Zhang Chen

List of Publications by Year
in descending order

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60 papers	5,324 citations	136950 32 h-index	133252 59 g-index
61 all docs	61 docs citations	61 times ranked	3766 citing authors

#	Article	IF	Citations
1	Thermochromic VO2 for Energy-Efficient Smart Windows. Joule, 2018, 2, 1707-1746.	24.0	536
2	Nanoceramic VO2 thermochromic smart glass: A review on progress in solution processing. Nano Energy, 2012, 1, 221-246.	16.0	507
3	Enhanced chemical stability of VO2 nanoparticles by the formation of SiO2/VO2 core/shell structures and the application to transparent and flexible VO2-based composite foils with excellent thermochromic properties for solar heat control. Energy and Environmental Science, 2012, 5, 6104.	30.8	278
4	Thermochromic VO₂ Thin Films: Solution-Based Processing, Improved Optical Properties, and Lowered Phase Transformation Temperature. Langmuir, 2010, 26, 10738-10744.	3.5	255
5	Nanoporous Thermochromic VO₂ Films with Low Optical Constants, Enhanced Luminous Transmittance and Thermochromic Properties. ACS Applied Materials & Interfaces, 2011, 3, 135-138.	8.0	247
6	VO2 thermochromic smart window for energy savings and generation. Scientific Reports, 2013, 3, 3029.	3.3	246
7	VO2-based double-layered films for smart windows: Optical design, all-solution preparation and improved properties. Solar Energy Materials and Solar Cells, 2011, 95, 2677-2684.	6.2	210
8	Fine crystalline VO2 nanoparticles: synthesis, abnormal phase transition temperatures and excellent optical properties of a derived VO2 nanocomposite foil. Journal of Materials Chemistry A, 2014, 2, 2718.	10.3	204
9	Transparent wood containing Cs_xWO₃ nanoparticles for heat-shielding window applications. Journal of Materials Chemistry A, 2017, 5, 6019-6024.	10.3	194
10	VO2â€“Sb:SnO2 composite thermochromic smart glass foil. Energy and Environmental Science, 2012, 5, 8234.	30.8	186
11	Mg-doped VO2 nanoparticles: hydrothermal synthesis, enhanced visible transmittance and decreased metalâ€“insulator transition temperature. Physical Chemistry Chemical Physics, 2013, 15, 7505.	2.8	178
12	Direct Chemical Vapor Deposition-Derived Graphene Glasses Targeting Wide Ranged Applications. Nano Letters, 2015, 15, 5846-5854.	9.1	176
13	Effects of Annealing Parameters on Optical Properties of Thermochromic VO₂ Films Prepared in Aqueous Solution. Journal of Physical Chemistry C, 2010, 114, 1901-1911.	3.1	173
14	F-doped VO2 nanoparticles for thermochromic energy-saving foils with modified color and enhanced solar-heat shielding ability. Physical Chemistry Chemical Physics, 2013, 15, 11723.	2.8	160
15	Solution-based fabrication of vanadium dioxide on F:SnO2 substrates with largely enhanced thermochromism and low-emissivity for energy-saving applications. Energy and Environmental Science, 2011, 4, 4290.	30.8	159
16	Significant changes in phase-transition hysteresis for Ti-doped VO2 films prepared by polymer-assisted deposition. Solar Energy Materials and Solar Cells, 2011, 95, 469-475.	6.2	158
17	The synthesis and performance of Zr-doped and Wâ€“Zr-codoped VO₂ nanoparticles and derived flexible foils. Journal of Materials Chemistry A, 2014, 2, 15087-15093.	10.3	131
18	The visible transmittance and solar modulation ability of VO2 flexible foils simultaneously improved by Ti doping: an optimization and first principle study. Physical Chemistry Chemical Physics, 2013, 15, 17537.	2.8	101

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19	WO3 quantum-dots electrochromism. Nano Energy, 2020, 68, 104350.	16.0	84
20	Physical vapour deposition of vanadium dioxide for thermochromic smart window applications. Journal of Materials Chemistry C, 2019, 7, 2121-2145.	5.5	83
21	Dual-Phase Transformation: Spontaneous Self-Template Surface-Patterning Strategy for Ultra-transparent VO₂ Solar Modulating Coatings. ACS Nano, 2017, 11, 407-415.	14.6	81
22	Crystallised mesoporous TiO₂(A)â€“VO₂(M/R) nanocomposite films with self-cleaning and excellent thermochromic properties. Journal of Materials Chemistry A, 2014, 2, 11874-11884.	10.3	67
23	Scalable and Flexible Electrospun Film for Daytime Subambient Radiative Cooling. ACS Applied Materials & Interfaces, 2021, 13, 29558-29566.	8.0	67
24	The demonstration and simulation of the application performance of the vanadium dioxide single glazing. Solar Energy Materials and Solar Cells, 2013, 117, 168-173.	6.2	62
25	Formation and metal-to-insulator transition properties of VO2â€“ZrV2O7 composite films by polymer-assisted deposition. Solar Energy Materials and Solar Cells, 2011, 95, 1604-1609.	6.2	54
26	Transparent Wood Composites Fabricated by Impregnation of Epoxy Resin and W-Doped VO₂ Nanoparticles for Application in Energy-Saving Windows. ACS Applied Materials & Interfaces, 2020, 12, 34777-34783.	8.0	54
27	A multi-functional textile that combines self-cleaning, water-proofing and VO2-based temperature-responsive thermoregulating. Solar Energy Materials and Solar Cells, 2017, 159, 102-111.	6.2	53
28	Synthesis of CsxWO3 nanoparticles and their NIR shielding properties. Ceramics International, 2018, 44, 13469-13475.	4.8	47
29	Enhancing thermochromic performance of VO2 films via increased microroughness by phase separation. Solar Energy Materials and Solar Cells, 2013, 110, 1-7.	6.2	43
30	Printed Smart Photovoltaic Window Integrated with an Energyâ€Saving Thermochromic Layer. Advanced Optical Materials, 2015, 3, 1524-1529.	7.3	43
31	Phase and morphology evolution of VO₂ nanoparticles using a novel hydrothermal system for thermochromic applications: the growth mechanism and effect of ammonium (NH₄⁺). RSC Advances, 2016, 6, 81559-81568.	3.6	37
32	VO2@SiO2/Poly(N-isopropylacrylamide) Hybrid Nanothermochromic Microgels for Smart Window. Industrial & Engineering Chemistry Research, 2018, 57, 12801-12808.	3.7	33
33	Novel synthesis of pure VO₂@SiO₂ core@shell nanoparticles to improve the optical and anti-oxidant properties of a VO₂ film. RSC Advances, 2016, 6, 108286-108289.	3.6	31
34	Lowered phase transition temperature and excellent solar heat shielding properties of well-crystallized VO₂ by W doping. Physical Chemistry Chemical Physics, 2016, 18, 28010-28017.	2.8	31
35	Cytotoxicity of vanadium oxide nanoparticles and titanium dioxideâ€coated vanadium oxide nanoparticles to human lung cells. Journal of Applied Toxicology, 2020, 40, 567-577.	2.8	30
36	An intermediate phase (NH₄)₂V₄O₉ and its effects on the hydrothermal synthesis of VO₂ (M) nanoparticles. CrystEngComm, 2016, 18, 558-565.	2.6	28

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37	Short-term and long-term toxicological effects of vanadium dioxide nanoparticles on A549 cells. Environmental Science: Nano, 2019, 6, 565-579.	4.3	27
38	Solid-state-reaction synthesis of VO₂ nanoparticles with low phase transition temperature, enhanced chemical stability and excellent thermochromic properties. RSC Advances, 2015, 5, 108015-108022.	3.6	24
39	Low temperature fabrication of thermochromic VO₂ thin films by low-pressure chemical vapor deposition. RSC Advances, 2017, 7, 10798-10805.	3.6	24
40	Large-Scale Preparation of Durable VO₂ Nanocomposite Coatings. ACS Applied Nano Materials, 2021, 4, 4048-4054.	5.0	21
41	Asymmetrically modulating the insulatorâ€“metal transition of thermochromic VO2 films upon heating and cooling by mild surface-etching. Applied Surface Science, 2014, 311, 676-683.	6.1	19
42	Thermo- and pH-responsive starch derivatives for smart window. Carbohydrate Polymers, 2018, 196, 209-216.	10.2	18
43	Phaseâ€Controlled Synthesis of Monolayer W 1â^' x Re x S 2 Alloy with Improved Photoresponse Performance. Small, 2020, 16, 2000852.	10.0	18
44	VO₂(D) hollow coreâ€“shell microspheres: synthesis, methylene blue dye adsorption and their transformation into C/VO_xnanoparticles. Inorganic Chemistry Frontiers, 2018, 5, 550-558.	6.0	17
45	Crystallized TiO₂ (A)â€“VO₂ (M/R) nanocomposite films with electrochromismâ€“thermochromism dual-response properties. RSC Advances, 2016, 6, 32176-32182.	3.6	15
46	Thermal kinetic analysis of metalâ€“insulator transition mechanism in W-doped VO2. Journal of Thermal Analysis and Calorimetry, 2016, 126, 949-957.	3.6	13
47	The discovery of conductive ionic bonds in NiO/Ni transparent counter electrodes for electrochromic smart windows with an ultra-long cycling life. Materials Advances, 0, , .	5.4	13
48	Atomic and electronic structures of thermochromic VO2 with Sb-doping. Computational Materials Science, 2017, 130, 103-108.	3.0	12
49	Bioinspired Ant-Nest-Like Hierarchical Porous Material Using CaCl₂ as Additive for Smart Indoor Humidity Control. Industrial & Engineering Chemistry Research, 2019, 58, 7139-7145.	3.7	11
50	An abnormal phase transition behavior in VO₂ nanoparticles induced by an M1â€“M2â€“R process: two anomalous high (>68 Â°C) transition temperatures. RSC Advances, 2016, 6, 50521-50528.	3.6	9
51	Preparation of 1-dodecanol microcapsules with cellulose nanofibers-modified melamine-formaldehyde resin as a potential phase change material. Materials Research Express, 2019, 6, 125376.	1.6	9
52	Effect of Dew Point and Alloy Composition on Reactive Wetting of Hot Dip Galvanized Medium Manganese Lightweight Steel. Coatings, 2020, 10, 37.	2.6	7
53	VO₂-based thermochromic smart window: From energy savings to generation. Chinese Science Bulletin, 2016, 61, 1661-1678.	0.7	7
54	Phytotoxicity of VO2 nanoparticles with different sizes to pea seedlings. Ecotoxicology and Environmental Safety, 2022, 242, 113885.	6.0	7

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55	Colorful Wall-Bricks with Superhydrophobic Surfaces for Enhanced Smart Indoor Humidity Control. ACS Omega, 2019, 4, 13896-13901.	3.5	6
56	Microporous Carbons Derived from <scp>d</scp>-Fructose Carbon with Excellent Microwave Absorption Performance. ACS Applied Electronic Materials, 2022, 4, 2424-2431.	4.3	6
57	Effect of Hot-Dip Galvanizing Process on Selective Oxidation and Galvanizability of Medium Manganese Steel for Automotive Application. Coatings, 2020, 10, 1265.	2.6	5
58	Realization of an anion insertion mechanism for high-rate electrochemical energy storage in highly crystalline few-layered potassium manganese dioxide nanosheets. Journal of Materials Chemistry A, 2022, 10, 9402-9407.	10.3	4
59	Solution Processing of Nanoceramic VO2 Thin Films for Application to Smart Windows. , 0, , .		2
60	Waterâ€Resistant and Hazeâ€Tunable Transparent Cellulose Nanopaper for Patterned Electroluminescence Devices. Macromolecular Materials and Engineering, 2018, 303, 1800142.	3.6	2