robust adhesion and enhanced dry self-cleaning property. Chinese Chemical Letters, 2019, 30, 2333-2337.	4.8	13
46	Temperature-induced switchable interfacial interactions on slippery surfaces for controllable liquid manipulation. Journal of Materials Chemistry A, 2019, 7, 18510-18518.	5.2	35
47	Highly fluorescent Ti₃C₂ MXene quantum dots for macrophage labeling and Cu²⁺ ion sensing. Nanoscale, 2019, 11, 14123-14133.	2.8	140
48	Nanomechanical Properties of Ti₃C₂ Mxene. Langmuir, 2019, 35, 14481-14485.	1.6	78
49	Metal Coordinationâ€Mediated Functional Grading and Selfâ€Healing in Mussel Byssus Cuticle. Advanced Science, 2019, 6, 1902043.	5.6	35
50	Strain-controlled optical transmittance tuning of three-dimensional carbon nanotube architectures. Journal of Materials Chemistry C, 2019, 7, 1927-1933.	2.7	3
51	Effect of dilute acid treatment on adhesion properties of Longmaxi black shale. Petroleum Science, 2019, 16, 1320-1331.	2.4	12
52	Multicolor tunable highly luminescent carbon dots for remote force measurement and white light emitting diodes. Chemical Communications, 2019, 55, 12164-12167.	2.2	33
53	Red/orange dual-emissive carbon dots for pH sensing and cell imaging. Nano Research, 2019, 12, 815-821.	5.8	196
54	Highly fluorescent dual-emission red carbon dots and their applications in optoelectronic devices and water detection. New Journal of Chemistry, 2019, 43, 3050-3058.	1.4	57

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55	Full color carbon dots through surface engineering for constructing white light-emitting diodes. Journal of Materials Chemistry C, 2019, 7, 2212-2218.	2.7	69
56	A self-healing hydrogel with pressure sensitive photoluminescence for remote force measurement and healing assessment. Materials Horizons, 2019, 6, 703-710.	6.4	66
57	Function-driven engineering of 1D carbon nanotubes and 0D carbon dots: mechanism, properties and applications. Nanoscale, 2019, 11, 1475-1504.	2.8	134
58	Hydrochromic full-color MXene quantum dots through hydrogen bonding toward ultrahigh-efficiency white light-emitting diodes. Applied Materials Today, 2019, 16, 90-101.	2.3	86
59	Atomic Plane-Vacancy Engineering of Transition-Metal Dichalcogenides with Enhanced Hydrogen Evolution Capability. ACS Applied Materials & Interfaces, 2019, 11, 25264-25270.	4.0	51
60	Bioinspired Photodetachable Dry Self-Cleaning Surface. Langmuir, 2019, 35, 6379-6386.	1.6	17
61	Multi-color carbon dots for white light-emitting diodes. RSC Advances, 2019, 9, 9700-9708.	1.7	22
62	Enhanced Adhesion of Carbon Nanotubes by Dopamine Modification. Langmuir, 2019, 35, 4527-4533.	1.6	32
63	Recent advances in delivery of photosensitive metal-based drugs. Coordination Chemistry Reviews, 2019, 387, 154-179.	9.5	136
64	Mussel Byssus Cuticle: Metal Coordinationâ€Mediated Functional Grading and Selfâ€Healing in Mussel Byssus Cuticle (Adv. Sci. 23/2019). Advanced Science, 2019, 6, 1970138.	5.6	1
65	Carbon quantum dots: An innovative additive for water lubrication. Science China Technological Sciences, 2019, 62, 587-596.	2.0	35
66	Guiding Principles for Designing Highly Efficient Metalâ€Free Carbon Catalysts. Advanced Materials, 2019, 31, e1805252.	11.1	110
67	Smart Adhesion Surfaces. , 2019, , 261-283.		1
68	Metal Charge Transfer Doped Carbon Dots with Reversibly Switchable, Ultra-High Quantum Yield Photoluminescence. ACS Applied Nano Materials, 2018, 1, 1886-1893.	2.4	64
69	Mechanism of byproducts formation in the isobutane/butene alkylation on HY zeolites. RSC Advances, 2018, 8, 3392-3398.	1.7	16
70	Synthesis, mechanical investigation, and application of nitrogen and phosphorus co-doped carbon dots with a high photoluminescent quantum yield. Nano Research, 2018, 11, 3691-3701.	5.8	75
71	Sulfur resistance of Ce-Mn/TiO ₂ catalysts for low-temperature NH ₃ â€“SCR. Royal Society Open Science, 2018, 5, 171846.	1.1	11
72	Near infrared quantum dots in biomedical applications: current status and future perspective. Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology, 2018, 10, e1483.	3.3	113

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73	High-solid anaerobic digestion of corn straw for methane production and pretreatment of bio-briquette. Bioresource Technology, 2018, 250, 741-749.	4.8	26
74	Temperature-induced tunable adhesion of gecko setae/spatulae and their biomimics. Materials Today: Proceedings, 2018, 5, 25879-25893.	0.9	8
75	Two-dimensional quantum dots: Fundamentals, photoluminescence mechanism and their energy and environmental applications. Materials Today Energy, 2018, 10, 222-240.	2.5	87
76	Surface Properties of Organic Kerogen in Continental and Marine Shale. Langmuir, 2018, 34, 13882-13887.	1.6	26
77	Synthesis of Highly Fluorescent Yellowâ€Green Nâ€Doped Carbon Nanorings for pH Variation Detection and Bioimaging. Particle and Particle Systems Characterization, 2018, 35, 1800276.	1.2	10
78	Poly(vinyl alcohol)/Chitosan composites: Physically transient materials for sustainable and transient bioelectronics. Journal of Cleaner Production, 2018, 195, 786-795.	4.6	49
79	High photoluminescence quantum yield of 18.7% by using nitrogen-doped Ti₃C₂ MXene quantum dots. Journal of Materials Chemistry C, 2018, 6, 6360-6369.	2.7	159
80	Photoluminescence mechanism and applications of Zn-doped carbon dots. RSC Advances, 2018, 8, 17254-17262.	1.7	28
81	Multicolor carbon nanodots from food waste and their heavy metal ion detection application. RSC Advances, 2018, 8, 23657-23662.	1.7	39
82	Biological Self-Assembly and Recognition Used to Synthesize and Surface Guide Next Generation of Hybrid Materials. ACS Applied Materials & Interfaces, 2018, 10, 28372-28381.	4.0	10
83	Formation and Regeneration of Shape-Selective ZSM-35 Catalysts for n-Butene Skeletal Isomerization to Isobutene. ACS Omega, 2018, 3, 8202-8211.	1.6	5
84	Characterization of hydrothermal carbonization products (hydrochars and spent liquor) and their biomethane production performance. Bioresource Technology, 2018, 267, 9-16.	4.8	57
85	Tough Reversible Adhesion Properties of a Dry Self-Cleaning Biomimetic Surface. ACS Applied Materials & Interfaces, 2018, 10, 26787-26794.	4.0	21
86	Synthesis of multi-functional green fluorescence carbon dots and their applications as a fluorescent probe for Hg²⁺ detection and zebrafish imaging. New Journal of Chemistry, 2018, 42, 10400-10405.	1.4	18
87	Effects of Molecular Weight Reduction on Brittleâ€“Ductile Transition and Elastic Yielding Due to Noninvasive Î³ Irradiation on Polymer Glasses. Macromolecules, 2017, 50, 2447-2455.	2.2	4
88	Efficient cocktail chemotherapy by co-delivery of a hydrogen sulfide-releasing aspirin prodrug and paclitaxel via single nanoparticles. RSC Advances, 2017, 7, 13458-13466.	1.7	7
89	Novel visible-light-driven S-doped carbon dots/BiOI nanocomposites: improved photocatalytic activity and mechanism insight. Journal of Materials Science, 2017, 52, 7282-7293.	1.7	20
90	Facile preparation of high-performance Fe-doped Ceâ€“Mn/TiO₂ catalysts for the low-temperature selective catalytic reduction of NO_x with NH₃. RSC Advances, 2017, 7, 48785-48792.	1.7	40

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91	Ratiometric fluorescent sensing of copper ion based on chromaticity change strategy. Analytical and Bioanalytical Chemistry, 2017, 409, 6655-6662.	1.9	21
92	Pyrolysis gas as a carbon source for biogas production via anaerobic digestion. RSC Advances, 2017, 7, 41889-41895.	1.7	19
93	Effects of single-stage syngas hydrotreating on the physical and chemical properties of oxidized fractionated bio-oil. Fuel, 2017, 209, 634-642.	3.4	15
94	Reaction and Characterization of Low-Temperature Effect of Transition Nanostructure Metal Codoped SCR Catalyst. Journal of Nanomaterials, 2017, 2017, 1-10.	1.5	1
95	Enhancement of the Wettability and Lubrication of Shale Rock via Nanoemulsions. International Journal of Polymer Science, 2017, 2017, 1-6.	1.2	10
96	Protein self-assembly onto nanodots leads to formation of conductive bio-based hybrids. Scientific Reports, 2016, 6, 38252.	1.6	6
97	The elasticity of MOFs under mechanical pressure. RSC Advances, 2016, 6, 37506-37514.	1.7	42
98	Highly fluorescent Zn-doped carbon dots as Fenton reaction-based bio-sensors: an integrative experimentalâ€“theoretical consideration. Nanoscale, 2016, 8, 17919-17927.	2.8	141
99	Heteroatom-doped carbon dots: synthesis, characterization, properties, photoluminescence mechanism and biological applications. Journal of Materials Chemistry B, 2016, 4, 7204-7219.	2.9	396
100	Biomimetic self-cleaning surfaces: synthesis, mechanism and applications. Journal of the Royal Society Interface, 2016, 13, 20160300.	1.5	86
101	Measurement of Interfacial Energy and Friction Between Carbon Nanotubes and Polymer Matrix via Atomic Force Microscopy. Journal of Nanoscience and Nanotechnology, 2016, 16, 6889-6894.	0.9	1
102	Fabrication of TiO₂â€“graphene composite for the enhanced performance of lithium batteries. RSC Advances, 2016, 6, 66971-66977.	1.7	9
103	Facile synthesis of copper doped carbon dots and their application as a â€œturn-offâ€•fluorescent probe in the detection of Fe³⁺ ions. RSC Advances, 2016, 6, 28745-28750.	1.7	75
104	Metathesis and isomerization of n-butene and ethylene over WO3/SiO2 and MgO catalysts: Thermodynamic and experimental analysis. Applied Catalysis A: General, 2016, 517, 227-235.	2.2	17
105	Controlled fabrication and enhanced visible-light photocatalytic hydrogen production of Au@CdS/MIL-101 heterostructure. Applied Catalysis B: Environmental, 2016, 185, 307-314.	10.8	131
106	Nanoscale TiO2 nanotubes govern the biological behavior of human glioma and osteosarcoma cells. International Journal of Nanomedicine, 2015, 10, 2423.	3.3	26
107	Self-Assembling Peptide Nanofibrous Hydrogel as a Versatile Drug Delivery Platform. Current Pharmaceutical Design, 2015, 21, 4342-4354.	0.9	114
108	Three-dimensional micro/nanoscale architectures: fabrication and applications. Nanoscale, 2015, 7, 10883-10895.	2.8	68

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109	Role of lattice defects in catalytic activities of graphene clusters for fuel cells. Physical Chemistry Chemical Physics, 2015, 17, 16733-16743.	1.3	181
110	Performance of hydroxyapatite coatings electrodeposited on micro-arc oxidized magnesium alloys using a static magnetic field. RSC Advances, 2015, 5, 14458-14464.	1.7	16
111	Enhancing the luminescence of carbon dots by doping nitrogen element and its application in the detection of Fe(III). Journal of Materials Science, 2015, 50, 2571-2576.	1.7	62
112	Graphene and graphene oxide: advanced membranes for gas separation and water purification. Inorganic Chemistry Frontiers, 2015, 2, 417-424.	3.0	118
113	Pyrite nanotube array films as an efficient photocatalyst for degradation of methylene blue and phenol. RSC Advances, 2015, 5, 62724-62731.	1.7	25
114	Antibacterial activities of TiO₂nanotubes on Porphyromonas gingivalis. RSC Advances, 2015, 5, 34237-34242.	1.7	19
115	Dynamic enhancement in adhesion forces of truncated and nanosphere tips on substrates. RSC Advances, 2015, 5, 91633-91639.	1.7	8
116	Synthesis, mechanistic investigation, and application of photoluminescent sulfur and nitrogen co-doped carbon dots. Journal of Materials Chemistry C, 2015, 3, 9885-9893.	2.7	154
117	Robust self-cleaning and micromanipulation capabilities of gecko spatulae and their bio-mimics. Nature Communications, 2015, 6, 8949.	5.8	124
118	Synthesis of FeS2 (pyrite) nanotube through sulfuration of Fe2O3 nanotube. Materials Letters, 2015, 141, 104-106.	1.3	21
119	Preparation of highly photoluminescent sulfur-doped carbon dots for Fe(<scp>iii</scp>) detection. Journal of Materials Chemistry A, 2015, 3, 542-546.	5.2	558
120	Interfacial Energy and Friction between Carbon Nanotubes and Polymer Matrix. Mechanics of Advanced Materials and Structures, 2014, 21, 393-401.	1.5	2
121	N-doped graphene as catalysts for oxygen reduction and oxygen evolution reactions: Theoretical considerations. Journal of Catalysis, 2014, 314, 66-72.	3.1	537
122	Strain and structure heterogeneity in MoS2 atomic layers grown by chemical vapour deposition. Nature Communications, 2014, 5, 5246.	5.8	453
123	Dynamic Adhesion Forces between Microparticles and Substrates in Water. Langmuir, 2014, 30, 11103-11109.	1.6	31
124	Photoelectrochemical performance of CdS nanorods grafted vertically aligned TiO2 nanorods. Materials Research Bulletin, 2013, 48, 4548-4554.	2.7	29
125	Dynamic Enhancement in Adhesion Forces of Microparticles on Substrates. Langmuir, 2013, 29, 13743-13749.	1.6	28
126	Wettability of nanotextured metallic glass surfaces. Scripta Materialia, 2013, 69, 732-735.	2.6	31

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127	Electrodeposited hydroxyapatite coatings on the TiO2 nanotube in static magnetic field. Applied Surface Science, 2013, 287, 218-222.	3.1	31
128	Measurement of Interfacial Energy and Friction Between Carbon Nanotubes and Polymer Matrix by a Micro-Pullout Test. Science of Advanced Materials, 2012, 4, 888-892.	0.1	9