Shi Chen

List of Publications by Year
in descending order

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92 papers	7,333 citations	44069 48 h-index	54911 84 g-index
92 all docs	92 docs citations	92 times ranked	10679 citing authors

#	Article	IF	Citations
1	Lead-Free MA₂CuCl_xBr_{4â€“x} Hybrid Perovskites. Inorganic Chemistry, 2016, 55, 1044-1052.	4.0	457
2	Defect Engineered g-C₃N₄ for Efficient Visible Light Photocatalytic Hydrogen Production. Chemistry of Materials, 2015, 27, 4930-4933.	6.7	401
3	High-Efficiency Light-Emitting Diodes of Organometal Halide Perovskite Amorphous Nanoparticles. ACS Nano, 2016, 10, 6623-6630.	14.6	347
4	Two-dimensional Ruddlesdenâ€“Popper layered perovskite solar cells based on phase-pure thin films. Nature Energy, 2021, 6, 38-45.	39.5	342
5	Abnormal strong burn-in degradation of highly efficient polymer solar cells caused by spinodal donor-acceptor demixing. Nature Communications, 2017, 8, 14541.	12.8	298
6	Aligned and Graded Typeâ€Ⅱ Ruddlesdenâ€“Popper Perovskite Films for Efficient Solar Cells. Advanced Energy Materials, 2018, 8, 1800185.	19.5	247
7	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
8	Interfacial Electron Transfer Barrier at Compact TiO₂/CH₃NH₃PbI₃Heterojunction. Small, 2015, 11, 3606-3613.	10.0	196
9	Overcoming the Interface Losses in Planar Heterojunction Perovskiteâ€Based Solar Cells. Advanced Materials, 2016, 28, 5112-5120.	21.0	188
10	Hierarchical Porous LiNi1/3Co1/3Mn1/3O2 Nano-/Micro Spherical Cathode Material: Minimized Cation Mixing and Improved Li+ Mobility for Enhanced Electrochemical Performance. Scientific Reports, 2016, 6, 25771.	3.3	178
11	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
12	Gate-controlled VO ₂ phase transition for high-performance smart windows. Science Advances, 2019, 5, eaav6815.	10.3	160
13	Surface Reconstruction and Phase Transition on Vanadiumâ€“Cobaltâ€“Iron Trimetal Nitrides to Form Active Oxyhydroxide for Enhanced Electrocatalytic Water Oxidation. Advanced Energy Materials, 2020, 10, 2002464.	19.5	155
14	Interfacial Charge Transfer Anisotropy in Polycrystalline Lead Iodide Perovskite Films. Journal of Physical Chemistry Letters, 2015, 6, 1396-1402.	4.6	141
15	High brightness formamidinium lead bromide perovskite nanocrystal light emitting devices. Scientific Reports, 2016, 6, 36733.	3.3	134
16	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
17	Development of Electrocatalysts for Efficient Nitrogen Reduction Reaction under Ambient Condition. Advanced Functional Materials, 2021, 31, 2008983.	14.9	124
18	Aqueous Rechargeable Alkaline Co_xNi_{2â€“x}S₂/TiO₂ Battery. ACS Nano, 2016, 10, 1007-1016.	14.6	123

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19	Photoinduced degradation of methylammonium lead triiodide perovskite semiconductors. Journal of Materials Chemistry A, 2016, 4, 15896-15903.	10.3	119
20	Vertically Aligned 2D/3D Pbâ€“Sn Perovskites with Enhanced Charge Extraction and Suppressed Phase Segregation for Efficient Printable Solar Cells. ACS Energy Letters, 2020, 5, 1386-1395.	17.4	111
21	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
22	Highly Efficient and Stable GABrâ€Modified Idealâ€Bandgap (1.35 eV) Sn/Pb Perovskite Solar Cells Achieve 20.63% Efficiency with a Record Small V_{oc} Deficit of 0.33 V. Advanced Materials, 2020, 32, e1908107.	21.0	101
23	Hierarchical TiO2 nanobelts@MnO2 ultrathin nanoflakes coreâ€“shell array electrode materials for supercapacitors. RSC Advances, 2013, 3, 14413.	3.6	98
24	â€œElectron/Ion Spongeâ€•Like V-Based Polyoxometalate: Toward High-Performance Cathode for Rechargeable Sodium Ion Batteries. ACS Nano, 2017, 11, 6911-6920.	14.6	95
25	Direct coherent multi-ink printing of fabric supercapacitors. Science Advances, 2021, 7, .	10.3	95
26	Decoupling the Lattice Distortion and Charge Doping Effects on the Phase Transition Behavior of VO2 by Titanium (Ti4+) Doping. Scientific Reports, 2015, 5, 9328.	3.3	84
27	Fill Factor Losses in Cu₂ZnSn(S_xSe_{1â^'x})₄ Solar Cells: Insights from Physical and Electrical Characterization of Devices and Exfoliated Films. Advanced Energy Materials, 2016, 6, 1501609.	19.5	84
28	Multiâ€Phase Heterostructure of CoNiP/Co_xP for Enhanced Hydrogen Evolution Under Alkaline and Seawater Conditions by Promoting H₂O Dissociation. Small, 2021, 17, e2007557.	10.0	83
29	Inverted, Environmentally Stable Perovskite Solar Cell with a Novel Lowâ€Cost and Waterâ€Free PEDOT Holeâ€Extraction Layer. Advanced Energy Materials, 2015, 5, 1500543.	19.5	81
30	Energy level alignment at the methylammonium lead iodide/copper phthalocyanine interface. APL Materials, 2014, 2, .	5.1	80
31	Controlling the crystallization dynamics of photovoltaic perovskite layers on larger-area coatings. Energy and Environmental Science, 2020, 13, 4666-4690.	30.8	79
32	Exploring the Stability of Novel Wide Bandgap Perovskites by a Robot Based High Throughput Approach. Advanced Energy Materials, 2018, 8, 1701543.	19.5	75
33	Deep surface passivation for efficient and hydrophobic perovskite solar cells. Journal of Materials Chemistry A, 2021, 9, 2919-2927.	10.3	74
34	Exploring the Limiting Openâ€Circuit Voltage and the Voltage Loss Mechanism in Planar CH₃NH₃PbBr₃ Perovskite Solar Cells. Advanced Energy Materials, 2016, 6, 1600132.	19.5	71
35	Development of Perovskite Oxideâ€Based Electrocatalysts for Oxygen Evolution Reaction. Small, 2021, 17, e2101605.	10.0	71
36	Direct Surface Passivation of Perovskite Film by 4-Fluorophenethylammonium Iodide toward Stable and Efficient Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2021, 13, 2558-2565.	8.0	71

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37	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
38	In Situ Interface Engineering for Highly Efficient Electron-Transport-Layer-Free Perovskite Solar Cells. Nano Letters, 2020, 20, 5799-5806.	9.1	67
39	Unraveling Mechanism on Reducing Thermal Hysteresis Width of VO₂ by Ti Doping: A Joint Experimental and Theoretical Study. Journal of Physical Chemistry C, 2014, 118, 18938-18944.	3.1	64
40	Mesoporous cerium oxide nanospheres for the visible-light driven photocatalytic degradation of dyes. Beilstein Journal of Nanotechnology, 2014, 5, 517-523.	2.8	62
41	Antisolvent Engineering to Optimize Grain Crystallinity and Holeâ€Blocking Capability of Perovskite Films for Highâ€Performance Photovoltaics. Advanced Materials, 2021, 33, e2102816.	21.0	61
42	Suppression of Hysteresis Effects in Organohalide Perovskite Solar Cells. Advanced Materials Interfaces, 2017, 4, 1700007.	3.7	57
43	Colorimetric Detection of Creatinine Based on Plasmonic Nanoparticles via Synergistic Coordination Chemistry. Small, 2015, 11, 4104-4110.	10.0	54
44	Boosting the efficiency of quasi-2D perovskites light-emitting diodes by using encapsulation growth method. Nano Energy, 2021, 80, 105511.	16.0	54
45	Sequential insulator-metal-insulator phase transitions of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi mathvariant="normal">V</mml:mi><mml:msub><mml:mi mathvariant="normal">O</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math> triggered by hydrogen doping. Physical Review B, 2017, 96, .	3.2	53
46	The Dynamic Phase Transition Modulation of Ionâ€Liquid Gating VO₂ Thin Film: Formation, Diffusion, and Recovery of Oxygen Vacancies. Advanced Functional Materials, 2016, 26, 3532-3541.	14.9	52
47	Terahertz conductivity of topological surface states in Bi1.5Sb0.5Te1.8Se1.2. Scientific Reports, 2013, 3, 3513.	3.3	51
48	A Depth-Profiling Study on the Solid Electrolyte Interface: Bis(fluorosulfuryl)imide Anion toward Improved K⁺ Storage. ACS Applied Energy Materials, 2019, 2, 7942-7951.	5.1	51
49	Binary organic spacer-based quasi-two-dimensional perovskites with preferable vertical orientation and efficient charge transport for high-performance planar solar cells. Journal of Materials Chemistry A, 2019, 7, 9542-9549.	10.3	50
50	Extending the environmental lifetime of unpackaged perovskite solar cells through interfacial design. Journal of Materials Chemistry A, 2016, 4, 11604-11610.	10.3	49
51	Surface Passivation Toward Efficient and Stable Perovskite Solar Cells. Energy and Environmental Materials, 2023, 6, .	12.8	46
52	Evolution of hydrogen by few-layered black phosphorus under visible illumination. Journal of Materials Chemistry A, 2017, 5, 24874-24879.	10.3	45
53	Robot-Based High-Throughput Engineering of Alcoholic Polymer: Fullerene Nanoparticle Inks for an Eco-Friendly Processing of Organic Solar Cells. ACS Applied Materials & Interfaces, 2018, 10, 23225-23234.	8.0	45
54	Joule heating driven infrared switching in flexible VO₂ nanoparticle films with reduced energy consumption for smart windows. Journal of Materials Chemistry A, 2019, 7, 4516-4524.	10.3	44

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55	Printed Smart Photovoltaic Window Integrated with an Energyâ€Saving Thermochromic Layer. Advanced Optical Materials, 2015, 3, 1524-1529.	7.3	43
56	Organic Monomolecular Layers Enable Energy-Level Matching for Efficient Hole Transporting Layer Free Inverted Perovskite Solar Cells. ACS Nano, 2019, 13, 1625-1634.	14.6	41
57	Stable and Efficient Blueâ€Emitting CsPbBr₃ Nanoplatelets with Potassium Bromide Surface Passivation. Small, 2021, 17, e2101359.	10.0	41
58	Accelerating the Screening of Perovskite Compositions for Photovoltaic Applications through Highâ€Throughput Inkjet Printing. Advanced Functional Materials, 2019, 29, 1905487.	14.9	37
59	Anodized Steel: The Most Promising Bifunctional Electrocatalyst for Alkaline Water Electrolysis in Industry. Advanced Functional Materials, 2022, 32, .	14.9	37
60	Temperature effect of the compact TiO2 layer in planar perovskite solar cells: An interfacial electrical, optical and carrier mobility study. Solar Energy Materials and Solar Cells, 2017, 163, 242-249.	6.2	36
61	Thermalâ€Responsive and Fireâ€Resistant Materials for Highâ€Safety Lithiumâ€Ion Batteries. Small, 2021, 17, e2103679.	10.0	35
62	Conjugated polyelectrolyte with potassium cations enables inverted perovskite solar cells with an efficiency over 20%. Journal of Materials Chemistry A, 2020, 8, 8238-8243.	10.3	33
63	Managing Phase Orientation and Crystallinity of Printed Dionâ€“Jacobson 2D Perovskite Layers via Controlling Crystallization Kinetics. Advanced Functional Materials, 2022, 32, .	14.9	33
64	Dynamic Reversible Evolution of Solid Electrolyte Interface in Nonflammable Triethyl Phosphate Electrolyte Enabling Safe and Stable Potassiumâ€Ion Batteries. Advanced Functional Materials, 2022, 32, .	14.9	32
65	Understanding the Interplay of Binary Organic Spacer in Ruddlesdenâ€“Popper Perovskites toward Efficient and Stable Solar Cells. Advanced Functional Materials, 2020, 30, 1907759.	14.9	31
66	Waterâ€Soluble Conjugated Polyelectrolyte Hole Transporting Layer for Efficient Skyâ€Blue Perovskite Lightâ€Emitting Diodes. Small, 2021, 17, e2101477.	10.0	29
67	Natureâ€inspired materials and designs for flexible lithiumâ€ion batteries. , 2022, 4, 878-900.		25
68	Ambient Inkjetâ€Printed Highâ€Efficiency Perovskite Solar Cells: Manipulating the Spreading and Crystallization Behaviors of Picoliter Perovskite Droplets. Solar Rrl, 2021, 5, 2100106.	5.8	24
69	Crystal Orientation Modulation and Defect Passivation for Efficient and Stable Methylammonium-Free Dion-Jacobson Quasi-2D Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2021, 13, 29567-29575.	8.0	24
70	Calculation Evidence of Staged Mott and Peierls Transitions in VO₂ Revealed by Mapping Reduced-Dimension Potential Energy Surface. Journal of Physical Chemistry Letters, 2015, 6, 3650-3656.	4.6	23
71	Compositional and Morphological Changes in Water-Induced Early-Stage Degradation in Lead Halide Perovskites. Coatings, 2019, 9, 535.	2.6	23
72	Vanadium dioxide for thermochromic smart windows in ambient conditions. Materials Today Energy, 2021, 21, 100827.	4.7	22

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73	Vacuumâ€Assisted Preparation of Highâ€Quality Quasiâ€2D Perovskite Thin Films for Largeâ€Area Lightâ€Emitting Diodes. Advanced Functional Materials, 2022, 32, 2107644.	14.9	19
74	Amphipathic Molecules Endowing Highly Structure Robust and Fast Kinetic Vanadiumâ€Based Cathode for Highâ€Performance Zincâ€Ion Batteries. Small Structures, 2022, 3, .	12.0	19
75	High Catalytic Performance of Au/Bi₂O₃ for Preferential Oxidation of CO in H₂. ACS Applied Materials & Interfaces, 2021, 13, 29532-29540.	8.0	18
76	Phase Transition Hysteresis of Tungsten Doped VO₂ Synergistically Boosts the Function of Smart Windows in Ambient Conditions. ACS Applied Electronic Materials, 2021, 3, 3648-3656.	4.3	18
77	Assembling Mesoscaleâ€Structured Organic Interfaces in Perovskite Photovoltaics. Advanced Materials, 2019, 31, e1806516.	21.0	16
78	Aluminum-Based Surface Polymerization on Carbon Dots with Aggregation-Enhanced Luminescence. Journal of Physical Chemistry Letters, 2021, 12, 4530-4536.	4.6	16
79	Mechanistic insights into the pseudocapacitive performance of bronze-type vanadium dioxide with mono/multi-valent cations intercalation. Journal of Materials Chemistry A, 2022, 10, 10439-10451.	10.3	14
80	Waferâ€Scale 2Hâ€MoS₂ Monolayer for High Surfaceâ€enhanced Raman Scattering Performance: Chargeâ€Transfer Coupled with Molecule Resonance. Advanced Materials Technologies, 2022, 7, .	5.8	14
81	Modulating Excitonic Recombination Effects through Oneâ€Step Synthesis of Perovskite Nanoparticles for Lightâ€Emitting Diodes. ChemSusChem, 2017, 10, 3818-3824.	6.8	12
82	A highly active defect engineered Cl-doped carbon catalyst for the N₂ reduction reaction. Journal of Materials Chemistry A, 2021, 9, 5807-5814.	10.3	12
83	In Operando Neutron Scattering Multipleâ€Scale Studies of Lithiumâ€Ion Batteries. Small, 2022, 18, e2107491.	10.0	11
84	Simplified Compact Perovskite Solar Cells with Efficiency of 19.6% via Interface Engineering. Energy and Environmental Materials, 2020, 3, 5-11.	12.8	10
85	Development of Perovskite Oxideâ€Based Electrocatalysts for Oxygen Evolution Reaction (Small) Tj ETQq1 1 0.784314 rgBT /Overloc	10.0	10
86	Exciton dynamics in luminescent carbon nanodots: Electronâ€“hole exchange interaction. Nano Research, 2016, 9, 549-559.	10.4	9
87	Novel self-assembled 2D networks based on zinc metal ion co-ordination: synthesis and comparative study with 3D networks. RSC Advances, 2014, 4, 17680-17693.	3.6	8
88	High throughput screening of novel tribromide perovskite materials for high-photovoltage solar cells. Journal of Materials Chemistry A, 2021, 9, 25502-25512.	10.3	8
89	Precursor formula engineering enabling high quality solution processed C60 films for efficient and stable inverted perovskite solar cells. Chemical Engineering Journal, 2022, 446, 136897.	12.7	6
90	Observation and Suppression of Stacking Interface States in Sandwich-Structured Quantum Dot Light-Emitting Diodes. ACS Applied Materials & Interfaces, 2021, 13, 56630-56637.	8.0	5

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91	Oxygen Evolution Reaction: Surface Reconstruction and Phase Transition on Vanadiumâ€“Cobaltâ€“Iron Trimetal Nitrides to Form Active Oxyhydroxide for Enhanced Electrocatalytic Water Oxidation (Adv.) Tj ETQq1 1 0.784314 rgBT /Overlo		
92	Multidimensional Perovskite for Visible Light Driven Hydrogen Production in Aqueous HI Solution. ACS Applied Energy Materials, 2022, 5, 207-213.	5.1	4