

Yuchen Du

List of Publications by Year in descending order

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papers

5,623
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times ranked

9587
citing authors

#	ARTICLE	IF	CITATIONS
1	Semiconducting black phosphorus: synthesis, transport properties and electronic applications. <i>Chemical Society Reviews</i> , 2015, 44, 2732-2743.	40.3	1,303
2	Field-effect transistors made from solution-grown two-dimensional tellurene. <i>Nature Electronics</i> , 2018, 1, 228-236.	18.9	657
3	Chloride Molecular Doping Technique on 2D Materials: WS ₂ and MoS ₂ . <i>Nano Letters</i> , 2014, 14, 6275-6280.	9.5	628
4	Anisotropic in-plane thermal conductivity observed in few-layer black phosphorus. <i>Nature Communications</i> , 2015, 6, 8572.	13.2	540
5	Device Perspective for Black Phosphorus Field-Effect Transistors: Contact Resistance, Ambipolar Behavior, and Scaling. <i>ACS Nano</i> , 2014, 8, 10035-10042.	15.3	404
6	One-Dimensional van der Waals Material Tellurium: Raman Spectroscopy under Strain and Magneto-Transport. <i>Nano Letters</i> , 2017, 17, 3965-3973.	9.5	293
7	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.	4.2	235
8	Switching Mechanism in Single-Layer Molybdenum Disulfide Transistors: An Insight into Current Flow across Schottky Barriers. <i>ACS Nano</i> , 2014, 8, 1031-1038.	15.3	226
9	Statistical Study of Deep Submicron Dual-Gated Field-Effect Transistors on Monolayer Chemical Vapor Deposition Molybdenum Disulfide Films. <i>Nano Letters</i> , 2013, 13, 2640-2646.	9.5	200
10	Auxetic Black Phosphorus: A 2D Material with Negative Poisson's Ratio. <i>Nano Letters</i> , 2016, 16, 6701-6708.	9.5	198
11	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.	4.2	158
12	MoS_2 Field-Effect Transistors With Graphene/Metal Heterocontacts. <i>IEEE Electron Device Letters</i> , 2014, 35, 599-601.	4.2	137
13	Surface chemistry of black phosphorus under a controlled oxidative environment. <i>Nanotechnology</i> , 2016, 27, 434002.	2.7	117
14	Steep-Slope WSe ₂ Negative Capacitance Field-Effect Transistor. <i>Nano Letters</i> , 2018, 18, 3682-3687.	9.5	102
15	Observation of Optical and Electrical In-Plane Anisotropy in High-Mobility Few-Layer ZrTe ₅ . <i>Nano Letters</i> , 2016, 16, 7364-7369.	9.5	85
16	Temporal and Thermal Stability of Al ₂ O ₃ -Passivated Phosphorene MOSFETs. <i>IEEE Electron Device Letters</i> , 2014, 35, 1314-1316.	4.2	76
17	Performance Enhancement of Black Phosphorus Field-Effect Transistors by Chemical Doping. <i>IEEE Electron Device Letters</i> , 2016, 37, 429-432.	4.2	56
18	Two-Dimensional TaSe ₂ Metallic Crystals: Spin-Orbit Scattering Length and Breakdown Current Density. <i>ACS Nano</i> , 2014, 8, 9137-9142.	15.3	49

#	ARTICLE	IF	CITATIONS
19	Contact research strategy for emerging molybdenum disulfide and other two-dimensional field-effect transistors. APL Materials, 2014, 2, .	4.8	45
20	Mechanisms of current fluctuation in ambipolar black phosphorus field-effect transistors. Nanoscale, 2016, 8, 3572-3578.	5.8	27
21	(Invited) Fundamentals in MoS ₂ Transistors: Dielectric, Scaling and Metal Contacts. ECS Transactions, 2013, 58, 203-208.	0.6	19
22	Weak localization in few-layer black phosphorus. 2D Materials, 2016, 3, 024003.	4.5	17
23	High-performance MoS ₂ field-effect transistors enabled by chloride doping: Record low contact resistance (0.5 k Ω) and record high drain current (460 mA/mm). , 2014, , .		13
24	Transport studies in 2D transition metal dichalcogenides and black phosphorus. Journal of Physics Condensed Matter, 2016, 28, 263002.	1.9	12
25	Black phosphorus field-effect transistor with record drain current exceeding 1 A/mm. , 2017, , .		12
26	Ionic liquid gating on atomic layer deposition passivated GaN: Ultra-high electron density induced high drain current and low contact resistance. Applied Physics Letters, 2016, 108, .	3.2	5
27	Anisotropic Properties of Black Phosphorus. , 0, , 413-434.		3
28	P-type surface charge transfer doping of black phosphorus field-effect transistors. , 2016, , .		2
29	Electrical Characteristics of LDD and LDD-Free FinFET Devices of Dimension Compatible With 14 nm Technology Node. IEEE Journal of the Electron Devices Society, 2020, 8, 1039-1042.	2.2	2