Yang Xu

List of Publications by Year in Descending Order

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	2D Heterostructures for Ubiquitous Electronics and Optoelectronics: Principles, Opportunities, and Challenges.. *Chemical Reviews*, **2022**,	68.1	28
114	Vertical Field-Plated NiO/Ga2O3 Heterojunction Power Diodes **2021**,		1
113	Twist angle dependent absorption feature induced by interlayer rotations in CVD bilayer graphene. *Nanophotonics*, **2021**, 10, 2695-2703	6.3	
112	1.37 kV/12 A NiO/Ga2O3 Heterojunction Diode With Nanosecond Reverse Recovery and Rugged Surge-Current Capability. *IEEE Transactions on Power Electronics*, **2021**, 36, 12213-12217	7.2	19
111	1.95-kV Beveled-Mesa NiO/Ga2O3 Heterojunction Diode With 98.5% Conversion Efficiency and Over Million-Times Overvoltage Ruggedness. *IEEE Transactions on Power Electronics*, **2021**, 1-1	7.2	13
110	Bidirectional mid-infrared communications between two identical macroscopic graphene fibres. *Nature Communications*, **2020**, 11, 6368	17.4	9
109	3-D graphene aerogel sphere-based flexible sensors for healthcare applications. *Sensors and Actuators A: Physical*, **2020**, 312, 112144	3.9	12
108	Band Alignment and Interface Recombination in NiO/Ga2O3 Type-II p-n Heterojunctions. *IEEE Transactions on Electron Devices*, **2020**, 67, 3341-3347	2.9	24
107	Anion Engineering Enhanced Response Speed and Tunable Spectral Responsivity in Gallium-Oxynitrides-Based Ultraviolet Photodetectors. *ACS Applied Electronic Materials*, **2020**, 2, 808-816	4	6
106	High-performance silicon-graphene hybrid plasmonic waveguide photodetectors beyond 1.55 μm. *Light: Science and Applications*, **2020**, 9, 29	16.7	77
105	Visible-NIR Photodetectors Based on Low-Dimensional GeSe Micro-Crystals: Designed Morphology and Improved Photoresponsivity. *ChemPhysChem*, **2020**, 21, 397-405	3.2	4
104	On-Chip Measurement of Photoluminescence with High Sensitivity Monolithic Spectrometer. *Advanced Optical Materials*, **2020**, 8, 2000191	8.1	7
103	Graphene Hybrid Structures for Integrated and Flexible Optoelectronics. *Advanced Materials*, **2020**, 32, e1902039	24	53
102	Light-Driven WSe-ZnO Junction Field-Effect Transistors for High-Performance Photodetection. *Advanced Science*, **2020**, 7, 1901637	13.6	36
101	Synthesis, characterization and UV photodetector application of Sb-doped ZnO nanowires. *Journal of Luminescence*, **2020**, 221, 117025	3.8	6
100	Room-temperature valleytronic transistor. *Nature Nanotechnology*, **2020**, 15, 743-749	28.7	33
99	Monolithic Full-Stokes Near-Infrared Polarimetry with Chiral Plasmonic Metasurface Integrated Graphene-Silicon Photodetector. *ACS Nano*, **2020**,	16.7	30

98	Graphene photonic crystal fiber with large modulation depth. *Science China Chemistry*, **2020**, 63, 5-6	7.9	
97	Nanoplasmonically Enhanced High-Performance Metastable Phase □GaO Solar-Blind Photodetectors. *ACS Applied Materials & Interfaces*, **2019**, 11, 40283-40289	9.5	21
96	Highly Narrow-Band Polarization-Sensitive Solar-Blind Photodetectors Based on □GaO Single Crystals. *ACS Applied Materials & Interfaces*, **2019**, 11, 7131-7137	9.5	38
95	High-Speed and High-Responsivity Hybrid Silicon/Black-Phosphorus Waveguide Photodetectors at 2□m. *Laser and Photonics Reviews*, **2019**, 13, 1900032	8.3	48
94	. *IEEE Transactions on Electron Devices*, **2019**, 66, 2276-2281	2.9	33
93	Plasmon Excited Ultrahot Carriers and Negative Differential Photoresponse in a Vertical Graphene van der Waals Heterostructure. *Nano Letters*, **2019**, 19, 3295-3304	11.5	19
92	The Blossoming of 2D Materials. *Wuli Huaxue Xuebao/ Acta Physico - Chimica Sinica*, **2019**, 35, 1039-1040	3.8	3
91	Approaching the Collection Limit in Hot Electron Transistors with Ambipolar Hot Carrier Transport. *ACS Nano*, **2019**, 13, 14191-14197	16.7	15
90	Micron-Scale Photodetectors Based on One-Dimensional Single-Crystalline Sb2□SnxSe3 Microrods: Simultaneously Improving Responsivity and Extending Spectral Response Region. *Journal of Physical Chemistry C*, **2019**, 123, 810-816	3.8	7
89	All-Two-Dimensional-Material Hot Electron Transistor. *IEEE Electron Device Letters*, **2018**, 39, 634-637	4.4	14
88	Trap Assisted Bulk Silicon Photodetector with High Photoconductive Gain, Low Noise, and Fast Response by Ag Hyperdoping. *Advanced Optical Materials*, **2018**, 6, 1700638	8.1	49
87	Identifying the stacking order of multilayer graphene grown by chemical vapor deposition via Raman spectroscopy. *Journal of Raman Spectroscopy*, **2018**, 49, 46-53	2.3	15
86	A high performance humidity sensor based on surface acoustic wave and graphene oxide on AlN/Si layered structure. *Sensors and Actuators B: Chemical*, **2018**, 255, 2454-2461	8.5	83
85	Broadband optoelectronic synaptic devices based on silicon nanocrystals for neuromorphic computing. *Nano Energy*, **2018**, 52, 422-430	17.1	97
84	Silicon-graphene photonic devices. *Journal of Semiconductors*, **2018**, 39, 061009	2.3	5
83	Direct formation of wafer-scale single-layer graphene films on the rough surface substrate by PECVD. *Carbon*, **2018**, 129, 456-461	10.4	43
82	Hybrid Structure of Silicon Nanocrystals and 2D WSe2 for Broadband Optoelectronic Synaptic Devices **2018**,		10
81	**2018**,		2

80	A high performance broadband photodetector based on (SnxSb1−x)2Se3 nanorods with enhanced electrical conductivity. *Journal of Materials Chemistry C*, **2018**, 6, 11078-11085	7.1	13
79	Light-induced negative differential resistance in gate-controlled graphene-silicon photodiode. *Applied Physics Letters*, **2018**, 112, 201109	3.4	6
78	Designing an Efficient Multimode Environmental Sensor Based on Graphene–Silicon Heterojunction. *Advanced Materials Technologies*, **2017**, 2, 1600262	6.8	38
77	Flexible Dielectric Nanocomposites with Ultrawide Zero-Temperature Coefficient Windows for Electrical Energy Storage and Conversion under Extreme Conditions. *ACS Applied Materials & Interfaces*, **2017**, 9, 7591-7600	9.5	19
76	High quality graphene films with a clean surface prepared by an UV/ozone assisted transfer process. *Journal of Materials Chemistry C*, **2017**, 5, 1880-1884	7.1	47
75	Illumination-Induced Hole Doping for Performance Improvement of Graphene/n-Silicon Solar Cells with P3HT Interlayer. *Advanced Electronic Materials*, **2017**, 3, 1600516	6.4	15
74	Ambipolar Barristors for Reconfigurable Logic Circuits. *Nano Letters*, **2017**, 17, 1448-1454	11.5	18
73	Facile Synthesis of In Se Nanoflowers toward High Performance Self-Powered Broadband In Se /Si Heterojunction Photodiode. *Small*, **2017**, 13, 1604033	11	56
72	Photodetectors: Solvent-Based Soft-Patterning of Graphene Lateral Heterostructures for Broadband High-Speed Metal–Semiconductor–Metal Photodetectors (Adv. Mater. Technol. 2/2017). *Advanced Materials Technologies*, **2017**, 2,	6.8	2
71	A self-powered high-performance graphene/silicon ultraviolet photodetector with ultra-shallow junction: breaking the limit of silicon?. *Npj 2D Materials and Applications*, **2017**, 1,	8.8	144
70	A Broadband Fluorographene Photodetector. *Advanced Materials*, **2017**, 29, 1700463	24	72
69	Ab initioelectronic transport study of two-dimensional silicon carbide-based p junctions. *Journal of Semiconductors*, **2017**, 38, 033002	2.3	4
68	Single-electron transport in graphene-like nanostructures. *Physics Reports*, **2017**, 669, 1-42	27.7	16
67	Solvent-Based Soft-Patterning of Graphene Lateral Heterostructures for Broadband High-Speed Metal–Semiconductor–Metal Photodetectors. *Advanced Materials Technologies*, **2017**, 2, 1600241	6.8	43
66	Solar-Blind Photodetector with High Avalanche Gains and Bias-Tunable Detecting Functionality Based on Metastable Phase GaO/ZnO Isotype Heterostructures. *ACS Applied Materials & Interfaces*, **2017**, 9, 36997-37005	9.5	106
65	Tunable THz Multiband Frequency-Selective Surface Based on Hybrid Metal–Graphene Structures. *IEEE Nanotechnology Magazine*, **2017**, 16, 1132-1137	2.6	32
64	Plasmonic Silicon Quantum Dots Enabled High-Sensitivity Ultrabroadband Photodetection of Graphene-Based Hybrid Phototransistors. *ACS Nano*, **2017**, 11, 9854-9862	16.7	209
63	Extreme absorption enhancement in ZnTe:O/ZnO intermediate band core-shell nanowires by interplay of dielectric resonance and plasmonic bowtie nanoantennas. *Scientific Reports*, **2017**, 7, 7503	4.9	10

62	Black phosphorus ink formulation for inkjet printing of optoelectronics and photonics. *Nature Communications*, **2017**, 8, 278	17.4	225
61	High-performance, flexible graphene/ultra-thin silicon ultra-violet image sensor **2017**,		15
60	Graphene/silicon-quantum-dots/Si Schottky-PN cascade heterojunction for short-wavelength infrared photodetection **2017**,		5
59	Pushing the Performance Limit of Sub-100 nm Molybdenum Disulfide Transistors. *Nano Letters*, **2016**, 16, 6337-6342	11.5	91
58	Interface coupling in graphene/fluorographene heterostructure for high-performance graphene/silicon solar cells. *Nano Energy*, **2016**, 28, 12-18	17.1	55
57	Three-dimensional macro-structures of two-dimensional nanomaterials. *Chemical Society Reviews*, **2016**, 45, 5541-5588	58.5	231
56	Graphene Coupled with Silicon Quantum Dots for High-Performance Bulk-Silicon-Based Schottky-Junction Photodetectors. *Advanced Materials*, **2016**, 28, 4912-9	24	163
55	Facile synthesis of hybrid nanorods with the Sb2Se3/AgSbSe2 heterojunction structure for high performance photodetectors. *Nanoscale*, **2016**, 8, 2277-83	7.7	32
54	A high-quality round-shaped monolayer MoS2 domain and its transformation. *Nanoscale*, **2016**, 8, 219-25	7.7	34
53	Ultrastiff and Strong Graphene Fibers via Full-Scale Synergetic Defect Engineering. *Advanced Materials*, **2016**, 28, 6449-56	24	217
52	Contacts between Two- and Three-Dimensional Materials: Ohmic, Schottky, and p-n Heterojunctions. *ACS Nano*, **2016**, 10, 4895-919	16.7	257
51	High sensitivity flexible Lamb-wave humidity sensors with a graphene oxide sensing layer. *Nanoscale*, **2015**, 7, 7430-6	7.7	80
50	Electronic structures of multilayer two-dimensional silicon carbide with oriented misalignment. *Journal of Materials Chemistry C*, **2015**, 3, 9057-9062	7.1	20
49	Interference coordination strategy based on Nash bargaining for small-cell networks. *IET Communications*, **2015**, 9, 1583-1590	1.3	17
48	**2015**,		2
47	Joint licensed and unlicensed spectrum allocation for unlicensed LTE **2015**,		24
46	Flexible and Transparent Surface Acoustic Wave Microsensors and Microfluidics. *Procedia Engineering*, **2015**, 120, 717-720		7
45	Improved Slow Light Capacity In Graphene-based Waveguide. *Scientific Reports*, **2015**, 5, 15335	4.9	27

44	Compact Shielding of Graphene Monolayer Leads to Extraordinary SERS-Active Substrate with Large-Area Uniformity and Long-Term Stability. *Scientific Reports*, **2015**, 5, 17167	4.9	29
43	Development of flexible ZnO thin film surface acoustic wave strain sensors on ultrathin glass substrates. *Journal of Micromechanics and Microengineering*, **2015**, 25, 115005	2	15
42	Adaptive biasing scheme for load balancing in backhaul constrained small cell networks. *IET Communications*, **2015**, 9, 999-1005	1.3	7
41	A design of SPDT switch using graphene device **2015**,		2
40	Mechanical properties of nickel-graphene composites synthesized by electrochemical deposition. *Nanotechnology*, **2015**, 26, 065706	3.4	91
39	Fast response and high sensitivity ZnO/glass surface acoustic wave humidity sensors using graphene oxide sensing layer. *Scientific Reports*, **2014**, 4, 7206	4.9	115
38	A non-contact graphene surface scattering rate characterization method at microwave frequency by combining Raman spectroscopy and coaxial connectors measurement. *Carbon*, **2014**, 77, 53-58	10.4	10
37	Fluorinated graphene and hexagonal boron nitride as ALD seed layers for graphene-based van der Waals heterostructures. *Nanotechnology*, **2014**, 25, 355202	3.4	5
36	Bendable ZnO thin film surface acoustic wave devices on polyethylene terephthalate substrate. *Applied Physics Letters*, **2014**, 104, 213504	3.4	18
35	Local and nonlocal optically induced transparency effects in graphene-silicon hybrid nanophotonic integrated circuits. *ACS Nano*, **2014**, 8, 11386-93	16.7	42
34	Graphene interconnects fully encapsulated in layered insulator hexagonal boron nitride. *Nanotechnology*, **2013**, 24, 355202	3.4	28
33	Ab initio study of electronic and optical behavior of two-dimensional silicon carbide. *Journal of Materials Chemistry C*, **2013**, 1, 2131	7.1	111
32	Synthesis of few-to-monolayer graphene on rutile titanium dioxide. *Carbon*, **2013**, 55, 168-175	10.4	17
31	Reconfigurable Parallel Plasmonic Transmission Lines With Nanometer Light Localization and Long Propagation Distance. *IEEE Journal of Selected Topics in Quantum Electronics*, **2013**, 19, 4601809-4601809	3.8	5
30	Ab initio optical study of graphene on hexagonal boron nitride and fluorographene substrates. *Journal of Materials Chemistry C*, **2013**, 1, 1618	7.1	35
29	Monolayer graphene/hexagonal boron nitride heterostructure. *Carbon*, **2013**, 54, 396-402	10.4	49
28	Low-chirp high-extinction-ratio modulator based on graphene-silicon waveguide. *Optics Letters*, **2013**, 38, 2512-5	3	43
27	Unidirectional surface plasmons in nonreciprocal graphene. *New Journal of Physics*, **2013**, 15, 113003	2.9	33

26	Layered insulator hexagonal boron nitride for surface passivation in quantum dot solar cell. *Applied Physics Letters*, **2013**, 103, 243904	3.4	10
25	Flexible surface acoustic wave resonators built on disposable plastic film for electronics and lab-on-a-chip applications. *Scientific Reports*, **2013**, 3, 2140	4.9	94
24	Experimental demonstration of a free-space cylindrical cloak without superluminal propagation. *Physical Review Letters*, **2012**, 109, 223903	7.4	79
23	Tailoring atomic structure to control the electronic transport in zigzag graphene nanoribbon. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **2012**, 376, 3277-3280	2.3	3
22	Ab initio study of energy-band modulation in graphene-based two-dimensional layered superlattices. *Journal of Materials Chemistry*, **2012**, 22, 23821		17
21	Logic Inverter Implemented with CVD-Assembled Graphene FET on Hexagonal Boron Nitride. *IEEE Nanotechnology Magazine*, **2012**, 11, 619-623	2.6	9
20	Ultraviolet dielectric hyperlens with layered graphene and boron nitride. *Journal of Materials Chemistry*, **2012**, 22, 15863		28
19	Quantum and thermo-mechanical noise squeezing in nanoresonators: A comparative study. *Applied Physics Letters*, **2012**, 100, 023105	3.4	1
18	Exploring carrier transport phenomena in a CVD-assembled graphene FET on hexagonal boron nitride. *Nanotechnology*, **2012**, 23, 125706	3.4	24
17	CVD-Graphene Complementary Logic on Ultra-thin Multilayer Hexagonal Boron Nitride. *Materials Research Society Symposia Proceedings*, **2012**, 1407, 151		
16	Electronic transport anisotropy of buckling graphene under uniaxial compressive strain: Ab initio study. *Applied Physics Letters*, **2012**, 100, 052111	3.4	5
15	A novel fabrication method of silicon nano-needles using MEMS TMAH etching techniques. *Nanotechnology*, **2011**, 22, 125301	3.4	6
14	In-plane and tunneling pressure sensors based on graphene/hexagonal boron nitride heterostructures. *Applied Physics Letters*, **2011**, 99, 133109	3.4	65
13	Sharp Silicon Nano-Needles Based on Boron Etch-Stop in TMAH Solutions. *Materials Research Society Symposia Proceedings*, **2011**, 1301, 225		
12	Quantum-squeezing effects of strained multilayer graphene NEMS. *Nanoscale Research Letters*, **2011**, 6, 355	5	3
11	Electronic transport in monolayer graphene with extreme physical deformation: ab initio density functional calculation. *Nanotechnology*, **2011**, 22, 365202	3.4	8
10	Defect symmetry influence on electronic transport of zigzag nanoribbons. *Nanoscale Research Letters*, **2011**, 6, 254	5	27
9	Carbon-based interconnect: Performance, scaling and reliability of 3D stacked multilayer graphene system **2011**,		7

8	Electromechanical robustness of monolayer graphene with extreme bending. *Applied Physics Letters*, **2010**, 97, 223102	3.4	42
7	Detection of defective DNA in carbon nanotubes by combined molecular dynamics/tight-binding technique. *Applied Physics Letters*, **2009**, 95, 113116	3.4	6
6	Pull-in/out analysis of nano/microelectromechanical switches with defective oxide layers. *Applied Physics Letters*, **2009**, 95, 073112	3.4	6
5	Multiscale electrostatic analysis of silicon nanoelectromechanical systems (NEMS) via heterogeneous quantum models. *Physical Review B*, **2008**, 77,	3.3	12
4	Carbon nanotube screening effects on the water-ion channels. *Applied Physics Letters*, **2008**, 93, 43122	3.4	12
3	Combined semiclassical and effective-mass Schr□dinger approach for multiscale analysis of semiconductor nanostructures. *Physical Review B*, **2007**, 76,	3.3	6
2	Physical models for coupled electromechanical analysis of silicon nanoelectromechanical systems. *Journal of Applied Physics*, **2005**, 97, 114304	2.5	31
1	High-performance silicon photonic filters based on all-passive 10th-order adiabatic elliptical microrings. *APL Photonics*,	5.2	0