

# Kai Wang

## List of Publications by Year in descending order

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61  
papers

5,432  
citations

87888

38  
h-index

114465

63  
g-index

67  
all docs

67  
docs citations

67  
times ranked

7703  
citing authors

#	ARTICLE	IF	CITATIONS
1	High efficiency planar-type perovskite solar cells with negligible hysteresis using EDTA-complexed SnO <sub>2</sub> . Nature Communications, 2018, 9, 3239.	12.8	1,017
2	Low bandgap semiconducting polymers for polymeric photovoltaics. Chemical Society Reviews, 2016, 45, 4825-4846.	38.1	461
3	Single-Junction Polymer Solar Cells with Over 10% Efficiency by a Novel Two-Dimensional Donor-Acceptor Conjugated Copolymer. ACS Applied Materials & Interfaces, 2015, 7, 4928-4935.	8.0	256
4	Bulk heterojunction perovskite hybrid solar cells with large fill factor. Energy and Environmental Science, 2015, 8, 1245-1255.	30.8	252
5	Quasi-Two-Dimensional Halide Perovskite Single Crystal Photodetector. ACS Nano, 2018, 12, 4919-4929.	14.6	252
6	Ni <sub>0.85</sub> Se@MoSe <sub>2</sub> Nanosheet Arrays as the Electrode for High-Performance Supercapacitors. ACS Applied Materials & Interfaces, 2017, 9, 17067-17075.	8.0	220
7	Inverted organic photovoltaic cells. Chemical Society Reviews, 2016, 45, 2937-2975.	38.1	185
8	Stable Efficiency Exceeding 20.6% for Inverted Perovskite Solar Cells through Polymer-Optimized PCBM Electron-Transport Layers. Nano Letters, 2019, 19, 3313-3320.	9.1	181
9	Isothermally crystallized perovskites at room-temperature. Energy and Environmental Science, 2020, 13, 3412-3422.	30.8	153
10	Efficient Perovskite Hybrid Solar Cells by Highly Electrical Conductive PEDOT:PSS Hole Transport Layer. Advanced Energy Materials, 2016, 6, 1501773.	19.5	133
11	Localized Electron Density Engineering for Stabilized B <sup>-13</sup> CsSn <sub>3</sub> -Based Perovskite Solar Cells with Efficiencies >10%. ACS Energy Letters, 0, , 1480-1489.	17.4	125
12	Molecular Weight Effect on the Efficiency of Polymer Solar Cells. ACS Applied Materials & Interfaces, 2013, 5, 12163-12167.	8.0	111
13	Ultrasensitive solution-processed broad-band photodetectors using CH <sub>3</sub> NH <sub>3</sub> Pb <sub>3</sub> perovskite hybrids and PbS quantum dots as light harvesters. Nanoscale, 2015, 7, 16460-16469.	5.6	106
14	Ultrasensitive solution-processed perovskite hybrid photodetectors. Journal of Materials Chemistry C, 2015, 3, 6600-6606.	5.5	104
15	High Performance Planar Heterojunction Perovskite Solar Cells with Fullerene Derivatives as the Electron Transport Layer. ACS Applied Materials & Interfaces, 2015, 7, 1153-1159.	8.0	99
16	Recent progress in fundamental understanding of halide perovskite semiconductors. Progress in Materials Science, 2019, 106, 100580.	32.8	95
17	PbS quantum dots-induced trap-assisted charge injection in perovskite photodetectors. Nano Energy, 2016, 30, 27-35.	16.0	91
18	Efficient perovskite solar cells by hybrid perovskites incorporated with heterovalent neodymium cations. Nano Energy, 2019, 61, 352-360.	16.0	89

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19	Polyaniline-Modified Oriented Graphene Hydrogel Film as the Free-Standing Electrode for Flexible Solid-State Supercapacitors. ACS Applied Materials & Interfaces, 2015, 7, 23932-23940.	8.0	77
20	Wide-Bandgap Perovskite Solar Cells With Large Open-Circuit Voltage of 1653 mV Through Interfacial Engineering. Solar Rrl, 2018, 2, 1800083.	5.8	67
21	Cost-Effective High-Performance Charge-Carrier-Transport-Layer-Free Perovskite Solar Cells Achieved by Suppressing Ion Migration. ACS Energy Letters, 2021, 6, 3044-3052.	17.4	65
22	Distinct conducting layer edge states in two-dimensional (2D) halide perovskite. Science Advances, 2019, 5, eaau3241.	10.3	62
23	Efficient Perovskite Hybrid Solar Cells via Ionomer Interfacial Engineering. Advanced Functional Materials, 2015, 25, 6875-6884.	14.9	57
24	Effect of Oligothiophene ï€-Bridge Length on the Photovoltaic Properties of Dã€“A Copolymers Based on Carbazole and Quinoxalinoporphyryin. Macromolecules, 2012, 45, 7806-7814.	4.8	54
25	Multifunctional nanostructured materials for next generation photovoltaics. Nano Energy, 2020, 70, 104480.	16.0	52
26	Solution-Processed Fe<sub>3</sub>O<sub>4</sub> Magnetic Nanoparticle Thin Film Aligned by an External Magnetostatic Field as a Hole Extraction Layer for Polymer Solar Cells. ACS Applied Materials & Interfaces, 2013, 5, 10325-10330.	8.0	51
27	Efficient Perovskite Hybrid Solar Cells Through a Homogeneous High-Quality Organolead Iodide Layer. Small, 2015, 11, 3369-3376.	10.0	47
28	All electro spray printed perovskite solar cells. Nano Energy, 2018, 53, 440-448.	16.0	46
29	Nonionic Sc<sub>3</sub>N@C<sub>80</sub> Dopant for Efficient and Stable Halide Perovskite Photovoltaics. ACS Energy Letters, 2019, 4, 1852-1861.	17.4	46
30	High performance perovskites solar cells by hybrid perovskites co-crystallized with poly(ethylene) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 3	16.0	46
31	A Nonionic and Low-Entropic MA(MMA)nPbI3-Ink for Fast Crystallization of Perovskite Thin Films. Joule, 2020, 4, 615-630.	24.0	46
32	Ionic liquid induced surface trap-state passivation for efficient perovskite hybrid solar cells. Organic Electronics, 2017, 41, 42-48.	2.6	45
33	Enhanced Performance and Stability in DNA-Perovskite Heterostructure-Based Solar Cells. ACS Energy Letters, 2019, 4, 2646-2655.	17.4	45
34	Radical polymers as interfacial layers in inverted hybrid perovskite solar cells. Journal of Materials Chemistry A, 2017, 5, 23831-23839.	10.3	44
35	Self-Powered Red/UV Narrowband Photodetector by Unbalanced Charge Carrier Transport Strategy. Advanced Functional Materials, 2021, 31, 2007016.	14.9	44
36	Mono-crystalline Perovskite Photovoltaics toward Ultrahigh Efficiency?. Joule, 2019, 3, 311-316.	24.0	43

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37	Moderately reduced graphene oxide/PEDOT:PSS as hole transport layer to fabricate efficient perovskite hybrid solar cells. <i>Organic Electronics</i> , 2016, 39, 288-295.	2.6	42
38	Melanin-Perovskite Composites for Photothermal Conversion. <i>Advanced Energy Materials</i> , 2019, 9, 1901753.	19.5	42
39	Fullerene Polymer Complex Inducing Dipole Electric Field for Stable Perovskite Solar Cells. <i>Advanced Functional Materials</i> , 2019, 29, 1804419.	14.9	42
40	High Performance Perovskite Hybrid Solar Cells with E-beam-Processed TiO <sub>2</sub> Electron Extraction Layer. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 1876-1883.	8.0	40
41	High-detectivity inverted near-infrared polymer photodetectors using cross-linkable conjugated polyfluorene as an electron extraction layer. <i>Journal of Materials Chemistry C</i> , 2014, 2, 9592-9598.	5.5	38
42	Efficient Polymer Solar Cells by Lithium Sulfonated Polystyrene as a Charge Transport Interfacial Layer. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 5348-5357.	8.0	33
43	One-key-reset-recycling of whole perovskite solar cell. <i>Matter</i> , 2021, 4, 2522-2541.	10.0	31
44	Enhanced Performance of Polymer Solar Cells using PEDOT:PSS Doped with Fe <sub>3</sub> O <sub>4</sub> Magnetic Nanoparticles Aligned by an External Magnetostatic Field as an Anode Buffer Layer. <i>ACS Applied Materials &amp; Interfaces</i> , 2014, 6, 13201-13208.	8.0	30
45	Ultrahigh Durability Perovskite Solar Cells. <i>Nano Letters</i> , 2019, 19, 1251-1259.	9.1	30
46	Artemisinin (ART)-Induced perovskite/perovskite-bilayer structured photovoltaics. <i>Nano Energy</i> , 2020, 78, 105133.	16.0	30
47	Two-dimensional hybrid organic-inorganic perovskites as emergent ferroelectric materials. <i>Journal of Applied Physics</i> , 2020, 128, .	2.5	30
48	Organismic materials for beyond von Neumann machines. <i>Applied Physics Reviews</i> , 2020, 7, .	11.3	30
49	Monocrystalline perovskite wafers/thin films for photovoltaic and transistor applications. <i>Journal of Materials Chemistry A</i> , 2019, 7, 24661-24690.	10.3	27
50	Perovskite hybrid solar cells with a fullerene derivative electron extraction layer. <i>Journal of Materials Chemistry C</i> , 2017, 5, 4190-4197.	5.5	24
51	Bio-inspired strategies for next-generation perovskite solar mobile power sources. <i>Chemical Society Reviews</i> , 2021, 50, 12915-12984.	38.1	15
52	Nature of terrace edge states (TES) in lower-dimensional halide perovskite. <i>Journal of Materials Chemistry A</i> , 2020, 8, 7659-7670.	10.3	14
53	Solution-Processed Ultrahigh Detectivity Photodetectors by Hybrid Perovskite Incorporated with Heterovalent Neodymium Cations. <i>ACS Omega</i> , 2019, 4, 15873-15878.	3.5	13
54	Pitch Gradation by Ion-Dragging Effect in Polymer-Stabilized Cholesteric Liquid Crystal Reflector Device. <i>Polymers</i> , 2020, 12, 96.	4.5	12

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55	Polymer-based composites with improved energy density and dielectric constants by monoaxial hot-stretching for organic film capacitor applications. RSC Advances, 2015, 5, 51975-51982.	3.6	9
56	Preparation of TiO <sub>2</sub> @MWCNT core/shell heterostructures containing a single MWCNT and their electromagnetic properties. Composite Interfaces, 2015, 22, 343-351.	2.3	4
57	Efficient Perovskite Hybrid Solar Cells via Controllable Crystallization Film Morphology. IEEE Journal of Photovoltaics, 2015, 5, 1402-1407.	2.5	4
58	Homogenization of Optical Field in Nanocrystal-Embedded Perovskite Composites. ACS Energy Letters, 2022, 7, 1657-1671.	17.4	4
59	Inverted polymer solar cells with Zn <sub>2</sub> SnO <sub>4</sub> nanoparticles as the electron extraction layer. Chinese Chemical Letters, 2017, 28, 1755-1759.	9.0	3
60	Probe of the excitonic transitions and lifetimes in quasi-2D organic-inorganic halide perovskites. AIP Advances, 2022, 12, .	1.3	2
61	Design of TiO <sub>2</sub> @graphene nanosheets with rough surface and its reinforcement to polyarylene ether nitriles. Polymers for Advanced Technologies, 2015, 26, 1267-1274.	3.2	1