Zai-Quan Xu

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/1096507/publications.pdf

Version: 2024-02-01

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	Coupling Spin Defects in a Layered Material to Nanoscale Plasmonic Cavities. Advanced Materials, 2022, 34, e2106046.	21.0	34
2	Quantum emitters in 2D materials: Emitter engineering, photophysics, and integration in photonic nanostructures. Applied Physics Reviews, 2022, 9, .	11.3	37
3	Quantum Energy and Charge Transfer at Two-Dimensional Interfaces. Nano Letters, 2021, 21, 1193-1204.	9.1	31
4	Two-Dimensional Hexagonal Boron Nitride for Building Next-Generation Energy-Efficient Devices. ACS Energy Letters, 2021, 6, 985-996.	17.4	37
5	Scalable and Deterministic Fabrication of Quantum Emitter Arrays from Hexagonal Boron Nitride. Nano Letters, 2021, 21, 3626-3632.	9.1	42
6	Generation of High-Density Quantum Emitters in High-Quality, Exfoliated Hexagonal Boron Nitride. ACS Applied Materials & Interfaces, 2021, 13, 47283-47292.	8.0	13
7	Enhanced Emission from Interlayer Excitons Coupled to Plasmonic Gap Cavities. Small, 2021, 17, e2103994.	10.0	6
8	Nearâ€Field Energy Transfer between a Luminescent 2D Material and Color Centers in Diamond. Advanced Quantum Technologies, 2020, 3, 1900088.	3.9	16
9	Diffraction-limited imaging with monolayer 2D material-based ultrathin flat lenses. Light: Science and Applications, 2020, 9, 137.	16.6	65
10	Electrolyte gating in graphene-based supercapacitors and its use for probing nanoconfined charging dynamics. Nature Nanotechnology, 2020, 15, 683-689.	31.5	66
11	Upconversion Nonlinear Structured Illumination Microscopy. Nano Letters, 2020, 20, 4775-4781.	9.1	38
12	Charge and energy transfer of quantum emitters in 2D heterostructures. 2D Materials, 2020, 7, 031001.	4.4	13
13	Resonant energy transfer between hexagonal boron nitride quantum emitters and atomically layered transition metal dichalcogenides. 2D Materials, 2020, 7, 045015.	4.4	6
14	Back Cover: Nearâ€Field Energy Transfer between a Luminescent 2D Material and Color Centers in Diamond (Adv. Quantum Technol. 2/2020). Advanced Quantum Technologies, 2020, 3, 2070025.	3.9	1
15	Quantum Emitters in Two-dimensional Hexagonal Boron Nitride. , 2020, , .		1
16	Simultaneously enhanced linear and nonlinear photon generations from WS₂ by using dielectric circular Bragg resonators. Nanophotonics, 2020, 9, 2587-2592.	6.0	8
17	Enhanced emission and second harmonic generation from WS2 by using dielectric circular Bragg resonators. , 2020, , .		1
18	Purification of single-photon emission from hBN using post-processing treatments. Nanophotonics, 2019, 8, 2049-2055.	6.0	35

#	Article	IF	Citations
19	Engineering and Tuning of Quantum Emitters in Few-Layer Hexagonal Boron Nitride. ACS Nano, 2019, 13, 3132-3140.	14.6	101
20	Enhanced Super-Resolution Imaging of Quantum Emitters in Hexagonal Boron Nitride. , 2019, , .		0
21	Nanophotonic integration of hexagonal boron nitride (Conference Presentation). , 2019, , .		0
22	Strong Depletion in Hybrid Perovskite pâ€“n Junctions Induced by Local Electronic Doping. Advanced Materials, 2018, 30, e1705792.	21.0	141
23	All-optical control and super-resolution imaging of quantum emitters in layered materials. Nature Communications, 2018, 9, 874.	12.8	60
24	Single photon emission from plasma treated 2D hexagonal boron nitride. Nanoscale, 2018, 10, 7957-7965.	5.6	107
25	Nanoassembly of quantum emitters in hexagonal boron nitride and gold nanospheres. Nanoscale, 2018, 10, 2267-2274.	5.6	61
26	Resonant Excitation of Quantum Emitters in Hexagonal Boron Nitride. ACS Photonics, 2018, 5, 295-300.	6.6	53
27	Quantum Emitters in Flatland. , 2018, , .		0
28	Photonics and Optoelectronics of Low-Dimensional Materials. Advances in Condensed Matter Physics, 2018, 2018, 1-2.	1.1	0
29	Band Structure Engineering in 2D Materials for Optoelectronic Applications. Advanced Materials Technologies, 2018, 3, 1800072.	5.8	78
30	Enhanced Emission from WSe₂ Monolayers Coupled to Circular Bragg Gratings. ACS Photonics, 2018, 5, 3950-3955.	6.6	31
31	Improved carrier injection and confinement in InGaN light-emitting diodes containing GaN/AlGaN/GaN triangular barriers. Chinese Physics B, 2018, 27, 088504.	1.4	2
32	Encapsulation-Free Stabilization of Few-Layer Black Phosphorus. ACS Applied Materials & Interfaces, 2018, 10, 24327-24331.	8.0	16
33	Internal Nanostructure Diagnosis with Hyperbolic Phonon Polaritons in Hexagonal Boron Nitride. Nano Letters, 2018, 18, 5205-5210.	9.1	29
34	Wafer-scale two-dimensional semiconductors from printed oxide skin of liquid metals. Nature Communications, 2017, 8, 14482.	12.8	219
35	Roomâ€Temperature Singleâ€Photon Emission from Oxidized Tungsten Disulfide Multilayers. Advanced Optical Materials, 2017, 5, 1600939.	7.3	27
36	Deterministic Coupling of Quantum Emitters in 2D Materials to Plasmonic Nanocavity Arrays. Nano Letters, 2017, 17, 2634-2639.	9.1	163

#	Article	IF	Citations
37	Synthesis of Ultrathin Composition Graded Doped Lateral WSe2/WS2Heterostructures. ACS Applied Materials & Interfaces, 2017, 9, 34204-34212.	8.0	22
38	Nanodiamonds with photostable, sub-gigahertz linewidth quantum emitters. APL Photonics, 2017, 2, .	5.7	18
39	Reversible Structural Swellâ€“Shrink and Recoverable Optical Properties in Hybrid Inorganicâ€“Organic Perovskite. ACS Nano, 2016, 10, 7031-7038.	14.6	68
40	Enhanced quantum efficiency from a mosaic of two dimensional MoS₂formed onto aminosilane functionalised substrates. Nanoscale, 2016, 8, 12258-12266.	5.6	18
41	Atomically thin lateral pâ€“n junction photodetector with large effective detection area. 2D Materials, 2016, 3, 041001.	4.4	78
42	Photonics and optoelectronics of two-dimensional materials beyond graphene. Nanotechnology, 2016, 27, 462001.	2.6	259
43	Strain Relaxation of Monolayer WS₂ on Plastic Substrate. Advanced Functional Materials, 2016, 26, 8707-8714.	14.9	97
44	Solutionâ€Processable Ultrathin Black Phosphorus as an Effective Electron Transport Layer in Organic Photovoltaics. Advanced Functional Materials, 2016, 26, 864-871.	14.9	187
45	Scalable Production of a Few-Layer MoS₂/WS₂ Vertical Heterojunction Array and Its Application for Photodetectors. ACS Nano, 2016, 10, 573-580.	14.6	362
46	Two-Dimensional CH₃NH₃PbI₃ Perovskite: Synthesis and Optoelectronic Application. ACS Nano, 2016, 10, 3536-3542.	14.6	359
47	Back-contacted hybrid organicâ€“inorganic perovskite solar cells. Journal of Materials Chemistry C, 2016, 4, 3125-3130.	5.5	54
48	Wavelength-tunable waveguides based on polycrystalline organicâ€“inorganic perovskite microwires. Nanoscale, 2016, 8, 6258-6264.	5.6	76
49	Laser fabricated ultrathin flat lens in sub-nanometer thick monolayer transition metal dichalcogenides crystal. , 2016, , .		0
50	Broadband Photodetectors Based on Grapheneâ€“Bi₂Te₃ Heterostructure. ACS Nano, 2015, 9, 1886-1894.	14.6	338
51	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
52	Highly responsive MoS2 photodetectors enhanced by graphene quantum dots. Scientific Reports, 2015, 5, 11830.	3.3	155
53	Profound Effect of Substrate Hydroxylation and Hydration on Electronic and Optical Properties of Monolayer MoS₂. Nano Letters, 2015, 15, 3096-3102.	9.1	45
54	Synthesis and Transfer of Large-Area Monolayer WS₂ Crystals: Moving Toward the Recyclable Use of Sapphire Substrates. ACS Nano, 2015, 9, 6178-6187.	14.6	200

#	Article	IF	Citations
55	Synthesis and Transfer of Large-Area Monolayer WS2 Crystals: Toward the Recyclable Use of Sapphire Substrates. , 2015, , .		0
56	Giant Plasmene Nanosheets, Nanoribbons, and Origami. ACS Nano, 2014, 8, 11086-11093.	14.6	134
57	Inverted polymer solar cells integrated with small molecular electron collection layer. Organic Electronics, 2013, 14, 1844-1851.	2.6	14
58	Graphene-polymer multilayer heterostructure for terahertz metamaterials. , 2013, , .		5
59	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
60	Plasmonic backscattering enhancement for inverted polymer solar cells. Journal of Materials Chemistry, 2012, 22, 22781.	6.7	23
61	Surface plasmon-enhanced electroluminescence in organic light-emitting diodes incorporating Au nanoparticles. Applied Physics Letters, 2012, 100, .	3.3	134
62	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
63	Plasmonic-enhanced polymer solar cells incorporating solution-processable Au nanoparticle-adhered graphene oxide. Journal of Materials Chemistry, 2012, 22, 15614.	6.7	52
64	Efficient inverted polymer solar cells incorporating doped organic electron transporting layer. Organic Electronics, 2012, 13, 697-704.	2.6	43
65	Inverted polymer solar cells with atomic layer deposited CdS film as an electron collection layer. Organic Electronics, 2011, 12, 2151-2158.	2.6	25
66	Electronic structures of planar and mixed C70/CuPc heterojunctions in organic photovoltaic devices. Organic Electronics, 2011, 12, 1422-1428.	2.6	26
67	Irradiation-induced molecular dipole reorientation in inverted polymer solar cell using small molecular electron collection layer. Applied Physics Letters, 2011, 99, 203301.	3.3	6
68	Enhanced performance in polymer photovoltaic cells with chloroform treated indium tin oxide anode modification. Applied Physics Letters, 2011, 98, 253303.	3.3	47