

# Han Liu

## List of Publications by Citations

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24  
papers

9,631  
citations

21  
h-index

25  
g-index

25  
ext. papers

10,630  
ext. citations

11.8  
avg, IF

6.34  
L-index

#	Paper	IF	Citations
24	Phosphorene: an unexplored 2D semiconductor with a high hole mobility. <i>ACS Nano</i> , <b>2014</b> , 8, 4033-41	16.7	4487
23	Semiconducting black phosphorus: synthesis, transport properties and electronic applications. <i>Chemical Society Reviews</i> , <b>2015</b> , 44, 2732-43	58.5	1031
22	Black phosphorus-monolayer MoS <sub>2</sub> van der Waals heterojunction p-n diode. <i>ACS Nano</i> , <b>2014</b> , 8, 8292-9	16.7	979
21	Channel length scaling of MoS <sub>2</sub> MOSFETs. <i>ACS Nano</i> , <b>2012</b> , 6, 8563-9	16.7	594
20	Chloride molecular doping technique on 2D materials: WS <sub>2</sub> and MoS <sub>2</sub> . <i>Nano Letters</i> , <b>2014</b> , 14, 6275-80	11.5	481
19	Device perspective for black phosphorus field-effect transistors: contact resistance, ambipolar behavior, and scaling. <i>ACS Nano</i> , <b>2014</b> , 8, 10035-42	16.7	358
18	\$\text{MoS}_2\$ Dual-Gate MOSFET With Atomic-Layer-Deposited \$\text{Al}_2\text{O}_3\$ as Top-Gate Dielectric. <i>IEEE Electron Device Letters</i> , <b>2012</b> , 33, 546-548	4.4	351
17	Switching mechanism in single-layer molybdenum disulfide transistors: an insight into current flow across Schottky barriers. <i>ACS Nano</i> , <b>2014</b> , 8, 1031-8	16.7	202
16	Molecular Doping of Multilayer \$\text{MoS}_2\$ Field-Effect Transistors: Reduction in Sheet and Contact Resistances. <i>IEEE Electron Device Letters</i> , <b>2013</b> , 34, 1328-1330	4.4	196
15	Statistical study of deep submicron dual-gated field-effect transistors on monolayer chemical vapor deposition molybdenum disulfide films. <i>Nano Letters</i> , <b>2013</b> , 13, 2640-6	11.5	168
14	The Effect of Dielectric Capping on Few-Layer Phosphorene Transistors: Tuning the Schottky Barrier Heights. <i>IEEE Electron Device Letters</i> , <b>2014</b> , 35, 795-797	4.4	142
13	\$\text{MoS}_2\$ Field-Effect Transistors With Graphene/Metal Heterocontacts. <i>IEEE Electron Device Letters</i> , <b>2014</b> , 35, 599-601	4.4	118
12	The integration of high-k dielectric on two-dimensional crystals by atomic layer deposition. <i>Applied Physics Letters</i> , <b>2012</b> , 100, 152115	3.4	111
11	\$\text{MoS}_2\$ Nanoribbon Transistors: Transition From Depletion Mode to Enhancement Mode by Channel-Width Trimming. <i>IEEE Electron Device Letters</i> , <b>2012</b> , 33, 1273-1275	4.4	87
10	Magneto-transport in MoS <sub>2</sub> : phase coherence, spin-orbit scattering, and the hall factor. <i>ACS Nano</i> , <b>2013</b> , 7, 7077-82	16.7	78
9	Temporal and Thermal Stability of Al <sub>2</sub> O <sub>3</sub> -Passivated Phosphorene MOSFETs. <i>IEEE Electron Device Letters</i> , <b>2014</b> , 35, 1314-1316	4.4	68
8	Two-dimensional TaSe <sub>2</sub> metallic crystals: spin-orbit scattering length and breakdown current density. <i>ACS Nano</i> , <b>2014</b> , 8, 9137-42	16.7	40

## LIST OF PUBLICATIONS

7	Contact research strategy for emerging molybdenum disulfide and other two-dimensional field-effect transistors. <i>APL Materials</i> , <b>2014</b> , 2, 092510	5.7	37
6	Metal contacts to MoS <sub>2</sub> : A two-dimensional semiconductor <b>2012</b> ,		33
5	Atomic-layer-deposited Al <sub>2</sub> O <sub>3</sub> on Bi <sub>2</sub> Te <sub>3</sub> for topological insulator field-effect transistors. <i>Applied Physics Letters</i> , <b>2011</b> , 99, 052108	3.4	27
4	Measurement of In-Plane Thermal Conductivity of Ultrathin Films Using Micro-Raman Spectroscopy. <i>Nanoscale and Microscale Thermophysical Engineering</i> , <b>2014</b> , 18, 183-193	3.7	25
3	High-performance MoS <sub>2</sub> field-effect transistors enabled by chloride doping: Record low contact resistance (0.5 kΩμm) and record high drain current (460 μA/μm) <b>2014</b> ,		10
2	Ambipolar phosphorene field-effect transistors with dielectric capping <b>2014</b> ,		4
1	Anisotropic Properties of Black Phosphorus413-434		3