

Yuchen Du

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33
papers

4,323
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g-index

34
ext. papers

4,887
ext. citations

10.8
avg, IF

5.65
L-index

#	Paper	IF	Citations
33	Semiconducting black phosphorus: synthesis, transport properties and electronic applications. <i>Chemical Society Reviews</i> , 2015 , 44, 2732-43	58.5	1031
32	Chloride molecular doping technique on 2D materials: WS ₂ and MoS ₂ . <i>Nano Letters</i> , 2014 , 14, 6275-80	11.5	481
31	Anisotropic in-plane thermal conductivity observed in few-layer black phosphorus. <i>Nature Communications</i> , 2015 , 6, 8572	17.4	426
30	Field-effect transistors made from solution-grown two-dimensional tellurene. <i>Nature Electronics</i> , 2018 , 1, 228-236	28.4	358
29	Device perspective for black phosphorus field-effect transistors: contact resistance, ambipolar behavior, and scaling. <i>ACS Nano</i> , 2014 , 8, 10035-42	16.7	358
28	Switching mechanism in single-layer molybdenum disulfide transistors: an insight into current flow across Schottky barriers. <i>ACS Nano</i> , 2014 , 8, 1031-8	16.7	202
27	Molecular Doping of Multilayer MoS_2 Field-Effect Transistors: Reduction in Sheet and Contact Resistances. <i>IEEE Electron Device Letters</i> , 2013 , 34, 1328-1330	4.4	196
26	One-Dimensional van der Waals Material Tellurium: Raman Spectroscopy under Strain and Magneto-Transport. <i>Nano Letters</i> , 2017 , 17, 3965-3973	11.5	182
25	Statistical study of deep submicron dual-gated field-effect transistors on monolayer chemical vapor deposition molybdenum disulfide films. <i>Nano Letters</i> , 2013 , 13, 2640-6	11.5	168
24	The Effect of Dielectric Capping on Few-Layer Phosphorene Transistors: Tuning the Schottky Barrier Heights. <i>IEEE Electron Device Letters</i> , 2014 , 35, 795-797	4.4	142
23	Auxetic Black Phosphorus: A 2D Material with Negative Poisson's Ratio. <i>Nano Letters</i> , 2016 , 16, 6701-6708	11.5	135
22	MoS_2 Field-Effect Transistors With Graphene/Metal Heterocontacts. <i>IEEE Electron Device Letters</i> , 2014 , 35, 599-601	4.4	118
21	Surface chemistry of black phosphorus under a controlled oxidative environment. <i>Nanotechnology</i> , 2016 , 27, 434002	3.4	90
20	Temporal and Thermal Stability of Al ₂ O ₃ -Passivated Phosphorene MOSFETs. <i>IEEE Electron Device Letters</i> , 2014 , 35, 1314-1316	4.4	68
19	Steep-Slope WSe Negative Capacitance Field-Effect Transistor. <i>Nano Letters</i> , 2018 , 18, 3682-3687	11.5	66
18	Observation of Optical and Electrical In-Plane Anisotropy in High-Mobility Few-Layer ZrTe. <i>Nano Letters</i> , 2016 , 16, 7364-7369	11.5	59
17	Performance Enhancement of Black Phosphorus Field-Effect Transistors by Chemical Doping. <i>IEEE Electron Device Letters</i> , 2016 , 37, 429-432	4.4	49

16	Two-dimensional TaSe ₂ metallic crystals: spin-orbit scattering length and breakdown current density. <i>ACS Nano</i> , 2014 , 8, 9137-42	16.7	40
15	Contact research strategy for emerging molybdenum disulfide and other two-dimensional field-effect transistors. <i>APL Materials</i> , 2014 , 2, 092510	5.7	37
14	Mechanisms of current fluctuation in ambipolar black phosphorus field-effect transistors. <i>Nanoscale</i> , 2016 , 8, 3572-8	7.7	26
13	(Invited) Fundamentals in MoS ₂ Transistors: Dielectric, Scaling and Metal Contacts. <i>ECS Transactions</i> , 2013 , 58, 203-208	1	17
12	Weak localization in few-layer black phosphorus. <i>2D Materials</i> , 2016 , 3, 024003	5.9	15
11	High-performance MoS ₂ field-effect transistors enabled by chloride doping: Record low contact resistance (0.5 k Ω / μ m) and record high drain current (460 μ A/ μ m) 2014 ,		10
10	Transport studies in 2D transition metal dichalcogenides and black phosphorus. <i>Journal of Physics Condensed Matter</i> , 2016 , 28, 263002	1.8	10
9	Black phosphorus field-effect transistor with record drain current exceeding 1 A/mm 2017 ,		9
8	Few-layer black phosphorous PMOSFETs with BN/Al ₂ O ₃ bilayer gate dielectric: Achieving I _{on} =850A/ μ m, gm=340S/ μ m, and Rc=0.58k Ω / μ m 2016 ,		9
7	Physical understanding of graphene/metal hetero-contacts to enhance MoS ₂ field-effect transistors performance 2014 ,		5
6	Ionic liquid gating on atomic layer deposition passivated GaN: Ultra-high electron density induced high drain current and low contact resistance. <i>Applied Physics Letters</i> , 2016 , 108, 202102	3.4	4
5	Continuous-wave and transient characteristics of phosphorene microwave transistors 2016 ,		4
4	Anisotropic Properties of Black Phosphorus 413-434		3
3	P-type surface charge transfer doping of black phosphorus field-effect transistors 2016 ,		2
2	Dual-gate MOSFETs on monolayer CVD MoS ₂ films 2013 ,		2
1	Electrical Characteristics of LDD and LDD-Free FinFET Devices of Dimension Compatible With 14 nm Technology Node. <i>IEEE Journal of the Electron Devices Society</i> , 2020 , 8, 1039-1042	2.3	0