

Wei-Ning Wang

List of Publications by Year in descending order

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111
papers

6,453
citations

61984

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all docs

114
docs citations

114
times ranked

8218
citing authors

#	ARTICLE	IF	CITATIONS
1	Size and Structure Matter: Enhanced CO ₂ Photoreduction Efficiency by Size-Resolved Ultrafine Pt Nanoparticles on TiO ₂ Single Crystals. <i>Journal of the American Chemical Society</i> , 2012, 134, 11276-11281.	13.7	691
2	Photocatalytic reduction of CO ₂ with H ₂ O on mesoporous silica supported Cu/TiO ₂ catalysts. <i>Applied Catalysis B: Environmental</i> , 2010, 100, 386-392.	20.2	446
3	Mechanistic evaluation of translocation and physiological impact of titanium dioxide and zinc oxide nanoparticles on the tomato (<i>Solanum lycopersicum</i> L.) plant. <i>Metallomics</i> , 2015, 7, 1584-1594.	2.4	423
4	Correlations between Crystallite/Particle Size and Photoluminescence Properties of Submicrometer Phosphors. <i>Chemistry of Materials</i> , 2007, 19, 1723-1730.	6.7	339
5	Nanoparticle synthesis and delivery by an aerosol route for watermelon plant foliar uptake. <i>Journal of Nanoparticle Research</i> , 2013, 15, 1.	1.9	211
6	Facile Synthesis of New Full-Color-Emitting BCNO Phosphors with High Quantum Efficiency. <i>Advanced Materials</i> , 2008, 20, 3235-3238.	21.0	163
7	Investigation on the Correlations between Droplet and Particle Size Distribution in Ultrasonic Spray Pyrolysis. <i>Industrial & Engineering Chemistry Research</i> , 2008, 47, 1650-1659.	3.7	149
8	Comparison of CO ₂ Photoreduction Systems: A Review. <i>Aerosol and Air Quality Research</i> , 2014, 14, 533-549.	2.1	132
9	Nickel and nickel oxide nanoparticles prepared from nickel nitrate hexahydrate by a low pressure spray pyrolysis. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2004, 111, 69-76.	3.5	124
10	Novel rare-earth-free tunable-color-emitting BCNO phosphors. <i>Journal of Materials Chemistry</i> , 2011, 21, 5183.	6.7	114
11	Engineered Crumpled Graphene Oxide Nanocomposite Membrane Assemblies for Advanced Water Treatment Processes. <i>Environmental Science & Technology</i> , 2015, 49, 6846-6854.	10.0	108
12	Evaporation-Induced Crumpling of Graphene Oxide Nanosheets in Aerosolized Droplets: Confinement Force Relationship. <i>Journal of Physical Chemistry Letters</i> , 2012, 3, 3228-3233.	4.6	104
13	Mechanistic Insight into Photocatalytic Pathways of MIL-100(Fe)/TiO ₂ Composites. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 12516-12524.	8.0	103
14	Surface Engineered CuO Nanowires with ZnO Islands for CO ₂ Photoreduction. <i>ACS Applied Materials & Interfaces</i> , 2015, 7, 5685-5692.	8.0	100
15	Iron Mesh-Based Metal Organic Framework Filter for Efficient Arsenic Removal. <i>Environmental Science & Technology</i> , 2018, 52, 4275-4284.	10.0	100
16	Engineering stable Pt nanoparticles and oxygen vacancies on defective TiO ₂ via introducing strong electronic metal-support interaction for efficient CO ₂ photoreduction. <i>Chemical Engineering Journal</i> , 2020, 389, 123450.	12.7	99
17	Rapid synthesis of nanostructured Cu@TiO ₂ @SiO ₂ composites for CO ₂ photoreduction by evaporation driven self-assembly. <i>Catalysis Science and Technology</i> , 2011, 1, 593.	4.1	97
18	Pulmonary toxicity of well-dispersed multi-wall carbon nanotubes following inhalation and intratracheal instillation. <i>Nanotoxicology</i> , 2012, 6, 587-599.	3.0	96

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19	High luminance YAG:Ce nanoparticles fabricated from urea added aqueous precursor by flame process. <i>Journal of Alloys and Compounds</i> , 2008, 463, 350-357.	5.5	92
20	Rapid Formation of Metal-Organic Frameworks (MOFs) Based Nanocomposites in Microdroplets and Their Applications for CO ₂ Photoreduction. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 9688-9698.	8.0	91
21	Gene expression profiles in rat lung after inhalation exposure to C60 fullerene particles. <i>Toxicology</i> , 2009, 258, 47-55.	4.2	87
22	Facile Aerosol Synthesis and Characterization of Ternary Crumpled Graphene-TiO ₂ -Magnetite Nanocomposites for Advanced Water Treatment. <i>ACS Applied Materials & Interfaces</i> , 2014, 6, 11766-11774.	8.0	86
23	Transient nature of graphene quantum dot formation via a hydrothermal reaction. <i>RSC Advances</i> , 2014, 4, 55709-55715.	3.6	84
24	Simultaneous Detection and Removal of Formaldehyde at Room Temperature: Janus Au@ZnO@ZIF-8 Nanoparticles. <i>Nano-Micro Letters</i> , 2018, 10, 4.	27.0	84
25	One-step synthesis of titanium oxide nanoparticles by spray pyrolysis of organic precursors. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2005, 123, 194-202.	3.5	77
26	Nanofiltration of l-phenylalanine and l-aspartic acid aqueous solutions. <i>Journal of Membrane Science</i> , 2002, 196, 59-67.	8.2	75
27	Highly-oriented one-dimensional MOF-semiconductor nanoarrays for efficient photodegradation of antibiotics. <i>Catalysis Science and Technology</i> , 2018, 8, 2117-2123.	4.1	72
28	Experimental investigation on separation performance of nanofiltration membranes for inorganic electrolyte solutions. <i>Desalination</i> , 2002, 145, 115-122.	8.2	67
29	Biocompatibility of gold nanoparticles in retinal pigment epithelial cell line. <i>Toxicology in Vitro</i> , 2016, 37, 61-69.	2.4	66
30	Low-Temperature Crystallization of Barium Ferrite Nanoparticles by a Sodium Citrate-Aided Synthetic Process. <i>Journal of Physical Chemistry C</i> , 2007, 111, 10175-10180.	3.1	63
31	MOF-based ternary nanocomposites for better CO ₂ photoreduction: roles of heterojunctions and coordinatively unsaturated metal sites. <i>Journal of Materials Chemistry A</i> , 2018, 6, 932-940.	10.3	63
32	Template-assisted spray-drying method for the fabrication of porous particles with tunable structures. <i>Advanced Powder Technology</i> , 2019, 30, 2908-2924.	4.1	59
33	Green Synthesis of TiO ₂ Nanoparticle Using <i>Aspergillus tubingensis</i> . <i>Advanced Science, Engineering and Medicine</i> , 2013, 5, 943-949.	0.3	59
34	Bimetallic metal-organic frameworks (MOFs) synthesized using the spray method for tunable CO ₂ adsorption. <i>Chemical Engineering Journal</i> , 2020, 382, 122825.	12.7	58
35	Inflammogenic effect of well-characterized fullerenes in inhalation and intratracheal instillation studies. <i>Particle and Fibre Toxicology</i> , 2010, 7, 4.	6.2	57
36	Preparation of size-controlled tungsten oxide nanoparticles and evaluation of their adsorption performance. <i>Materials Research Bulletin</i> , 2010, 45, 165-173.	5.2	56

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37	Simulation and experimental study of spray pyrolysis of polydispersed droplets. <i>Journal of Materials Research</i> , 2007, 22, 1888-1898.	2.6	50
38	Rapid Synthesis of Non-Aggregated Fine Chloroapatite Blue Phosphor Powders with High Quantum Efficiency. <i>Advanced Materials</i> , 2008, 20, 3422-3426.	21.0	50
39	Direct white light emission from a rare-earth-free aluminium-boron-carbon oxynitride phosphor. <i>Journal of Materials Chemistry C</i> , 2014, 2, 4297-4303.	5.5	50
40	Enhanced Water Photolysis with Pt Metal Nanoparticles on Single Crystal TiO ₂ Surfaces. <i>Langmuir</i> , 2012, 28, 7528-7534.	3.5	49
41	Development and Evaluation of an Aerosol Generation and Supplying System for Inhalation Experiments of Manufactured Nanoparticles. <i>Environmental Science & Technology</i> , 2009, 43, 5529-5534.	10.0	47
42	Photoluminescence Optimization of Luminescent Nanocomposites Fabricated by Spray Pyrolysis of a Colloid-Solution Precursor. <i>Journal of the Electrochemical Society</i> , 2007, 154, J121.	2.9	45
43	Formation and Luminescence Enhancement of Agglomerate-Free YAG:Ce ³⁺ Submicrometer Particles by Flame-Assisted Spray Pyrolysis. <i>Journal of the Electrochemical Society</i> , 2007, 154, J91.	2.9	43
44	Fabrication and Characterization of a Yellow-Emitting BCNO Phosphor for White Light-Emitting Diodes. <i>Electrochemical and Solid-State Letters</i> , 2009, 12, J33.	2.2	43
45	Pulmonary toxicity of well-dispersed single-wall carbon nanotubes after inhalation. <i>Nanotoxicology</i> , 2012, 6, 766-775.	3.0	43
46	Effect of the Carbon Source on the Luminescence Properties of Boron Carbon Oxynitride Phosphor Particles. <i>Journal of the Electrochemical Society</i> , 2010, 157, J329.	2.9	42
47	Evaporative cooling of micron-sized droplets in a low-pressure aerosol reactor. <i>Chemical Engineering Science</i> , 2006, 61, 6029-6034.	3.8	41
48	Direct synthesis of spherical YAG:Ce phosphor from precursor solution containing polymer and urea. <i>Chemical Engineering Journal</i> , 2012, 210, 461-466.	12.7	39
49	Formation of BaTiO ₃ nanoparticles from an aqueous precursor by flame-assisted spray pyrolysis. <i>Journal of the European Ceramic Society</i> , 2007, 27, 4489-4497.	5.7	38
50	Role of urea addition in the preparation of tetragonal BaTiO ₃ nanoparticles using flame-assisted spray pyrolysis. <i>Journal of the European Ceramic Society</i> , 2008, 28, 2573-2580.	5.7	36
51	Nanoparticle formation through solid-phase flame synthesis: Experiment and modeling. <i>AIChE Journal</i> , 2009, 55, 885-895.	3.6	35
52	Dispersion and aggregation of nanoparticles derived from colloidal droplets under low-pressure conditions. <i>Journal of Colloid and Interface Science</i> , 2005, 288, 423-431.	9.4	33
53	Aerosol Synthesis of Self-Organized Nanostructured Hollow and Porous Carbon Particles Using a Dual Polymer System. <i>Langmuir</i> , 2014, 30, 11257-11262.	3.5	33
54	Crumpled reduced graphene oxide-amine-titanium dioxide nanocomposites for simultaneous carbon dioxide adsorption and photoreduction. <i>Catalysis Science and Technology</i> , 2016, 6, 6187-6196.	4.1	33

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55	Application of Half Mini DMA for sub 2nm particle size distribution measurement in an electrospray and a flame aerosol reactor. <i>Journal of Aerosol Science</i> , 2014, 71, 52-64.	3.8	31
56	Chemical and photoluminescence analyses of new carbon-based boron oxynitride phosphors. <i>Materials Research Bulletin</i> , 2009, 44, 2099-2102.	5.2	30
57	Facile synthesis of ZnO@ZIF core-shell nanofibers: crystal growth and gas adsorption. <i>CrystEngComm</i> , 2017, 19, 2445-2450.	2.6	30
58	Iron oxide nanowire-based filter for inactivation of airborne bacteria. <i>Environmental Science: Nano</i> , 2018, 5, 1096-1106.	4.3	30
59	Highly Luminous Hollow Chloroapatite Phosphors Formed by a Template-Free Aerosol Route for Solid-State Lighting. <i>Chemistry of Materials</i> , 2009, 21, 4685-4691.	6.7	29
60	Synthesis of highly crystalline hexagonal cesium tungsten bronze nanoparticles by flame-assisted spray pyrolysis. <i>Advanced Powder Technology</i> , 2018, 29, 2512-2520.	4.1	28
61	Biopersistence of inhaled MWCNT in rat lungs in a 4-week well-characterized exposure. <i>Inhalation Toxicology</i> , 2011, 23, 784-791.	1.6	27
62	Pathological features of rat lung following inhalation and intratracheal instillation of C60fullerene. <i>Inhalation Toxicology</i> , 2011, 23, 407-416.	1.6	27
63	Towards Better Phosphor Design: Effect of SiO ₂ Nanoparticles on Photoluminescence Enhancement of YAG:Ce. <i>ECS Journal of Solid State Science and Technology</i> , 2013, 2, R91-R95.	1.8	25
64	Nanostructured Graphene-Titanium Dioxide Composites Synthesized by a Single-Step Aerosol Process for Photoreduction of Carbon Dioxide. <i>Environmental Engineering Science</i> , 2014, 31, 428-434.	1.6	25
65	Measurement of Sub-2 nm Clusters of Pristine and Composite Metal Oxides during Nanomaterial Synthesis in Flame Aerosol Reactors. <i>Analytical Chemistry</i> , 2014, 86, 7523-7529.	6.5	25
66	Kinetics of sub-20nm TiO ₂ particle formation in an aerosol reactor during thermal decomposition of titanium tetraisopropoxide. <i>Journal of Nanoparticle Research</i> , 2015, 17, 1.	1.9	25
67	Polymer-Assisted Annealing of Spray-Pyrolyzed Powders for Formation of Luminescent Particles with Submicrometer and Nanometer Sizes. <i>Journal of the American Ceramic Society</i> , 2007, 90, 425-432.	3.8	24
68	Unraveling the origin of the "Turn-On" effect of Al-MIL-53-NO ₂ during H ₂ S detection. <i>CrystEngComm</i> , 2020, 22, 195-204.	2.6	24
69	Influence of Polymer Decomposition Temperature on the Formation of Rare-Earth Free Boron Carbon Oxynitride Phosphors. <i>Journal of Chemical Engineering of Japan</i> , 2012, 45, 995-1000.	0.6	23
70	Self-decontaminating nanofibrous filters for efficient particulate matter removal and airborne bacteria inactivation. <i>Environmental Science: Nano</i> , 2021, 8, 1081-1095.	4.3	23
71	Flame aerosol reactor synthesis of nanostructured SnO ₂ thin films: High gas-sensing properties by control of morphology. <i>Sensors and Actuators B: Chemical</i> , 2010, 150, 609-615.	7.8	22
72	Simultaneous removal of VOCs and PM _{2.5} by metal-organic framework coated electret filter media. <i>Journal of Membrane Science</i> , 2021, 618, 118629.	8.2	22

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73	Vapor condensation on nanoparticles in the mixer of a particle size magnifier. <i>International Journal of Heat and Mass Transfer</i> , 2007, 50, 2333-2338.	4.8	21
74	Air quality metrics and wireless technology to maximize the energy efficiency of HVAC in a working auditorium. <i>Building and Environment</i> , 2015, 85, 287-297.	6.9	20
75	Direct Synthesis of Barium Titanate Nanoparticles Via a Low Pressure Spray Pyrolysis Method. <i>Journal of Materials Research</i> , 2005, 20, 2873-2882.	2.6	17
76	The energy-environment nexus: aerosol science and technology enabling solutions. <i>Frontiers of Environmental Science and Engineering in China</i> , 2011, 5, 299-312.	0.8	17
77	The role of Fe ³⁺ ions in fluorescence detection of H ₂ S by a bimetallic metal-organic framework. <i>Journal of Solid State Chemistry</i> , 2020, 288, 121434.	2.9	17
78	Role of dopant concentration, crystal phase and particle size on microbial inactivation of Cu-doped TiO ₂ nanoparticles. <i>Nanotechnology</i> , 2011, 22, 415704.	2.6	16
79	Effects of Ethanol Addition and Ba/Ti Ratios on Preparation of Barium Titanate Nanocrystals Via a Spray Pyrolysis Method. <i>Journal of the American Ceramic Society</i> , 2006, 89, 888-893.	3.8	15
80	Photoluminescence Characteristics of Macroporous Eu-Doped Yttrium Oxide Particles Prepared by Spray Pyrolysis. <i>Japanese Journal of Applied Physics</i> , 2009, 48, 032001.	1.5	15
81	Synthesis of Gallium Nitride Nanoparticles by Microwave Plasma-Enhanced CVD. <i>Chemical Vapor Deposition</i> , 2010, 16, 151-156.	1.3	15
82	Role of exhaust gas recycle on submicrometer particle formation during oxy-coal combustion. <i>Proceedings of the Combustion Institute</i> , 2013, 34, 3479-3487.	3.9	15
83	Characterization of organic and black carbon aerosol formation during coal combustion: An experimental study in a 1 MW pilot scale coal combustor. <i>Fuel</i> , 2016, 180, 653-658.	6.4	14
84	Synthesis of Cu-Trimesic Acid/Cu-1,4-Benzenedioic Acid via Microdroplets: Role of Component Compositions. <i>Crystal Growth and Design</i> , 2019, 19, 1095-1102.	3.0	14
85	A Pulse Combustion-Spray Pyrolysis Process for the Preparation of Nano- and Submicrometer-Sized Oxide Particles. <i>Journal of the American Ceramic Society</i> , 2007, 90, 3779-3785.	3.8	13
86	Pressure-regulated synthesis of Cu(TPA) ₂ (DMF) in microdroplets for selective CO ₂ adsorption. <i>Dalton Transactions</i> , 2019, 48, 1006-1016.	3.3	13
87	Controlled synthesis of carbon-based alumina nanophosphors with tunable blue-green luminescence. <i>Materials Letters</i> , 2010, 64, 836-839.	2.6	12
88	Rational Design of Efficient Semiconductor-based Photocatalysts via Microdroplets: A Review. <i>KONA Powder and Particle Journal</i> , 2019, 36, 201-214.	1.7	8
89	Noninvasive in vivo electron paramagnetic resonance study to estimate pulmonary reducing ability in mice exposed to NiO or C ₆₀ nanoparticles. <i>Journal of Magnetic Resonance Imaging</i> , 2009, 29, 1432-1437.	3.4	7
90	Low Temperature Synthesis of N-Doped TiO ₂ ; Nanocatalysts for Photodegradation of Methyl Orange. <i>Journal of Nanoscience and Nanotechnology</i> , 2013, 13, 2376-2381.	0.9	7

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91	Colloid-assisted growth of metal-organic framework nanoparticles. CrystEngComm, 2019, 21, 2268-2272.	2.6	7
92	Unraveling the role of operating pressure in the rapid formation of Cu-BDC MOF via a microdroplet approach. Chemical Engineering Journal, 2022, 447, 137544.	12.7	7
93	Photoluminescence Properties of Submicrometer Phosphors with Different Crystallite/Particle Sizes. Japanese Journal of Applied Physics, 2008, 47, 7220-7223.	1.5	6
94	Flame Spray Pyrolysis. , 2011, , 869-879.		6
95	Data-driven parameter optimization for the synthesis of high-quality zeolitic imidazolate frameworks via a microdroplet route. Advanced Powder Technology, 2021, 32, 266-271.	4.1	6
96	Aerosol Processing of Crumpled Graphene Oxide-based Nanocomposites for Drug Delivery. Current Pharmaceutical Design, 2016, 22, 2491-2500.	1.9	6
97	Capture of Particles from an Iron and Steel Smelter with a Pulse-Energized Electrostatic Precipitator. Aerosol and Air Quality Research, 2012, 12, 673-682.	2.1	6
98	Technology Innovation in the Nanoparticle Project. KONA Powder and Particle Journal, 2007, 25, 237-243.	1.7	5
99	Elemental mercury oxidation in an electrostatic precipitator enhanced with in situ soft X-ray irradiation. Journal of the Air and Waste Management Association, 2015, 65, 455-465.	1.9	5
100	Formation of Nitrogen-Containing Organic Aerosol during Combustion of High-Sulfur-Content Coal. Energy & Fuels, 2017, 31, 14161-14168.	5.1	5
101	Mitigating the relative humidity effects on the simultaneous removal of VOCs and PM2.5 of a metal-organic framework coated electret filter. Separation and Purification Technology, 2022, 285, 120309.	7.9	5
102	Preparation and characterization of boron oxide-based red-emitting phosphors using Eu, Al and Ca additives. Materials Chemistry and Physics, 2012, 133, 392-397.	4.0	3
103	Mercury oxidation during coal combustion by injection of vanadium pentoxide (V2O5). International Journal of Coal Geology, 2017, 170, 54-59.	5.0	3
104	Thermal Modeling for a HVAC Controlled Real-Life Auditorium. , 2014, , .		2
105	Towards addressing environmental challenges: rational design of metal-organic frameworks-based photocatalysts via a microdroplet approach. JPhys Energy, 2021, 3, 032005.	5.3	2
106	Engineered Nanoparticles and the Environment. , 2012, , 443-476.		2
107	Low-pressure Spray Pyrolysis. , 2011, , 861-868.		1
108	Role of Pt Nanoparticles in Photoreactions on TiO2 Photoelectrodes. Materials Research Society Symposia Proceedings, 2012, 1446, 85.	0.1	0

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109	Nano-Biohybrid Light-Harvesting Systems for Solar Energy Applications. Materials Research Society Symposia Proceedings, 2012, 1445, 1.	0.1	0
110	Analysis of biological and artificial chemical sensor responses to odor mixtures. , 2013, , .		0
111	Enhanced Carbon Dioxide Photoconversion Efficiency by 1D Structured Platinized TiO2 Films. ECS Transactions, 2013, 58, 305-309.	0.5	0