

# Yuchen Du

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/3818434/publications.pdf>

Version: 2024-02-01

33  
papers

5,420  
citations

361296

20  
h-index

552653

26  
g-index

34  
all docs

34  
docs citations

34  
times ranked

8187  
citing authors

#	ARTICLE	IF	CITATIONS
1	Semiconducting black phosphorus: synthesis, transport properties and electronic applications. <i>Chemical Society Reviews</i> , 2015, 44, 2732-2743.	18.7	1,260
2	Chloride Molecular Doping Technique on 2D Materials: WS <sub>2</sub> and MoS <sub>2</sub> . <i>Nano Letters</i> , 2014, 14, 6275-6280.	4.5	606
3	Field-effect transistors made from solution-grown two-dimensional tellurene. <i>Nature Electronics</i> , 2018, 1, 228-236.	13.1	591
4	Anisotropic in-plane thermal conductivity observed in few-layer black phosphorus. <i>Nature Communications</i> , 2015, 6, 8572.	5.8	520
5	Device Perspective for Black Phosphorus Field-Effect Transistors: Contact Resistance, Ambipolar Behavior, and Scaling. <i>ACS Nano</i> , 2014, 8, 10035-10042.	7.3	400
6	One-Dimensional van der Waals Material Tellurium: Raman Spectroscopy under Strain and Magneto-Transport. <i>Nano Letters</i> , 2017, 17, 3965-3973.	4.5	272
7	Molecular Doping of Multilayer $\text{MoS}_2$ Field-Effect Transistors: Reduction in Sheet and Contact Resistances. <i>IEEE Electron Device Letters</i> , 2013, 34, 1328-1330.	2.2	231
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.	7.3	224
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.	4.5	197
10	Auxetic Black Phosphorus: A 2D Material with Negative Poisson's Ratio. <i>Nano Letters</i> , 2016, 16, 6701-6708.	4.5	184
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.	2.2	154
12	$\text{MoS}_2$ Field-Effect Transistors With Graphene/Metal Heterocontacts. <i>IEEE Electron Device Letters</i> , 2014, 35, 599-601.	2.2	133
13	Surface chemistry of black phosphorus under a controlled oxidative environment. <i>Nanotechnology</i> , 2016, 27, 434002.	1.3	112
14	Steep-Slope WSe <sub>2</sub> Negative Capacitance Field-Effect Transistor. <i>Nano Letters</i> , 2018, 18, 3682-3687.	4.5	97
15	Observation of Optical and Electrical In-Plane Anisotropy in High-Mobility Few-Layer ZrTe <sub>5</sub> . <i>Nano Letters</i> , 2016, 16, 7364-7369.	4.5	80
16	Temporal and Thermal Stability of Al <sub>2</sub> O <sub>3</sub> -Passivated Phosphorene MOSFETs. <i>IEEE Electron Device Letters</i> , 2014, 35, 1314-1316.	2.2	76
17	Performance Enhancement of Black Phosphorus Field-Effect Transistors by Chemical Doping. <i>IEEE Electron Device Letters</i> , 2016, 37, 429-432.	2.2	55
18	Two-Dimensional TaSe <sub>2</sub> Metallic Crystals: Spin-Orbit Scattering Length and Breakdown Current Density. <i>ACS Nano</i> , 2014, 8, 9137-9142.	7.3	49

#	ARTICLE	IF	CITATIONS
19	Contact research strategy for emerging molybdenum disulfide and other two-dimensional field-effect transistors. <i>APL Materials</i> , 2014, 2, .	2.2	44
20	Mechanisms of current fluctuation in ambipolar black phosphorus field-effect transistors. <i>Nanoscale</i> , 2016, 8, 3572-3578.	2.8	27
21	(Invited) Fundamentals in MoS <sub>2</sub> Transistors: Dielectric, Scaling and Metal Contacts. <i>ECS Transactions</i> , 2013, 58, 203-208.	0.3	19
22	Weak localization in few-layer black phosphorus. <i>2D Materials</i> , 2016, 3, 024003.	2.0	17
23	High-performance MoS <sub>2</sub> field-effect transistors enabled by chloride doping: Record low contact resistance (0.5 k $\Omega$ ) and record high drain current (460 A/cm). , 2014, , .		12
24	Transport studies in 2D transition metal dichalcogenides and black phosphorus. <i>Journal of Physics Condensed Matter</i> , 2016, 28, 263002.	0.7	12
25	Black phosphorus field-effect transistor with record drain current exceeding 1 A/mm. , 2017, , .		12
26	Few-layer black phosphorous PMOSFETs with BN/Al <sub>2</sub> O <sub>3</sub> bilayer gate dielectric: Achieving I <sub>on</sub> =850 A <sup>1/4</sup> /V <sup>1/4</sup> m, g <sub>m</sub> =340 S <sup>1/4</sup> /V <sup>1/4</sup> m, and R <sub>c</sub> =0.58 k $\Omega$ ·V <sup>1/4</sup> m. , 2016, , .		10
27	Continuous-wave and transient characteristics of phosphorene microwave transistors. , 2016, , .		6
28	Physical understanding of graphene/metal hetero-contacts to enhance MoS <sub>2</sub> field-effect transistors performance. , 2014, , .		5
29	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, .	1.5	5
30	Anisotropic Properties of Black Phosphorus. , 0, , 413-434.		3
31	Dual-gate MOSFETs on monolayer CVD MoS <sub>2</sub> films. , 2013, , .		2
32	P-type surface charge transfer doping of black phosphorus field-effect transistors. , 2016, , .		2
33	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.	1.2	1