Xiao-Ming Wen

List of Publications by Citations

162	6,471	46	75
papers	citations	h-index	g-index
188	7,658	8.2	6.15
ext. papers	ext. citations	avg, IF	L-index

#	Paper	IF	Citations
162	Universal passivation strategy to slot-die printed SnO for hysteresis-free efficient flexible perovskite solar module. *Nature Communications*, **2018**, 9, 4609	17.4	392
161	Temperature-Dependent Fluorescence in Carbon Dots. *Journal of Physical Chemistry C*, **2012**, 116, 25552-25557	4.8	321
160	Hole Transport Layer Free Inorganic CsPbIBr2 Perovskite Solar Cell by Dual Source Thermal Evaporation. *Advanced Energy Materials*, **2016**, 6, 1502202	21.8	317
159	Unravelling charge carrier dynamics in protonated g-C3N4 interfaced with carbon nanodots as co-catalysts toward enhanced photocatalytic CO2 reduction: A combined experimental and first-principles DFT study. *Nano Research*, **2017**, 10, 1673-1696	10	290
158	Acoustic-optical phonon up-conversion and hot-phonon bottleneck in lead-halide perovskites. *Nature Communications*, **2017**, 8, 14120	17.4	245
157	BiVO4 {010} and {110} Relative Exposure Extent: Governing Factor of Surface Charge Population and Photocatalytic Activity. *Journal of Physical Chemistry Letters*, **2016**, 7, 1400-5	6.4	195
156	Methylammonium Lead Bromide Perovskite-Based Solar Cells by Vapor-Assisted Deposition. *Journal of Physical Chemistry C*, **2015**, 119, 3545-3549	3.8	195
155	Consolidation of the optoelectronic properties of CHNHPbBr perovskite single crystals. *Nature Communications*, **2017**, 8, 590	17.4	164
154	Defect trapping states and charge carrier recombination in organic□inorganic halide perovskites. *Journal of Materials Chemistry C*, **2016**, 4, 793-800	7.1	136
153	Intrinsic and Extrinsic Fluorescence in Carbon Nanodots: Ultrafast Time-Resolved Fluorescence and Carrier Dynamics. *Advanced Optical Materials*, **2013**, 1, 173-178	8.1	126
152	On the upconversion fluorescence in carbon nanodots and graphene quantum dots. *Chemical Communications*, **2014**, 50, 4703-6	5.8	120
151	Fluorescence Dynamics in BSA-Protected Au25 Nanoclusters. *Journal of Physical Chemistry C*, **2012**, 116, 19032-19038	3.8	99
150	Mobile Charge-Induced Fluorescence Intermittency in Methylammonium Lead Bromide Perovskite. *Nano Letters*, **2015**, 15, 4644-9	11.5	97
149	Tunable Type I and II heterojunction of CoOx nanoparticles confined in g-C3N4 nanotubes for photocatalytic hydrogen production. *Applied Catalysis B: Environmental*, **2019**, 244, 814-822	21.8	94
148	Light Illumination Induced Photoluminescence Enhancement and Quenching in Lead Halide Perovskite. *Solar Rrl*, **2017**, 1, 1600001	7.1	88
147	Mobile Ion Induced Slow Carrier Dynamics in Organic-Inorganic Perovskite CH□NH□PbBr□ *ACS Applied Materials & Interfaces*, **2016**, 8, 5351-7	9.5	87
146	Structure-Correlated Dual Fluorescent Bands in BSA-Protected Au25 Nanoclusters. *Journal of Physical Chemistry C*, **2012**, 116, 11830-11836	3.8	85

145	Triggering the Passivation Effect of Potassium Doping in Mixed-Cation Mixed-Halide Perovskite by Light Illumination. *Advanced Energy Materials*, **2019**, 9, 1901016	21.8	84
144	Morphology and Carrier Extraction Study of Organic-Inorganic Metal Halide Perovskite by One- and Two-Photon Fluorescence Microscopy. *Journal of Physical Chemistry Letters*, **2014**, 5, 3849-53	6.4	80
143	Efficient electron transfer in carbon nanodot graphene oxide nanocomposites. *Journal of Materials Chemistry C*, **2014**, 2, 2894	7.1	77
142	Photoinduced Ultrafast Charge Separation in Plexcitonic CdSe/Au and CdSe/Pt Nanorods. *Journal of Physical Chemistry Letters*, **2013**, 4, 3596-3601	6.4	77
141	A highly efficient graphene oxide absorber for Q-switched Nd:GdVO4 lasers. *Nanotechnology*, **2011**, 22, 455203	3.4	74
140	Nucleation and Growth Control of HC(NH2)2PbI3 for Planar Perovskite Solar Cell. *Journal of Physical Chemistry C*, **2016**, 120, 11262-11267	3.8	74
139	Ultrafast electron transfer in the nanocomposite of the graphene oxide Au nanocluster with graphene oxide as a donor. *Journal of Materials Chemistry C*, **2014**, 2, 3826-3834	7.1	71
138	Temperature-Dependent Fluorescence in Au10 Nanoclusters. *Journal of Physical Chemistry C*, **2012**, 116, 6567-6571	3.8	71
137	Kesterite Cu2ZnSn(S,Se)4 Solar Cells with beyond 8% Efficiency by a Sol-Gel and Selenization Process. *ACS Applied Materials & Interfaces*, **2015**, 7, 14376-83	9.5	67
136	Fluorescent Metallic Nanoclusters: Electron Dynamics, Structure, and Applications. *Particle and Particle Systems Characterization*, **2015**, 32, 142-163	3.1	65
135	A New Passivation Route Leading to Over 8% Efficient PbSe Quantum-Dot Solar Cells via Direct Ion Exchange with Perovskite Nanocrystals. *Advanced Materials*, **2017**, 29, 1703214	24	64
134	Temperature dependence of photoluminescence in silicon quantum dots. *Journal Physics D: Applied Physics*, **2007**, 40, 3573-3578	3	63
133	The Dominant Energy Transport Pathway in Halide Perovskites: Photon Recycling or Carrier Diffusion?. *Advanced Energy Materials*, **2019**, 9, 1900185	21.8	61
132	Electric field induced reversible and irreversible photoluminescence responses in methylammonium lead iodide perovskite. *Journal of Materials Chemistry C*, **2016**, 4, 9060-9068	7.1	61
131	Metal-Organic Framework Decorated Cuprous Oxide Nanowires for Long-lived Charges Applied in Selective Photocatalytic CO Reduction to CH. *Angewandte Chemie - International Edition*, **2021**, 60, 8455-8459	16.1	57
130	Interfacing BiVO with Reduced Graphene Oxide for Enhanced Photoactivity: A Tale of Facet Dependence of Electron Shuttling. *Small*, **2016**, 12, 5295-5302	11	56
129	A pulse electrodeposited amorphous tunnel layer stabilises Cu2O for efficient photoelectrochemical water splitting under visible-light irradiation. *Journal of Materials Chemistry A*, **2020**, 8, 5638-5646	13	53
128	Tunability Limit of Photoluminescence in Colloidal Silicon Nanocrystals. *Scientific Reports*, **2015**, 5, 12469	4.9	53

127	Kesterite Cu2ZnSnS4 thin film solar cells by a facile DMF-based solution coating process. *Journal of Materials Chemistry C*, **2015**, 3, 10783-10792	7.1	52
126	Light-Induced Formation of MoOS Clusters on CdS Nanorods as Cocatalyst for Enhanced Hydrogen Evolution. *ACS Applied Materials & Interfaces*, **2020**, 12, 8324-8332	9.5	51
125	Template-Free Synthesis of High-Yield Fe-Doped Cesium Lead Halide Perovskite Ultralong Microwires with Enhanced Two-Photon Absorption. *Journal of Physical Chemistry Letters*, **2018**, 9, 4878-4885	6.4	51
124	Spatial Distribution of Lead Iodide and Local Passivation on Organo-Lead Halide Perovskite. *ACS Applied Materials & Interfaces*, **2017**, 9, 6072-6078	9.5	50
123	Chemical Dopant Engineering in Hole Transport Layers for Efficient Perovskite Solar Cells: Insight into the Interfacial Recombination. *ACS Nano*, **2018**, 12, 10452-10462	16.7	50
122	Inverted Hysteresis in CHNHPbI Solar Cells: Role of Stoichiometry and Band Alignment. *Journal of Physical Chemistry Letters*, **2017**, 8, 2672-2680	6.4	49
121	Theoretical and Experimental Investigation of the Electronic Structure and Quantum Confinement of Wet-Chemistry Synthesized Ag2S Nanocrystals. *Journal of Physical Chemistry C*, **2015**, 119, 867-872	3.8	49
120	Introducing a protective interlayer of TiO2 in Cu2O□uO heterojunction thin film as a highly stable visible light photocathode. *RSC Advances*, **2015**, 5, 5231-5236	3.7	49
119	Photoluminescence characterisations of a dynamic aging process of organic-inorganic CH3NH3PbBr3 perovskite. *Nanoscale*, **2016**, 8, 1926-31	7.7	47
118	The critical role of composition-dependent intragrain planar defects in the performance of MA1□FAxPbI3 perovskite solar cells. *Nature Energy*, **2021**, 6, 624-632	62.3	47
117	LiTFSI-Free Spiro-OMeTAD-Based Perovskite Solar Cells with Power Conversion Efficiencies Exceeding 19%. *Advanced Energy Materials*, **2019**, 9, 1901519	21.8	46
116	Temperature dependent spectral properties of type-I and quasi type-II CdSe/CdS dot-in-rod nanocrystals. *Physical Chemistry Chemical Physics*, **2012**, 14, 3505-12	3.6	44
115	Significant Improvement in the Performance of PbSe Quantum Dot Solar Cell by Introducing a CsPbBr3 Perovskite Colloidal Nanocrystal Back Layer. *Advanced Energy Materials*, **2017**, 7, 1601773	21.8	43
114	Synthesis, photophysical, and device properties of novel dendrimers based on a fluorene-hexabenzocoronene (FHBC) core. *Organic Letters*, **2009**, 11, 975-8	6.2	43
113	Ultrafast Carrier Dynamics in Methylammonium Lead Bromide Perovskite. *Journal of Physical Chemistry C*, **2016**, 120, 2542-2547	3.8	42
112	Effect of Halide Treatments on PbSe Quantum Dot Thin Films: Stability, Hot Carrier Lifetime, and Application to Photovoltaics. *Journal of Physical Chemistry C*, **2015**, 119, 24149-24155	3.8	38
111	Dynamic study of the light soaking effect on perovskite solar cells by in-situ photoluminescence microscopy. *Nano Energy*, **2018**, 46, 356-364	17.1	37
110	2D Plasmonic Tungsten Oxide Enabled Ultrasensitive Fiber Optics Gas Sensor. *Advanced Optical Materials*, **2019**, 7, 1901383	8.1	37

109	Slow Response of Carrier Dynamics in Perovskite Interface upon Illumination. *ACS Applied Materials & Interfaces*, **2018**, 10, 31452-31461	9.5	35
108	Improving the Photo-Oxidative Performance of BiMoO by Harnessing the Synergy between Spatial Charge Separation and Rational Co-Catalyst Deposition. *ACS Applied Materials & Interfaces*, **2018**, 10, 9342-9352	9.5	34
107	Construction of a Bi2MoO6:Bi2Mo3O12 heterojunction for efficient photocatalytic oxygen evolution. *Chemical Engineering Journal*, **2018**, 353, 636-644	14.7	33
106	Transient Energy Reservoir in 2D Perovskites. *Advanced Optical Materials*, **2019**, 7, 1900971	8.1	33
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101	Metallophilic Bond-Induced Quenching of Delayed Fluorescence in Au25@BSA Nanoclusters. *Particle and Particle Systems Characterization*, **2013**, 30, 467-472	3.1	28
100	The optical properties of CsPbBr-CsPbBr perovskite composites. *Nanoscale*, **2019**, 11, 14676-14683	7.7	26
99	Improving Efficiency of Evaporated Cu2ZnSnS4Thin Film Solar Cells by a Thin Ag Intermediate Layer between Absorber and Back Contact. *International Journal of Photoenergy*, **2015**, 2015, 1-9	2.1	26
98	Suppression of the internal electric field effects in ZnO/Zn(0.7)Mg(0.3)O quantum wells by ion-implantation induced intermixing. *Nanotechnology*, **2008**, 19, 055205	3.4	26
97	Time-resolved and time-integrated photoluminescence analysis of state filling and quantum confinement of silicon quantum dots. *Journal of Applied Physics*, **2005**, 97, 013501	2.5	26
96	External stokes shift of perovskite nanocrystals enlarged by photon recycling. *Applied Physics Letters*, **2019**, 114, 011906	3.4	26
95	Enhanced Visible Light-Induced Charge Separation and Charge Transport in Cu2O-Based Photocathodes by Urea Treatment. *ACS Applied Materials & Interfaces*, **2015**, 7, 19887-93	9.5	25
94	Tracking Dynamic Phase Segregation in Mixed-Halide Perovskite Single Crystals under Two-Photon Scanning Laser Illumination. *Small Methods*, **2019**, 3, 1900273	12.8	24
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92	Exciton-Driven Chemical Sensors Based on Excitation-Dependent Photoluminescent Two-Dimensional SnS. *ACS Applied Materials & Interfaces*, **2019**, 11, 42462-42468	9.5	24

91	Photophysics of 2D Organic-Inorganic Hybrid Lead Halide Perovskites: Progress, Debates, and Challenges. *Advanced Science*, **2021**, 8, 2001843	13.6	24
90	Quantum Confined Stark Effect in Au8 and Au25 Nanoclusters. *Journal of Physical Chemistry C*, **2013**, 117, 3621-3626	3.8	23
89	Illumination-Induced Halide Segregation in Gradient Bandgap Mixed-Halide Perovskite Nanoplatelets. *Advanced Optical Materials*, **2018**, 6, 1801107	8.1	23
88	Investigation of anti-solvent induced optical properties change of cesium lead bromide iodide mixed perovskite (CsPbBrI) quantum dots. *Journal of Colloid and Interface Science*, **2017**, 504, 586-592	9.3	22
87	Spatially Modulating the Fluorescence Color of Mixed-Halide Perovskite Nanoplatelets through Direct Femtosecond Laser Writing. *ACS Applied Materials & Interfaces*, **2019**, 11, 26017-26023	9.5	22
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84	Long-Distance Ionic Diffusion in Cesium Lead Mixed Halide Perovskite Induced by Focused Illumination. *Chemistry of Materials*, **2019**, 31, 9049-9056	9.6	20
83	Temperature dependent photoluminescence in oxygen ion implanted and rapid thermally annealed ZnO⁄nMgO multiple quantum wells. *Applied Physics Letters*, **2007**, 90, 221914	3.4	20
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79	Fluorescence origin and spectral broadening mechanism in atomically precise Au8 nanoclusters. *Nanoscale*, **2013**, 5, 10251-7	7.7	18
78	Extended hot carrier lifetimes observed in bulk In0.265⊟0.02Ga0.735N under high-density photoexcitation. *Applied Physics Letters*, **2016**, 108, 131904	3.4	18
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75	Phase segregation in inorganic mixed-halide perovskites: from phenomena to mechanisms. *Photonics Research*, **2020**, 8, A56	6	17
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71	Generation of hot carrier population in colloidal silicon quantum dots for high-efficiency photovoltaics. *Solar Energy Materials and Solar Cells*, **2016**, 145, 391-396	6.4	15
70	Performance improvement of low bandgap polymer bulk heterojunction solar cells by incorporating P3HT. *Organic Electronics*, **2014**, 15, 2837-2846	3.5	15
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67	Linking Phase Segregation and Photovoltaic Performance of Mixed-Halide Perovskite Films through Grain Size Engineering. *ACS Energy Letters*,1649-1658	20.1	15
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65	Observation of coherent biexcitons in ZnO□nMgO multiple quantum wells at room temperature. *Applied Physics Letters*, **2006**, 89, 182109	3.4	14
64	Hafnium nitride for hot carrier solar cells. *Solar Energy Materials and Solar Cells*, **2016**, 144, 781-786	6.4	13
63	The state filling effect in p-doped InGaAs/GaAs quantum dots. *Journal of Physics Condensed Matter*, **2007**, 19, 386213	1.8	13
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54	Induced pH-dependent shift by local surface plasmon resonance in functionalized gold nanorods. *Nanoscale Research Letters*, **2013**, 8, 103	5	10
53	The enhancement of electron-phonon coupling in glutathione-protected Au25 clusters. *Journal of Colloid and Interface Science*, **2013**, 402, 86-9	9.3	10
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51	Studies of the photostability of CdSe/CdS dot-in-rod nanoparticles. *Journal of Nanoparticle Research*, **2012**, 14, 1	2.3	10
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47	Radio frequency magnetron sputtered highly textured Cu2ZnSnS4 thin films on sapphire (0 0 0 1) substrates. *Journal of Alloys and Compounds*, **2015**, 632, 53-58	5.7	9
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45	Lead-free metal-halide double perovskites: from optoelectronic properties to applications. *Nanophotonics*, **2021**, 10, 2181-2219	6.3	9
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42	Effects of blend composition on the morphology of Si-PCPDTBT:PC71BM bulk heterojunction organic solar cells. *Physica Status Solidi (A) Applications and Materials Science*, **2015**, 212, 1931-1940	1.6	8
41	Ultrafast dynamics in ZnO/ZnMgO multiple quantum wells. *Nanotechnology*, **2007**, 18, 315403	3.4	8
40	Self-assembled carbon dot-wrapped perovskites enable light trapping and defect passivation for efficient and stable perovskite solar cells. *Journal of Materials Chemistry A*, **2021**, 9, 7508-7521	13	8
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14	Femtosecond two-color three-pulse photon echoes for studying dephasing in silicon quantum dots. *Journal of Materials Science: Materials in Electronics*, **2007**, 18, 305-308	2.1	2
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9	Effect of a ZnS intermediate layer on properties of Cu2ZnSnS4 films from sputtered Zn/CuSn precursors on Si (100) substrate **2016**,		1
8	InOOH-mediated intergrown heterojunctions for enhanced photocatalytic Performance: Assembly and interfacial charge carrier transferring. *Chemical Engineering Journal*, **2022**, 442, 136355	14.7	1
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6	Improving Hole Transport and Extraction by Interface Engineering in Perovskite Solar Cells. *Energy Technology*,2101002	3.5	0
5	Energy Funneling in Quasi-2D Ruddlesden–Popper Perovskites: Charge Transfer versus Resonant Energy Transfer. *Advanced Photonics Research*,2100283	1.9	0
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1 Photocatalysis: Interfacing BiVO4 with Reduced Graphene Oxide for Enhanced Photoactivity: A Tale of Facet Dependence of Electron Shuttling (Small 38/2016). *Small*, **2016**, 12, 5232-5232 11