

Yang Xu

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115
papers

4,377
citations

35
h-index

63
g-index

132
ext. papers

5,286
ext. citations

9
avg, IF

5.48
L-index

#	Paper	IF	Citations
115	Contacts between Two- and Three-Dimensional Materials: Ohmic, Schottky, and p-n Heterojunctions. <i>ACS Nano</i> , 2016 , 10, 4895-919	16.7	257
114	Three-dimensional macro-structures of two-dimensional nanomaterials. <i>Chemical Society Reviews</i> , 2016 , 45, 5541-5588	58.5	231
113	Black phosphorus ink formulation for inkjet printing of optoelectronics and photonics. <i>Nature Communications</i> , 2017 , 8, 278	17.4	225
112	Ultrastiff and Strong Graphene Fibers via Full-Scale Synergetic Defect Engineering. <i>Advanced Materials</i> , 2016 , 28, 6449-56	24	217
111	Plasmonic Silicon Quantum Dots Enabled High-Sensitivity Ultrabroadband Photodetection of Graphene-Based Hybrid Phototransistors. <i>ACS Nano</i> , 2017 , 11, 9854-9862	16.7	209
110	Graphene Coupled with Silicon Quantum Dots for High-Performance Bulk-Silicon-Based Schottky-Junction Photodetectors. <i>Advanced Materials</i> , 2016 , 28, 4912-9	24	163
109	A self-powered high-performance graphene/silicon ultraviolet photodetector with ultra-shallow junction: breaking the limit of silicon?. <i>Npj 2D Materials and Applications</i> , 2017 , 1,	8.8	144
108	Fast response and high sensitivity ZnO/glass surface acoustic wave humidity sensors using graphene oxide sensing layer. <i>Scientific Reports</i> , 2014 , 4, 7206	4.9	115
107	Ab initio study of electronic and optical behavior of two-dimensional silicon carbide. <i>Journal of Materials Chemistry C</i> , 2013 , 1, 2131	7.1	111
106	Solar-Blind Photodetector with High Avalanche Gains and Bias-Tunable Detecting Functionality Based on Metastable Phase β -GaO/ZnO Isotype Heterostructures. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 36997-37005	9.5	106
105	Broadband optoelectronic synaptic devices based on silicon nanocrystals for neuromorphic computing. <i>Nano Energy</i> , 2018 , 52, 422-430	17.1	97
104	Flexible surface acoustic wave resonators built on disposable plastic film for electronics and lab-on-a-chip applications. <i>Scientific Reports</i> , 2013 , 3, 2140	4.9	94
103	Pushing the Performance Limit of Sub-100 nm Molybdenum Disulfide Transistors. <i>Nano Letters</i> , 2016 , 16, 6337-6342	11.5	91
102	Mechanical properties of nickel-graphene composites synthesized by electrochemical deposition. <i>Nanotechnology</i> , 2015 , 26, 065706	3.4	91
101	A high performance humidity sensor based on surface acoustic wave and graphene oxide on AlN/Si layered structure. <i>Sensors and Actuators B: Chemical</i> , 2018 , 255, 2454-2461	8.5	83
100	High sensitivity flexible Lamb-wave humidity sensors with a graphene oxide sensing layer. <i>Nanoscale</i> , 2015 , 7, 7430-6	7.7	80
99	Experimental demonstration of a free-space cylindrical cloak without superluminal propagation. <i>Physical Review Letters</i> , 2012 , 109, 223903	7.4	79

98	High-performance silicon-graphene hybrid plasmonic waveguide photodetectors beyond 1.55 μm . <i>Light: Science and Applications</i> , 2020 , 9, 29	16.7	77
97	A Broadband Fluorographene Photodetector. <i>Advanced Materials</i> , 2017 , 29, 1700463	24	72
96	In-plane and tunneling pressure sensors based on graphene/hexagonal boron nitride heterostructures. <i>Applied Physics Letters</i> , 2011 , 99, 133109	3.4	65
95	Facile Synthesis of In_2Se_3 Nanoflowers toward High Performance Self-Powered Broadband $\text{In}_2\text{Se}_3/\text{Si}$ Heterojunction Photodiode. <i>Small</i> , 2017 , 13, 1604033	11	56
94	Interface coupling in graphene/fluorographene heterostructure for high-performance graphene/silicon solar cells. <i>Nano Energy</i> , 2016 , 28, 12-18	17.1	55
93	Graphene Hybrid Structures for Integrated and Flexible Optoelectronics. <i>Advanced Materials</i> , 2020 , 32, e1902039	24	53
92	Trap Assisted Bulk Silicon Photodetector with High Photoconductive Gain, Low Noise, and Fast Response by Ag Hyperdoping. <i>Advanced Optical Materials</i> , 2018 , 6, 1700638	8.1	49
91	Monolayer graphene/hexagonal boron nitride heterostructure. <i>Carbon</i> , 2013 , 54, 396-402	10.4	49
90	High-Speed and High-Responsivity Hybrid Silicon/Black-Phosphorus Waveguide Photodetectors at $2\mu\text{m}$. <i>Laser and Photonics Reviews</i> , 2019 , 13, 1900032	8.3	48
89	High quality graphene films with a clean surface prepared by an UV/ozone assisted transfer process. <i>Journal of Materials Chemistry C</i> , 2017 , 5, 1880-1884	7.1	47
88	Solvent-Based Soft-Patterning of Graphene Lateral Heterostructures for Broadband High-Speed Metal/Semiconductor/Metal Photodetectors. <i>Advanced Materials Technologies</i> , 2017 , 2, 1600241	6.8	43
87	Low-chirp high-extinction-ratio modulator based on graphene-silicon waveguide. <i>Optics Letters</i> , 2013 , 38, 2512-5	3	43
86	Direct formation of wafer-scale single-layer graphene films on the rough surface substrate by PECVD. <i>Carbon</i> , 2018 , 129, 456-461	10.4	43
85	Local and nonlocal optically induced transparency effects in graphene-silicon hybrid nanophotonic integrated circuits. <i>ACS Nano</i> , 2014 , 8, 11386-93	16.7	42
84	Electromechanical robustness of monolayer graphene with extreme bending. <i>Applied Physics Letters</i> , 2010 , 97, 223102	3.4	42
83	Designing an Efficient Multimode Environmental Sensor Based on Graphene/Silicon Heterojunction. <i>Advanced Materials Technologies</i> , 2017 , 2, 1600262	6.8	38
82	Highly Narrow-Band Polarization-Sensitive Solar-Blind Photodetectors Based on AlGaO Single Crystals. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 7131-7137	9.5	38
81	Light-Driven WSe_2 -ZnO Junction Field-Effect Transistors for High-Performance Photodetection. <i>Advanced Science</i> , 2020 , 7, 1901637	13.6	36

80	Ab initio optical study of graphene on hexagonal boron nitride and fluorographene substrates. <i>Journal of Materials Chemistry C</i> , 2013 , 1, 1618	7.1	35
79	A high-quality round-shaped monolayer MoS ₂ domain and its transformation. <i>Nanoscale</i> , 2016 , 8, 219-257.	7.7	34
78	. <i>IEEE Transactions on Electron Devices</i> , 2019 , 66, 2276-2281	2.9	33
77	Unidirectional surface plasmons in nonreciprocal graphene. <i>New Journal of Physics</i> , 2013 , 15, 113003	2.9	33
76	Room-temperature valleytronic transistor. <i>Nature Nanotechnology</i> , 2020 , 15, 743-749	28.7	33
75	Tunable THz Multiband Frequency-Selective Surface Based on Hybrid Metal-Graphene Structures. <i>IEEE Nanotechnology Magazine</i> , 2017 , 16, 1132-1137	2.6	32
74	Facile synthesis of hybrid nanorods with the Sb ₂ Se ₃ /AgSbSe ₂ heterojunction structure for high performance photodetectors. <i>Nanoscale</i> , 2016 , 8, 2277-83	7.7	32
73	Physical models for coupled electromechanical analysis of silicon nanoelectromechanical systems. <i>Journal of Applied Physics</i> , 2005 , 97, 114304	2.5	31
72	Monolithic Full-Stokes Near-Infrared Polarimetry with Chiral Plasmonic Metasurface Integrated Graphene-Silicon Photodetector. <i>ACS Nano</i> , 2020 ,	16.7	30
71	Compact Shielding of Graphene Monolayer Leads to Extraordinary SERS-Active Substrate with Large-Area Uniformity and Long-Term Stability. <i>Scientific Reports</i> , 2015 , 5, 17167	4.9	29
70	Graphene interconnects fully encapsulated in layered insulator hexagonal boron nitride. <i>Nanotechnology</i> , 2013 , 24, 355202	3.4	28
69	Ultraviolet dielectric hyperlens with layered graphene and boron nitride. <i>Journal of Materials Chemistry</i> , 2012 , 22, 15863		28
68	2D Heterostructures for Ubiquitous Electronics and Optoelectronics: Principles, Opportunities, and Challenges.. <i>Chemical Reviews</i> , 2022 ,	68.1	28
67	Improved Slow Light Capacity In Graphene-based Waveguide. <i>Scientific Reports</i> , 2015 , 5, 15335	4.9	27
66	Defect symmetry influence on electronic transport of zigzag nanoribbons. <i>Nanoscale Research Letters</i> , 2011 , 6, 254	5	27
65	Band Alignment and Interface Recombination in NiO/EgGa ₂ O ₃ Type-II p-n Heterojunctions. <i>IEEE Transactions on Electron Devices</i> , 2020 , 67, 3341-3347	2.9	24
64	Joint licensed and unlicensed spectrum allocation for unlicensed LTE 2015 ,		24
63	Exploring carrier transport phenomena in a CVD-assembled graphene FET on hexagonal boron nitride. <i>Nanotechnology</i> , 2012 , 23, 125706	3.4	24

62	Nanoplasmonically Enhanced High-Performance Metastable Phase β -GaO Solar-Blind Photodetectors. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 40283-40289	9.5	21
61	Electronic structures of multilayer two-dimensional silicon carbide with oriented misalignment. <i>Journal of Materials Chemistry C</i> , 2015 , 3, 9057-9062	7.1	20
60	Flexible Dielectric Nanocomposites with Ultrawide Zero-Temperature Coefficient Windows for Electrical Energy Storage and Conversion under Extreme Conditions. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 7591-7600	9.5	19
59	Plasmon Excited Ultrahot Carriers and Negative Differential Photoresponse in a Vertical Graphene van der Waals Heterostructure. <i>Nano Letters</i> , 2019 , 19, 3295-3304	11.5	19
58	1.37 kV/12 A NiO/ β -Ga ₂ O ₃ Heterojunction Diode With Nanosecond Reverse Recovery and Rugged Surge-Current Capability. <i>IEEE Transactions on Power Electronics</i> , 2021 , 36, 12213-12217	7.2	19
57	Ambipolar Barristors for Reconfigurable Logic Circuits. <i>Nano Letters</i> , 2017 , 17, 1448-1454	11.5	18
56	Bendable ZnO thin film surface acoustic wave devices on polyethylene terephthalate substrate. <i>Applied Physics Letters</i> , 2014 , 104, 213504	3.4	18
55	Interference coordination strategy based on Nash bargaining for small-cell networks. <i>IET Communications</i> , 2015 , 9, 1583-1590	1.3	17
54	Synthesis of few-to-monolayer graphene on rutile titanium dioxide. <i>Carbon</i> , 2013 , 55, 168-175	10.4	17
53	Ab initio study of energy-band modulation in graphene-based two-dimensional layered superlattices. <i>Journal of Materials Chemistry</i> , 2012 , 22, 23821		17
52	Single-electron transport in graphene-like nanostructures. <i>Physics Reports</i> , 2017 , 669, 1-42	27.7	16
51	Illumination-Induced Hole Doping for Performance Improvement of Graphene/n-Silicon Solar Cells with P3HT Interlayer. <i>Advanced Electronic Materials</i> , 2017 , 3, 1600516	6.4	15
50	Identifying the stacking order of multilayer graphene grown by chemical vapor deposition via Raman spectroscopy. <i>Journal of Raman Spectroscopy</i> , 2018 , 49, 46-53	2.3	15
49	High-performance, flexible graphene/ultra-thin silicon ultra-violet image sensor 2017 ,		15
48	Development of flexible ZnO thin film surface acoustic wave strain sensors on ultrathin glass substrates. <i>Journal of Micromechanics and Microengineering</i> , 2015 , 25, 115005	2	15
47	Approaching the Collection Limit in Hot Electron Transistors with Ambipolar Hot Carrier Transport. <i>ACS Nano</i> , 2019 , 13, 14191-14197	16.7	15
46	All-Two-Dimensional-Material Hot Electron Transistor. <i>IEEE Electron Device Letters</i> , 2018 , 39, 634-637	4.4	14
45	A high performance broadband photodetector based on (Sn _x Sb _{1-x}) ₂ Se ₃ nanorods with enhanced electrical conductivity. <i>Journal of Materials Chemistry C</i> , 2018 , 6, 11078-11085	7.1	13

44	1.95-kV Beveled-Mesa NiO/EGa ₂ O ₃ Heterojunction Diode With 98.5% Conversion Efficiency and Over Million-Times Overvoltage Ruggedness. <i>IEEE Transactions on Power Electronics</i> , 2021 , 1-1	7.2	13
43	3-D graphene aerogel sphere-based flexible sensors for healthcare applications. <i>Sensors and Actuators A: Physical</i> , 2020 , 312, 112144	3.9	12
42	Multiscale electrostatic analysis of silicon nanoelectromechanical systems (NEMS) via heterogeneous quantum models. <i>Physical Review B</i> , 2008 , 77,	3.3	12
41	Carbon nanotube screening effects on the water-ion channels. <i>Applied Physics Letters</i> , 2008 , 93, 43122	3.4	12
40	A non-contact graphene surface scattering rate characterization method at microwave frequency by combining Raman spectroscopy and coaxial connectors measurement. <i>Carbon</i> , 2014 , 77, 53-58	10.4	10
39	Extreme absorption enhancement in ZnTe:O/ZnO intermediate band core-shell nanowires by interplay of dielectric resonance and plasmonic bowtie nanoantennas. <i>Scientific Reports</i> , 2017 , 7, 7503	4.9	10
38	Layered insulator hexagonal boron nitride for surface passivation in quantum dot solar cell. <i>Applied Physics Letters</i> , 2013 , 103, 243904	3.4	10
37	Hybrid Structure of Silicon Nanocrystals and 2D WSe ₂ for Broadband Optoelectronic Synaptic Devices 2018 ,		10
36	Bidirectional mid-infrared communications between two identical macroscopic graphene fibres. <i>Nature Communications</i> , 2020 , 11, 6368	17.4	9
35	Logic Inverter Implemented with CVD-Assembled Graphene FET on Hexagonal Boron Nitride. <i>IEEE Nanotechnology Magazine</i> , 2012 , 11, 619-623	2.6	9
34	Electronic transport in monolayer graphene with extreme physical deformation: ab initio density functional calculation. <i>Nanotechnology</i> , 2011 , 22, 365202	3.4	8
33	On-Chip Measurement of Photoluminescence with High Sensitivity Monolithic Spectrometer. <i>Advanced Optical Materials</i> , 2020 , 8, 2000191	8.1	7
32	Flexible and Transparent Surface Acoustic Wave Microsensors and Microfluidics. <i>Procedia Engineering</i> , 2015 , 120, 717-720		7
31	Adaptive biasing scheme for load balancing in backhaul constrained small cell networks. <i>IET Communications</i> , 2015 , 9, 999-1005	1.3	7
30	Carbon-based interconnect: Performance, scaling and reliability of 3D stacked multilayer graphene system 2011 ,		7
29	Micron-Scale Photodetectors Based on One-Dimensional Single-Crystalline Sb ₂ S ₃ /SnxSe ₃ Microrods: Simultaneously Improving Responsivity and Extending Spectral Response Region. <i>Journal of Physical Chemistry C</i> , 2019 , 123, 810-816	3.8	7
28	Anion Engineering Enhanced Response Speed and Tunable Spectral Responsivity in Gallium-Oxynitrides-Based Ultraviolet Photodetectors. <i>ACS Applied Electronic Materials</i> , 2020 , 2, 808-816		6
27	A novel fabrication method of silicon nano-needles using MEMS TMAH etching techniques. <i>Nanotechnology</i> , 2011 , 22, 125301	3.4	6

26	Detection of defective DNA in carbon nanotubes by combined molecular dynamics/tight-binding technique. <i>Applied Physics Letters</i> , 2009 , 95, 113116	3.4	6
25	Pull-in/out analysis of nano/micromechanical switches with defective oxide layers. <i>Applied Physics Letters</i> , 2009 , 95, 073112	3.4	6
24	Combined semiclassical and effective-mass Schrödinger approach for multiscale analysis of semiconductor nanostructures. <i>Physical Review B</i> , 2007 , 76,	3.3	6
23	Synthesis, characterization and UV photodetector application of Sb-doped ZnO nanowires. <i>Journal of Luminescence</i> , 2020 , 221, 117025	3.8	6
22	Light-induced negative differential resistance in gate-controlled graphene-silicon photodiode. <i>Applied Physics Letters</i> , 2018 , 112, 201109	3.4	6
21	Silicon-graphene photonic devices. <i>Journal of Semiconductors</i> , 2018 , 39, 061009	2.3	5
20	Reconfigurable Parallel Plasmonic Transmission Lines With Nanometer Light Localization and Long Propagation Distance. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2013 , 19, 4601809-4601809	3.8	5
19	Graphene/silicon-quantum-dots/Si Schottky-PN cascade heterojunction for short-wavelength infrared photodetection 2017 ,		5
18	Fluorinated graphene and hexagonal boron nitride as ALD seed layers for graphene-based van der Waals heterostructures. <i>Nanotechnology</i> , 2014 , 25, 355202	3.4	5
17	Electronic transport anisotropy of buckling graphene under uniaxial compressive strain: Ab initio study. <i>Applied Physics Letters</i> , 2012 , 100, 052111	3.4	5
16	Ab initio electronic transport study of two-dimensional silicon carbide-based p-n junctions. <i>Journal of Semiconductors</i> , 2017 , 38, 033002	2.3	4
15	Visible-NIR Photodetectors Based on Low-Dimensional GeSe Micro-Crystals: Designed Morphology and Improved Photoresponsivity. <i>ChemPhysChem</i> , 2020 , 21, 397-405	3.2	4
14	Tailoring atomic structure to control the electronic transport in zigzag graphene nanoribbon. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2012 , 376, 3277-3280	2.3	3
13	Quantum-squeezing effects of strained multilayer graphene NEMS. <i>Nanoscale Research Letters</i> , 2011 , 6, 355	5	3
12	The Blossoming of 2D Materials. <i>Wuli Huaxue Xuebao/Acta Physico - Chimica Sinica</i> , 2019 , 35, 1039-1040	3.8	3
11	Photodetectors: Solvent-Based Soft-Patterning of Graphene Lateral Heterostructures for Broadband High-Speed Metal-Semiconductor-Metal Photodetectors (Adv. Mater. Technol. 2/2017). <i>Advanced Materials Technologies</i> , 2017 , 2,	6.8	2
10	2015 ,		2
9	A design of SPDT switch using graphene device 2015 ,		2

8	2018,		2
7	Quantum and thermo-mechanical noise squeezing in nanoresonators: A comparative study. <i>Applied Physics Letters</i> , 2012 , 100, 023105	3.4	1
6	Vertical Field-Plated NiO/Ga ₂ O ₃ Heterojunction Power Diodes 2021,		1
5	High-performance silicon photonic filters based on all-passive 10th-order adiabatic elliptical microrings. <i>APL Photonics</i> ,	5.2	0
4	Sharp Silicon Nano-Needles Based on Boron Etch-Stop in TMAH Solutions. <i>Materials Research Society Symposia Proceedings</i> , 2011 , 1301, 225		
3	CVD-Graphene Complementary Logic on Ultra-thin Multilayer Hexagonal Boron Nitride. <i>Materials Research Society Symposia Proceedings</i> , 2012 , 1407, 151		
2	Twist angle dependent absorption feature induced by interlayer rotations in CVD bilayer graphene. <i>Nanophotonics</i> , 2021 , 10, 2695-2703	6.3	
1	Graphene photonic crystal fiber with large modulation depth. <i>Science China Chemistry</i> , 2020 , 63, 5-6	7.9	