

# Yang Xu

## List of Publications by Citations

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115  
papers

4,761  
citations

38  
h-index

66  
g-index

135  
ext. papers

5,876  
ext. citations

10.3  
avg, IF

5.88  
L-index

#	Paper	IF	Citations
115	Contacts between Two- and Three-Dimensional Materials: Ohmic, Schottky, and p-n Heterojunctions. <i>ACS Nano</i> , <b>2016</b> , 10, 4895-919	16.7	257
114	Three-dimensional macro-structures of two-dimensional nanomaterials. <i>Chemical Society Reviews</i> , <b>2016</b> , 45, 5541-5588	58.5	231
113	Black phosphorus ink formulation for inkjet printing of optoelectronics and photonics. <i>Nature Communications</i> , <b>2017</b> , 8, 278	17.4	225
112	Ultrastiff and Strong Graphene Fibers via Full-Scale Synergetic Defect Engineering. <i>Advanced Materials</i> , <b>2016</b> , 28, 6449-56	24	217
111	Plasmonic Silicon Quantum Dots Enabled High-Sensitivity Ultrabroadband Photodetection of Graphene-Based Hybrid Phototransistors. <i>ACS Nano</i> , <b>2017</b> , 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> , <b>2016</b> , 28, 4912-9	24	163
109	Catalyst-Free Thermoset Polyurethane with Permanent Shape Reconfigurability and Highly Tunable Triple-Shape Memory Performance. <i>ACS Macro Letters</i> , <b>2017</b> , 6, 326-330	6.6	154
108	Dynamic Covalent Polymer Networks: A Molecular Platform for Designing Functions beyond Chemical Recycling and Self-Healing. <i>Chemical Reviews</i> , <b>2021</b> , 121, 1716-1745	68.1	152
107	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> , <b>2017</b> , 1,	8.8	144
106	Fast response and high sensitivity ZnO/glass surface acoustic wave humidity sensors using graphene oxide sensing layer. <i>Scientific Reports</i> , <b>2014</b> , 4, 7206	4.9	115
105	Ab initio study of electronic and optical behavior of two-dimensional silicon carbide. <i>Journal of Materials Chemistry C</i> , <b>2013</b> , 1, 2131	7.1	111
104	Solar-Blind Photodetector with High Avalanche Gains and Bias-Tunable Detecting Functionality Based on Metastable Phase $\beta$ -GaO/ZnO Isotype Heterostructures. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 36997-37005	9.5	106
103	Broadband optoelectronic synaptic devices based on silicon nanocrystals for neuromorphic computing. <i>Nano Energy</i> , <b>2018</b> , 52, 422-430	17.1	97
102	Flexible surface acoustic wave resonators built on disposable plastic film for electronics and lab-on-a-chip applications. <i>Scientific Reports</i> , <b>2013</b> , 3, 2140	4.9	94
101	Titania nanowires functionalized polyester fabrics with enhanced photocatalytic and antibacterial performances. <i>Journal of Hazardous Materials</i> , <b>2018</b> , 343, 285-297	12.8	92
100	Pushing the Performance Limit of Sub-100 nm Molybdenum Disulfide Transistors. <i>Nano Letters</i> , <b>2016</b> , 16, 6337-6342	11.5	91
99	Mechanical properties of nickel-graphene composites synthesized by electrochemical deposition. <i>Nanotechnology</i> , <b>2015</b> , 26, 065706	3.4	91

98	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> , <b>2018</b> , 255, 2454-2461	8.5	83
97	High sensitivity flexible Lamb-wave humidity sensors with a graphene oxide sensing layer. <i>Nanoscale</i> , <b>2015</b> , 7, 7430-6	7.7	80
96	Experimental demonstration of a free-space cylindrical cloak without superluminal propagation. <i>Physical Review Letters</i> , <b>2012</b> , 109, 223903	7.4	79
95	High-performance silicon-graphene hybrid plasmonic waveguide photodetectors beyond 1.55 $\mu\text{m}$ . <i>Light: Science and Applications</i> , <b>2020</b> , 9, 29	16.7	77
94	Multifunctional wearable smart device based on conductive reduced graphene oxide/polyester fabric. <i>Applied Surface Science</i> , <b>2018</b> , 454, 218-226	6.7	76
93	A Broadband Fluorographene Photodetector. <i>Advanced Materials</i> , <b>2017</b> , 29, 1700463	24	72
92	In-plane and tunneling pressure sensors based on graphene/hexagonal boron nitride heterostructures. <i>Applied Physics Letters</i> , <b>2011</b> , 99, 133109	3.4	65
91	Facile Synthesis of In Se Nanoflowers toward High Performance Self-Powered Broadband In Se /Si Heterojunction Photodiode. <i>Small</i> , <b>2017</b> , 13, 1604033	11	56
90	Interface coupling in graphene/fluorographene heterostructure for high-performance graphene/silicon solar cells. <i>Nano Energy</i> , <b>2016</b> , 28, 12-18	17.1	55
89	Graphene Hybrid Structures for Integrated and Flexible Optoelectronics. <i>Advanced Materials</i> , <b>2020</b> , 32, e1902039	24	53
88	Trap Assisted Bulk Silicon Photodetector with High Photoconductive Gain, Low Noise, and Fast Response by Ag Hyperdoping. <i>Advanced Optical Materials</i> , <b>2018</b> , 6, 1700638	8.1	49
87	Monolayer graphene/hexagonal boron nitride heterostructure. <i>Carbon</i> , <b>2013</b> , 54, 396-402	10.4	49
86	High-Speed and High-Responsivity Hybrid Silicon/Black-Phosphorus Waveguide Photodetectors at 2 $\mu\text{m}$ . <i>Laser and Photonics Reviews</i> , <b>2019</b> , 13, 1900032	8.3	48
85	High quality graphene films with a clean surface prepared by an UV/ozone assisted transfer process. <i>Journal of Materials Chemistry C</i> , <b>2017</b> , 5, 1880-1884	7.1	47
84	Solvent-Based Soft-Patterning of Graphene Lateral Heterostructures for Broadband High-Speed Metal-Semiconductor-Metal Photodetectors. <i>Advanced Materials Technologies</i> , <b>2017</b> , 2, 1600241	6.8	43
83	Low-chirp high-extinction-ratio modulator based on graphene-silicon waveguide. <i>Optics Letters</i> , <b>2013</b> , 38, 2512-5	3	43
82	Direct formation of wafer-scale single-layer graphene films on the rough surface substrate by PECVD. <i>Carbon</i> , <b>2018</b> , 129, 456-461	10.4	43
81	Local and nonlocal optically induced transparency effects in graphene-silicon hybrid nanophotonic integrated circuits. <i>ACS Nano</i> , <b>2014</b> , 8, 11386-93	16.7	42

80	Electromechanical robustness of monolayer graphene with extreme bending. <i>Applied Physics Letters</i> , <b>2010</b> , 97, 223102	3.4	42
79	Designing an Efficient Multimode Environmental Sensor Based on Graphene/Silicon Heterojunction. <i>Advanced Materials Technologies</i> , <b>2017</b> , 2, 1600262	6.8	38
78	Highly Narrow-Band Polarization-Sensitive Solar-Blind Photodetectors Based on AlGaO Single Crystals. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2019</b> , 11, 7131-7137	9.5	38
77	Light-Driven WSe-ZnO Junction Field-Effect Transistors for High-Performance Photodetection. <i>Advanced Science</i> , <b>2020</b> , 7, 1901637	13.6	36
76	Ab initio optical study of graphene on hexagonal boron nitride and fluorographene substrates. <i>Journal of Materials Chemistry C</i> , <b>2013</b> , 1, 1618	7.1	35
75	A high-quality round-shaped monolayer MoS <sub>2</sub> domain and its transformation. <i>Nanoscale</i> , <b>2016</b> , 8, 219-257	7	34
74	. <i>IEEE Transactions on Electron Devices</i> , <b>2019</b> , 66, 2276-2281	2.9	33
73	Unidirectional surface plasmons in nonreciprocal graphene. <i>New Journal of Physics</i> , <b>2013</b> , 15, 113003	2.9	33
72	Room-temperature valleytronic transistor. <i>Nature Nanotechnology</i> , <b>2020</b> , 15, 743-749	28.7	33
71	Tunable THz Multiband Frequency-Selective Surface Based on Hybrid Metal/Graphene Structures. <i>IEEE Nanotechnology Magazine</i> , <b>2017</b> , 16, 1132-1137	2.6	32
70	Facile synthesis of hybrid nanorods with the Sb <sub>2</sub> Se <sub>3</sub> /AgSbSe <sub>2</sub> heterojunction structure for high performance photodetectors. <i>Nanoscale</i> , <b>2016</b> , 8, 2277-83	7.7	32
69	Physical models for coupled electromechanical analysis of silicon nanoelectromechanical systems. <i>Journal of Applied Physics</i> , <b>2005</b> , 97, 114304	2.5	31
68	Monolithic Full-Stokes Near-Infrared Polarimetry with Chiral Plasmonic Metasurface Integrated Graphene-Silicon Photodetector. <i>ACS Nano</i> , <b>2020</b> ,	16.7	30
67	Graphene interconnects fully encapsulated in layered insulator hexagonal boron nitride. <i>Nanotechnology</i> , <b>2013</b> , 24, 355202	3.4	28
66	Ultraviolet dielectric hyperlens with layered graphene and boron nitride. <i>Journal of Materials Chemistry</i> , <b>2012</b> , 22, 15863		28
65	2D Heterostructures for Ubiquitous Electronics and Optoelectronics: Principles, Opportunities, and Challenges.. <i>Chemical Reviews</i> , <b>2022</b> ,	68.1	28
64	Improved Slow Light Capacity In Graphene-based Waveguide. <i>Scientific Reports</i> , <b>2015</b> , 5, 15335	4.9	27
63	Defect symmetry influence on electronic transport of zigzag nanoribbons. <i>Nanoscale Research Letters</i> , <b>2011</b> , 6, 254	5	27

62	Exploring carrier transport phenomena in a CVD-assembled graphene FET on hexagonal boron nitride. <i>Nanotechnology</i> , <b>2012</b> , 23, 125706	3.4	24
61	Nanoplasmonically Enhanced High-Performance Metastable Phase $\beta$ -GaO Solar-Blind Photodetectors. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2019</b> , 11, 40283-40289	9.5	21
60	Enhancement of charge photo-generation and transport via an internal network of Sb <sub>2</sub> Se <sub>3</sub> /Cu <sub>2</sub> GeSe <sub>3</sub> heterojunctions. <i>Journal of Materials Chemistry A</i> , <b>2014</b> , 2, 17099-17106	13	21
59	Electronic structures of multilayer two-dimensional silicon carbide with oriented misalignment. <i>Journal of Materials Chemistry C</i> , <b>2015</b> , 3, 9057-9062	7.1	20
58	Flexible Dielectric Nanocomposites with Ultrawide Zero-Temperature Coefficient Windows for Electrical Energy Storage and Conversion under Extreme Conditions. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 7591-7600	9.5	19
57	Plasmon Excited Ultrahot Carriers and Negative Differential Photoresponse in a Vertical Graphene van der Waals Heterostructure. <i>Nano Letters</i> , <b>2019</b> , 19, 3295-3304	11.5	19
56	Bendable ZnO thin film surface acoustic wave devices on polyethylene terephthalate substrate. <i>Applied Physics Letters</i> , <b>2014</b> , 104, 213504	3.4	18
55	Interference coordination strategy based on Nash bargaining for small-cell networks. <i>IET Communications</i> , <b>2015</b> , 9, 1583-1590	1.3	17
54	Ab initio study of energy-band modulation in graphene-based two-dimensional layered superlattices. <i>Journal of Materials Chemistry</i> , <b>2012</b> , 22, 23821		17
53	Single-electron transport in graphene-like nanostructures. <i>Physics Reports</i> , <b>2017</b> , 669, 1-42	27.7	16
52	Illumination-Induced Hole Doping for Performance Improvement of Graphene/n-Silicon Solar Cells with P3HT Interlayer. <i>Advanced Electronic Materials</i> , <b>2017</b> , 3, 1600516	6.4	15
51	Identifying the stacking order of multilayer graphene grown by chemical vapor deposition via Raman spectroscopy. <i>Journal of Raman Spectroscopy</i> , <b>2018</b> , 49, 46-53	2.3	15
50	High-performance, flexible graphene/ultra-thin silicon ultra-violet image sensor <b>2017</b> ,		15
49	Development of flexible ZnO thin film surface acoustic wave strain sensors on ultrathin glass substrates. <i>Journal of Micromechanics and Microengineering</i> , <b>2015</b> , 25, 115005	2	15
48	Approaching the Collection Limit in Hot Electron Transistors with Ambipolar Hot Carrier Transport. <i>ACS Nano</i> , <b>2019</b> , 13, 14191-14197	16.7	15
47	All-Two-Dimensional-Material Hot Electron Transistor. <i>IEEE Electron Device Letters</i> , <b>2018</b> , 39, 634-637	4.4	14
46	Transition of photoconductive and photovoltaic operation modes in amorphous Ga <sub>2</sub> O <sub>3</sub> -based solar-blind detectors tuned by oxygen vacancies. <i>Chinese Physics B</i> , <b>2019</b> , 28, 028501	1.2	13
45	A high performance broadband photodetector based on (Sn <sub>x</sub> Sb <sub>1-x</sub> ) <sub>2</sub> Se <sub>3</sub> nanorods with enhanced electrical conductivity. <i>Journal of Materials Chemistry C</i> , <b>2018</b> , 6, 11078-11085	7.1	13

44	3-D graphene aerogel sphere-based flexible sensors for healthcare applications. <i>Sensors and Actuators A: Physical</i> , <b>2020</b> , 312, 112144	3.9	12
43	Multiscale electrostatic analysis of silicon nanoelectromechanical systems (NEMS) via heterogeneous quantum models. <i>Physical Review B</i> , <b>2008</b> , 77,	3.3	12
42	Carbon nanotube screening effects on the water-ion channels. <i>Applied Physics Letters</i> , <b>2008</b> , 93, 43122	3.4	12
41	A non-contact graphene surface scattering rate characterization method at microwave frequency by combining Raman spectroscopy and coaxial connectors measurement. <i>Carbon</i> , <b>2014</b> , 77, 53-58	10.4	10
40	Layered insulator hexagonal boron nitride for surface passivation in quantum dot solar cell. <i>Applied Physics Letters</i> , <b>2013</b> , 103, 243904	3.4	10
39	Hybrid Structure of Silicon Nanocrystals and 2D WSe <sub>2</sub> for Broadband Optoelectronic Synaptic Devices <b>2018</b> ,		10
38	Bidirectional mid-infrared communications between two identical macroscopic graphene fibres. <i>Nature Communications</i> , <b>2020</b> , 11, 6368	17.4	9
37	Logic Inverter Implemented with CVD-Assembled Graphene FET on Hexagonal Boron Nitride. <i>IEEE Nanotechnology Magazine</i> , <b>2012</b> , 11, 619-623	2.6	9
36	Electronic transport in monolayer graphene with extreme physical deformation: ab initio density functional calculation. <i>Nanotechnology</i> , <b>2011</b> , 22, 365202	3.4	8
35	Ultrafast Digital Fabrication of Designable Architected Liquid Crystalline Elastomer. <i>Advanced Materials</i> , <b>2021</b> , 33, e2105597	24	8
34	On-Chip Measurement of Photoluminescence with High Sensitivity Monolithic Spectrometer. <i>Advanced Optical Materials</i> , <b>2020</b> , 8, 2000191	8.1	7
33	Flexible and Transparent Surface Acoustic Wave Microsensors and Microfluidics. <i>Procedia Engineering</i> , <b>2015</b> , 120, 717-720		7
32	Adaptive biasing scheme for load balancing in backhaul constrained small cell networks. <i>IET Communications</i> , <b>2015</b> , 9, 999-1005	1.3	7
31	Carbon-based interconnect: Performance, scaling and reliability of 3D stacked multilayer graphene system <b>2011</b> ,		7
30	Micron-Scale Photodetectors Based on One-Dimensional Single-Crystalline Sb <sub>2</sub> S <sub>3</sub> Microrods: Simultaneously Improving Responsivity and Extending Spectral Response Region. <i>Journal of Physical Chemistry C</i> , <b>2019</b> , 123, 810-816	3.8	7
29	Anion Engineering Enhanced Response Speed and Tunable Spectral Responsivity in Gallium-Oxynitrides-Based Ultraviolet Photodetectors. <i>ACS Applied Electronic Materials</i> , <b>2020</b> , 2, 808-816 <sup>4</sup>		6
28	A novel fabrication method of silicon nano-needles using MEMS TMAH etching techniques. <i>Nanotechnology</i> , <b>2011</b> , 22, 125301	3.4	6
27	Detection of defective DNA in carbon nanotubes by combined molecular dynamics/tight-binding technique. <i>Applied Physics Letters</i> , <b>2009</b> , 95, 113116	3.4	6

26	Pull-in/out analysis of nano/microelectromechanical switches with defective oxide layers. <i>Applied Physics Letters</i> , <b>2009</b> , 95, 073112	3.4	6
25	Combined semiclassical and effective-mass Schrödinger approach for multiscale analysis of semiconductor nanostructures. <i>Physical Review B</i> , <b>2007</b> , 76,	3.3	6
24	Transparent origami glass. <i>Nature Communications</i> , <b>2021</b> , 12, 4261	17.4	6
23	Light-induced negative differential resistance in gate-controlled graphene-silicon photodiode. <i>Applied Physics Letters</i> , <b>2018</b> , 112, 201109	3.4	6
22	Silicon-graphene photonic devices. <i>Journal of Semiconductors</i> , <b>2018</b> , 39, 061009	2.3	5
21	Reconfigurable Parallel Plasmonic Transmission Lines With Nanometer Light Localization and Long Propagation Distance. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , <b>2013</b> , 19, 4601809-4601809 <sup>3.8</sup>		5
20	Graphene/silicon-quantum-dots/Si Schottky-PN cascade heterojunction for short-wavelength infrared photodetection <b>2017</b> ,		5
19	Fluorinated graphene and hexagonal boron nitride as ALD seed layers for graphene-based van der Waals heterostructures. <i>Nanotechnology</i> , <b>2014</b> , 25, 355202	3.4	5
18	Electronic transport anisotropy of buckling graphene under uniaxial compressive strain: Ab initio study. <i>Applied Physics Letters</i> , <b>2012</b> , 100, 052111	3.4	5
17	Ab initio electronic transport study of two-dimensional silicon carbide-based p-n junctions. <i>Journal of Semiconductors</i> , <b>2017</b> , 38, 033002	2.3	4
16	Visible-NIR Photodetectors Based on Low-Dimensional GeSe Micro-Crystals: Designed Morphology and Improved Photoresponsivity. <i>ChemPhysChem</i> , <b>2020</b> , 21, 397-405	3.2	4
15	Tailoring atomic structure to control the electronic transport in zigzag graphene nanoribbon. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , <b>2012</b> , 376, 3277-3280	2.3	3
14	Quantum-squeezing effects of strained multilayer graphene NEMS. <i>Nanoscale Research Letters</i> , <b>2011</b> , 6, 355	5	3
13	Broadband Graphene Field-Effect Coupled Detectors: from Soft X-ray to Near-Infrared. <i>IEEE Electron Device Letters</i> , <b>2022</b> , 1-1	4.4	3
12	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> , <b>2017</b> , 2,	6.8	2
11	<b>2015</b> ,		2
10	A design of SPDT switch using graphene device <b>2015</b> ,		2
9	Linear and Nonlinear Optical Absorption of on-chip Silicon-on-insulator Nanowires with Graphene <b>2012</b> ,		2

8	<b>2018,</b>		2
7	Photodetectors: A Broadband Fluorographene Photodetector (Adv. Mater. 22/2017). <i>Advanced Materials</i> , <b>2017</b> , 29,	24	1
6	Quantum and thermo-mechanical noise squeezing in nanoresonators: A comparative study. <i>Applied Physics Letters</i> , <b>2012</b> , 100, 023105	3.4	1
5	UV curable micro-structured shape memory epoxy with tunable performance. <i>Journal of Applied Polymer Science</i> , <b>2021</b> , 138, 51319	2.9	1
4	Sharp Silicon Nano-Needles Based on Boron Etch-Stop in TMAH Solutions. <i>Materials Research Society Symposia Proceedings</i> , <b>2011</b> , 1301, 225		
3	CVD-Graphene Complementary Logic on Ultra-thin Multilayer Hexagonal Boron Nitride. <i>Materials Research Society Symposia Proceedings</i> , <b>2012</b> , 1407, 151		
2	Twist angle dependent absorption feature induced by interlayer rotations in CVD bilayer graphene. <i>Nanophotonics</i> , <b>2021</b> , 10, 2695-2703	6.3	
1	Graphene photonic crystal fiber with large modulation depth. <i>Science China Chemistry</i> , <b>2020</b> , 63, 5-6	7.9	