

# Bin Yu

## List of Publications by Citations

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56  
papers

1,938  
citations

24  
h-index

43  
g-index

65  
ext. papers

2,210  
ext. citations

8.1  
avg, IF

4.3  
L-index

#	Paper	IF	Citations
56	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
55	Gd-doping effect on performance of HfO <sub>2</sub> based resistive switching memory devices using implantation approach. <i>Applied Physics Letters</i> , <b>2011</b> , 98, 042105	3.4	145
54	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
53	Unified Physical Model of Bipolar Oxide-Based Resistive Switching Memory. <i>IEEE Electron Device Letters</i> , <b>2009</b> , 30, 1326-1328	4.4	143
52	Ionic doping effect in ZrO <sub>2</sub> resistive switching memory. <i>Applied Physics Letters</i> , <b>2010</b> , 96, 123502	3.4	140
51	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
50	Two-dimensional layered semiconductor/graphene heterostructures for solar photovoltaic applications. <i>Nanoscale</i> , <b>2014</b> , 6, 12682-9	7.7	87
49	One-Dimensional Phase-Change Nanostructure: Germanium Telluride Nanowire. <i>Journal of Physical Chemistry C</i> , <b>2007</b> , 111, 2421-2425	3.8	85
48	A Broadband Fluorographene Photodetector. <i>Advanced Materials</i> , <b>2017</b> , 29, 1700463	24	72
47	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
46	Modeling of Retention Failure Behavior in Bipolar Oxide-Based Resistive Switching Memory. <i>IEEE Electron Device Letters</i> , <b>2011</b> , 32, 276-278	4.4	50
45	Monolayer graphene/hexagonal boron nitride heterostructure. <i>Carbon</i> , <b>2013</b> , 54, 396-402	10.4	49
44	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
43	Electromechanical robustness of monolayer graphene with extreme bending. <i>Applied Physics Letters</i> , <b>2010</b> , 97, 223102	3.4	42
42	Chalcogenide-Nanowire-Based Phase Change Memory. <i>IEEE Nanotechnology Magazine</i> , <b>2008</b> , 7, 496-502	2.6	42
41	Designing an Efficient Multimode Environmental Sensor Based on Graphene-Silicon Heterojunction. <i>Advanced Materials Technologies</i> , <b>2017</b> , 2, 1600262	6.8	38
40	. <i>IEEE Electron Device Letters</i> , <b>2011</b> , 32, 1340-1342	4.4	29

39	Ultra-Sensitive Strain Sensor Based on Flexible Poly(vinylidene fluoride) Piezoelectric Film. <i>Nanoscale Research Letters</i> , <b>2018</b> , 13, 83	5	28
38	Graphene interconnects fully encapsulated in layered insulator hexagonal boron nitride. <i>Nanotechnology</i> , <b>2013</b> , 24, 355202	3.4	28
37	Bilayer Graphene System: Current-Induced Reliability Limit. <i>IEEE Electron Device Letters</i> , <b>2010</b> , 31, 1155-1157	4.1	28
36	2D Heterostructures for Ubiquitous Electronics and Optoelectronics: Principles, Opportunities, and Challenges.. <i>Chemical Reviews</i> , <b>2022</b> ,	68.1	28
35	Ultra-sensitive near-infrared graphene photodetectors with nanopillar antennas. <i>Nanoscale</i> , <b>2017</b> , 9, 17459-17464	7.7	27
34	Graphene-Based Interconnects on Hexagonal Boron Nitride Substrate. <i>IEEE Electron Device Letters</i> , <b>2012</b> , 33, 925-927	4.4	25
33	A physical model for bipolar oxide-based resistive switching memory based on ion-transport-recombination effect. <i>Applied Physics Letters</i> , <b>2011</b> , 98, 232108	3.4	25
32	Bilayer Graphene/Copper Hybrid On-Chip Interconnect: A Reliability Study. <i>IEEE Nanotechnology Magazine</i> , <b>2011</b> , 10, 710-714	2.6	21
31	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
30	Reversible phase-change behavior in two-dimensional antimony telluride (Sb <sub>2</sub> Te <sub>3</sub> ) nanosheets. <i>Applied Physics Letters</i> , <b>2018</b> , 112, 133101	3.4	15
29	High-performance, flexible graphene/ultra-thin silicon ultra-violet image sensor <b>2017</b> ,		15
28	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
27	New Diode-Triggered Silicon-Controlled Rectifier for Robust Electrostatic Discharge Protection at High Temperatures. <i>IEEE Transactions on Electron Devices</i> , <b>2019</b> , 66, 2044-2048	2.9	12
26	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
25	Scalable synthesis of two-dimensional antimony telluride nanoplates down to a single quintuple layer. <i>RSC Advances</i> , <b>2015</b> , 5, 59320-59325	3.7	9
24	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
23	Formation of Graphene p-n Junction via Complementary Doping. <i>IEEE Electron Device Letters</i> , <b>2011</b> , 32, 1050-1052	4.4	9
22	A Hybrid Phototransistor Neuromorphic Synapse. <i>IEEE Journal of the Electron Devices Society</i> , <b>2019</b> , 7, 13-17	2.3	8

21	Carbon-based interconnect: Performance, scaling and reliability of 3D stacked multilayer graphene system <b>2011</b> ,		7
20	Extenuated interlayer scattering in double-layered graphene/hexagonal boron nitride heterostructure. <i>Carbon</i> , <b>2018</b> , 126, 17-22	10.4	6
19	Electrical Conduction and Reliability in Dual-Layered Graphene Heterostructure Interconnects. <i>IEEE Electron Device Letters</i> , <b>2014</b> , 35, 1311-1313	4.4	6
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	Optimization of Bosch etch process for vertically stacked Si nanowires. <i>Journal of Materials Science: Materials in Electronics</i> , <b>2012</b> , 23, 334-342	2.1	4
16	Repeatable growth of graphene from Bo precursor. <i>Carbon</i> , <b>2017</b> , 123, 628-634	10.4	4
15	Multilayer Graphene Oxide/Cadmium Selenide Quantum-Dot-Coated Titanium Dioxide Heterojunction Solar Cell. <i>IEEE Electron Device Letters</i> , <b>2012</b> , 33, 1165-1167	4.4	4
14	Unraveling the origin of ferroelectric resistance switching through the interfacial engineering of layered ferroelectric-metal junctions.. <i>Nature Communications</i> , <b>2021</b> , 12, 7291	17.4	4
13	Investigation of electrically induced migration of copper on graphene surfaces: Theory and experiments. <i>Applied Physics Letters</i> , <b>2013</b> , 103, 073104	3.4	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	Rapid optical determination of topological insulator nanoplate thickness and oxidation. <i>AIP Advances</i> , <b>2017</b> , 7, 015114	1.5	2
10	Substrate effect on graphene-based interconnects <b>2012</b> ,		2
9	Photodetectors: A Broadband Fluorographene Photodetector (Adv. Mater. 22/2017). <i>Advanced Materials</i> , <b>2017</b> , 29,	24	1
8	Ultra-Broad and Angle-Sensitive Terahertz Absorber <b>2019</b> ,		1
7	Unipolar Switching Behavior in Highly Crystalline Hexagonal Boron Nitride. <i>Materials Research Society Symposia Proceedings</i> , <b>2014</b> , 1658, 1		1
6	MoS <sub>2</sub> / TiO <sub>2</sub> nanoparticle composite bulk heterojunction solar cell <b>2012</b> ,		1
5	Reliability study of bilayer graphene - material for future transistor and interconnect <b>2010</b> ,		1
4	Multilayer Graphene-Based Carbon Interconnect. <i>Materials Research Society Symposia Proceedings</i> , <b>2012</b> , 1407, 7		1

- 3 Quantum and thermo-mechanical noise squeezing in nanoresonators: A comparative study. *Applied Physics Letters*, **2012**, 100, 023105 3.4 1
- 2 Encapsulation of graphene interconnects with 2D Layered Insulator for improved performance. *Materials Research Society Symposia Proceedings*, **2014**, 1658, 47
- 1 CVD-Graphene Complementary Logic on Ultra-thin Multilayer Hexagonal Boron Nitride. *Materials Research Society Symposia Proceedings*, **2012**, 1407, 151