

Zai-Quan Xu

List of Publications by Year in descending order

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68
papers

4,461
citations

126907

33
h-index

128289

60
g-index

69
all docs

69
docs citations

69
times ranked

8128
citing authors

#	ARTICLE	IF	CITATIONS
1	Scalable Production of a Few-Layer MoS ₂ /WS ₂ Vertical Heterojunction Array and Its Application for Photodetectors. ACS Nano, 2016, 10, 573-580.	14.6	362
2	Two-Dimensional CH ₃ NH ₃ PbI ₃ Perovskite: Synthesis and Optoelectronic Application. ACS Nano, 2016, 10, 3536-3542.	14.6	359
3	Broadband Photodetectors Based on Graphene/Bi ₂ Te ₃ Heterostructure. ACS Nano, 2015, 9, 1886-1894.	14.6	338
4	Photonics and optoelectronics of two-dimensional materials beyond graphene. Nanotechnology, 2016, 27, 462001.	2.6	259
5	Wafer-scale two-dimensional semiconductors from printed oxide skin of liquid metals. Nature Communications, 2017, 8, 14482.	12.8	219
6	Synthesis and Transfer of Large-Area Monolayer WS ₂ Crystals: Moving Toward the Recyclable Use of Sapphire Substrates. ACS Nano, 2015, 9, 6178-6187.	14.6	200
7	Solution-Processable Ultrathin Black Phosphorus as an Effective Electron Transport Layer in Organic Photovoltaics. Advanced Functional Materials, 2016, 26, 864-871.	14.9	187
8	Deterministic Coupling of Quantum Emitters in 2D Materials to Plasmonic Nanocavity Arrays. Nano Letters, 2017, 17, 2634-2639.	9.1	163
9	Highly responsive MoS ₂ photodetectors enhanced by graphene quantum dots. Scientific Reports, 2015, 5, 11830.	3.3	155
10	Strong Depletion in Hybrid Perovskite p-n Junctions Induced by Local Electronic Doping. Advanced Materials, 2018, 30, e1705792.	21.0	141
11	Surface plasmon-enhanced electroluminescence in organic light-emitting diodes incorporating Au nanoparticles. Applied Physics Letters, 2012, 100, .	3.3	134
12	Giant Plasmene Nanosheets, Nanoribbons, and Origami. ACS Nano, 2014, 8, 11086-11093.	14.6	134
13	Single photon emission from plasma treated 2D hexagonal boron nitride. Nanoscale, 2018, 10, 7957-7965.	5.6	107
14	Engineering and Tuning of Quantum Emitters in Few-Layer Hexagonal Boron Nitride. ACS Nano, 2019, 13, 3132-3140.	14.6	101
15	Strain Relaxation of Monolayer WS ₂ on Plastic Substrate. Advanced Functional Materials, 2016, 26, 8707-8714.	14.9	97
16	Atomically thin lateral p-n junction photodetector with large effective detection area. 2D Materials, 2016, 3, 041001.	4.4	78
17	Band Structure Engineering in 2D Materials for Optoelectronic Applications. Advanced Materials Technologies, 2018, 3, 1800072.	5.8	78
18	Wavelength-tunable waveguides based on polycrystalline organic-inorganic perovskite microwires. Nanoscale, 2016, 8, 6258-6264.	5.6	76

#	ARTICLE	IF	CITATIONS
19	Reversible Structural Swellâ€“Shrink and Recoverable Optical Properties in Hybrid Inorganicâ€“Organic Perovskite. ACS Nano, 2016, 10, 7031-7038.	14.6	68
20	Electrolyte gating in graphene-based supercapacitors and its use for probing nanoconfined charging dynamics. Nature Nanotechnology, 2020, 15, 683-689.	31.5	66
21	Diffraction-limited imaging with monolayer 2D material-based ultrathin flat lenses. Light: Science and Applications, 2020, 9, 137.	16.6	65
22	Nanoassembly of quantum emitters in hexagonal boron nitride and gold nanospheres. Nanoscale, 2018, 10, 2267-2274.	5.6	61
23	All-optical control and super-resolution imaging of quantum emitters in layered materials. Nature Communications, 2018, 9, 874.	12.8	60
24	Back-contacted hybrid organicâ€“inorganic perovskite solar cells. Journal of Materials Chemistry C, 2016, 4, 3125-3130.	5.5	54
25	Resonant Excitation of Quantum Emitters in Hexagonal Boron Nitride. ACS Photonics, 2018, 5, 295-300.	6.6	53
26	Plasmonic-enhanced polymer solar cells incorporating solution-processable Au nanoparticle-adhered graphene oxide. Journal of Materials Chemistry, 2012, 22, 15614.	6.7	52
27	Enhanced performance in polymer photovoltaic cells with chloroform treated indium tin oxide anode modification. Applied Physics Letters, 2011, 98, 253303.	3.3	47
28	Profound Effect of Substrate Hydroxylation and Hydration on Electronic and Optical Properties of Monolayer MoS ₂ . Nano Letters, 2015, 15, 3096-3102.	9.1	45
29	Efficient inverted polymer solar cells incorporating doped organic electron transporting layer. Organic Electronics, 2012, 13, 697-704.	2.6	43
30	Scalable and Deterministic Fabrication of Quantum Emitter Arrays from Hexagonal Boron Nitride. Nano Letters, 2021, 21, 3626-3632.	9.1	42
31	A facile approach to alleviate photochemical degradation in high efficiency polymer solar cells. Journal of Materials Chemistry A, 2015, 3, 16313-16319.	10.3	38
32	Upconversion Nonlinear Structured Illumination Microscopy. Nano Letters, 2020, 20, 4775-4781.	9.1	38
33	Two-Dimensional Hexagonal Boron Nitride for Building Next-Generation Energy-Efficient Devices. ACS Energy Letters, 2021, 6, 985-996.	17.4	37
34	Quantum emitters in 2D materials: Emitter engineering, photophysics, and integration in photonic nanostructures. Applied Physics Reviews, 2022, 9, .	11.3	37
35	Purification of single-photon emission from hBN using post-processing treatments. Nanophotonics, 2019, 8, 2049-2055.	6.0	35
36	Coupling Spin Defects in a Layered Material to Nanoscale Plasmonic Cavities. Advanced Materials, 2022, 34, e2106046.	21.0	34

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37	Enhanced Emission from WSe_2 Monolayers Coupled to Circular Bragg Gratings. ACS Photonics, 2018, 5, 3950-3955.	6.6	31
38	Quantum Energy and Charge Transfer at Two-Dimensional Interfaces. Nano Letters, 2021, 21, 1193-1204.	9.1	31
39	Internal Nanostructure Diagnosis with Hyperbolic Phonon Polaritons in Hexagonal Boron Nitride. Nano Letters, 2018, 18, 5205-5210.	9.1	29
40	Room-Temperature Single-Photon Emission from Oxidized Tungsten Disulfide Multilayers. Advanced Optical Materials, 2017, 5, 1600939.	7.3	27
41	Electronic structures of planar and mixed C70/CuPc heterojunctions in organic photovoltaic devices. Organic Electronics, 2011, 12, 1422-1428.	2.6	26
42	Inverted polymer solar cells with atomic layer deposited CdS film as an electron collection layer. Organic Electronics, 2011, 12, 2151-2158.	2.6	25
43	Role of transition metal oxides in the charge recombination layer used in tandem organic photovoltaic cells. Journal of Materials Chemistry, 2012, 22, 6285.	6.7	25
44	Plasmonic backscattering enhancement for inverted polymer solar cells. Journal of Materials Chemistry, 2012, 22, 22781.	6.7	23
45	Synthesis of Ultrathin Composition Graded Doped Lateral WSe_2/WS_2 Heterostructures. ACS Applied Materials & Interfaces, 2017, 9, 34204-34212.	8.0	22
46	Enhanced quantum efficiency from a mosaic of two dimensional MoS_2 formed onto aminosilane functionalised substrates. Nanoscale, 2016, 8, 12258-12266.	5.6	18
47	Nanodiamonds with photostable, sub-gigahertz linewidth quantum emitters. APL Photonics, 2017, 2, .	5.7	18
48	Encapsulation-Free Stabilization of Few-Layer Black Phosphorus. ACS Applied Materials & Interfaces, 2018, 10, 24327-24331.	8.0	16
49	Near-Field Energy Transfer between a Luminescent 2D Material and Color Centers in Diamond. Advanced Quantum Technologies, 2020, 3, 1900088.	3.9	16
50	Inverted polymer solar cells integrated with small molecular electron collection layer. Organic Electronics, 2013, 14, 1844-1851.	2.6	14
51	Charge and energy transfer of quantum emitters in 2D heterostructures. 2D Materials, 2020, 7, 031001.	4.4	13
52	Generation of High-Density Quantum Emitters in High-Quality, Exfoliated Hexagonal Boron Nitride. ACS Applied Materials & Interfaces, 2021, 13, 47283-47292.	8.0	13
53	Efficient inverted polymer solar cells with thermal-evaporated and solution-processed small molecular electron extraction layer. Applied Physics Letters, 2013, 102, 133303.	3.3	10
54	Simultaneously enhanced linear and nonlinear photon generations from WS_2 by using dielectric circular Bragg resonators. Nanophotonics, 2020, 9, 2587-2592.	6.0	8

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55	Irradiation-induced molecular dipole reorientation in inverted polymer solar cell using small molecular electron collection layer. <i>Applied Physics Letters</i> , 2011, 99, 203301.	3.3	6
56	Resonant energy transfer between hexagonal boron nitride quantum emitters and atomically layered transition metal dichalcogenides. <i>2D Materials</i> , 2020, 7, 045015.	4.4	6
57	Enhanced Emission from Interlayer Excitons Coupled to Plasmonic Gap Cavities. <i>Small</i> , 2021, 17, e21103994.	10.0	6
58	Graphene-polymer multilayer heterostructure for terahertz metamaterials. , 2013, , .		5
59	Improved carrier injection and confinement in InGaN light-emitting diodes containing GaN/AlGaIn/GaN triangular barriers. <i>Chinese Physics B</i> , 2018, 27, 088504.	1.4	2
60	Back Cover: Near-Field Energy Transfer between a Luminescent 2D Material and Color Centers in Diamond (<i>Adv. Quantum Technol.</i> 2/2020). <i>Advanced Quantum Technologies</i> , 2020, 3, 2070025.	3.9	1
61	Quantum Emitters in Two-dimensional Hexagonal Boron Nitride. , 2020, , .		1
62	Enhanced emission and second harmonic generation from WS ₂ by using dielectric circular Bragg resonators. , 2020, , .		1
63	Quantum Emitters in Flatland. , 2018, , .		0
64	Photonics and Optoelectronics of Low-Dimensional Materials. <i>Advances in Condensed Matter Physics</i> , 2018, 2018, 1-2.	1.1	0
65	Enhanced Super-Resolution Imaging of Quantum Emitters in Hexagonal Boron Nitride. , 2019, , .		0
66	Synthesis and Transfer of Large-Area Monolayer WS ₂ Crystals: Toward the Recyclable Use of Sapphire Substrates. , 2015, , .		0
67	Laser fabricated ultrathin flat lens in sub-nanometer thick monolayer transition metal dichalcogenides crystal. , 2016, , .		0
68	Nanophotonic integration of hexagonal boron nitride (Conference Presentation). , 2019, , .		0