Yangyang Wang

List of Publications by Year
in descending order

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57 papers	4,412 citations	109137 35 h-index	143772 57 g-index
58 all docs	58 docs citations	58 times ranked	4254 citing authors

#	Article	IF	Citations
1	Rise of silicene: A competitive 2D material. Progress in Materials Science, 2016, 83, 24-151.	16.0	713
2	Tunable and sizable band gap in silicene by surface adsorption. Scientific Reports, 2012, 2, 853.	1.6	253
3	Many-body Effect, Carrier Mobility, and Device Performance of Hexagonal Arsenene and Antimonene. Chemistry of Materials, 2017, 29, 2191-2201.	3.2	244
4	Interfacial Properties of Monolayer and Bilayer MoS2 Contacts with Metals: Beyond the Energy Band Calculations. Scientific Reports, 2016, 6, 21786.	1.6	224
5	Monolayer Phosphoreneâ€“Metal Contacts. Chemistry of Materials, 2016, 28, 2100-2109.	3.2	199
6	High-performance sub-10 nm monolayer Bi₂O₂Se transistors. Nanoscale, 2019, 11, 532-540.	2.8	196
7	Does p-type ohmic contact exist in WSe₂â€“metal interfaces?. Nanoscale, 2016, 8, 1179-1191.	2.8	166
8	Simulations of Quantum Transport in Sub-5-nm Monolayer Phosphorene Transistors. Physical Review Applied, 2018, 10, .	1.5	144
9	Many-Body Effect and Device Performance Limit of Monolayer InSe. ACS Applied Materials & Interfaces, 2018, 10, 23344-23352.	4.0	98
10	Performance Upper Limit of subâ€10 nm Monolayer MoS₂ Transistors. Advanced Electronic Materials, 2016, 2, 1600191.	2.6	97
11	Schottky barrier heights in two-dimensional field-effect transistors: from theory to experiment. Reports on Progress in Physics, 2021, 84, 056501.	8.1	97
12	Graphdiyneâ€“metal contacts and graphdiyne transistors. Nanoscale, 2015, 7, 2116-2127.	2.8	94
13	Schottky Barriers in Bilayer Phosphorene Transistors. ACS Applied Materials & Interfaces, 2017, 9, 12694-12705.	4.0	94
14	Does the Dirac Cone Exist in Silicene on Metal Substrates?. Scientific Reports, 2014, 4, 5476.	1.6	92
15	Interfacial Properties of Bilayer and Trilayer Graphene on Metal Substrates. Scientific Reports, 2013, 3, 2081.	1.6	86
16	Monolayer tellureneâ€“metal contacts. Journal of Materials Chemistry C, 2018, 6, 6153-6163.	2.7	81
17	Sub-10Ânm two-dimensional transistors: Theory and experiment. Physics Reports, 2021, 938, 1-72.	10.3	80
18	Sub-5 nm Monolayer Arsenene and Antimonene Transistors. ACS Applied Materials & Interfaces, 2018, 10, 22363-22371.	4.0	77

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19	Black phosphorus transistors with van der Waals-type electrical contacts. Nanoscale, 2017, 9, 14047-14057.	2.8	76
20	Electrical Contacts in Monolayer Arsenene Devices. ACS Applied Materials & Interfaces, 2017, 9, 29273-29284.	4.0	76
21	Monolayer Bismuthene-Metal Contacts: A Theoretical Study. ACS Applied Materials & Interfaces, 2017, 9, 23128-23140.	4.0	73
22	Three-layer phosphorene-metal interfaces. Nano Research, 2018, 11, 707-721.	5.8	72
23	Interfacial Properties of Monolayer MoSe₂â€“Metal Contacts. Journal of Physical Chemistry C, 2016, 120, 13063-13070.	1.5	70
24	Can a Black Phosphorus Schottky Barrier Transistor Be Good Enough?. ACS Applied Materials & Interfaces, 2017, 9, 3959-3966.	4.0	70
25	Designing sub-10-nm Metal-Oxide-Semiconductor Field-Effect Transistors via Ballistic Transport and Disparate Effective Mass: The Case of Two-Dimensional <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll"><mml:mrow><mml:mi>Bi</mml:mi><mml:mi mathvariant="normal">N</mml:mi></mml:mrow></mml:math>. Physical Review Applied, 2020, 13, .	1.5	69
26	Allâ€Metallic Vertical Transistors Based on Stacked Dirac Materials. Advanced Functional Materials, 2015, 25, 68-77.	7.8	59
27	Anisotropic Inâ€Plane Ballistic Transport in Monolayer Black Arsenicâ€Phosphorus FETs. Advanced Electronic Materials, 2020, 6, 1901281.	2.6	59
28	Tunable band gap in few-layer graphene by surface adsorption. Scientific Reports, 2013, 3, .	1.6	55
29	Electrical contacts in monolayer blue phosphorene devices. Nano Research, 2018, 11, 1834-1849.	5.8	55
30	Gate-tunable interfacial properties of in-plane ML MX₂ 1Tâ€²â€“2H heterojunctions. Journal of Materials Chemistry C, 2018, 6, 5651-5661.	2.7	54
31	High-performance sub-10-nm monolayer black phosphorene tunneling transistors. Nano Research, 2018, 11, 2658-2668.	5.8	47
32	Flexible Mid-Infrared Radiation Modulator with Multilayer Graphene Thin Film by Ionic Liquid Gating. ACS Applied Materials & Interfaces, 2019, 11, 13538-13544.	4.0	47
33	Strong band hybridization between silicene and Ag(111) substrate. Physica E: Low-Dimensional Systems and Nanostructures, 2014, 58, 38-42.	1.3	43
34	Silicene nanomesh. Scientific Reports, 2015, 5, 9075.	1.6	42
35	Does the Dirac cone of germanene exist on metal substrates?. Physical Chemistry Chemical Physics, 2016, 18, 19451-19456.	1.3	39
36	Controlled release of recombinant human cementum protein 1 from electrospun multiphasic scaffold for cementum regeneration. International Journal of Nanomedicine, 2016, Volume 11, 3145-3158.	3.3	34

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37	n-Type Ohmic contact and p-type Schottky contact of monolayer InSe transistors. Physical Chemistry Chemical Physics, 2018, 20, 24641-24651.	1.3	33
38	Largeâ€Scale Multifunctional Carbon Nanotube Thin Film as Effective Midâ€Infrared Radiation Modulator with Longâ€Term Stability. Advanced Optical Materials, 2021, 9, 2001216.	3.6	32
39	Interfacial properties of staneneâ€“metal contacts. 2D Materials, 2016, 3, 035020.	2.0	26
40	Interfacial Properties of Monolayer Antimonene Devices. Physical Review Applied, 2019, 11, .	1.5	22
41	Ultrascaled Double-Gate Monolayer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll"><mml:msub><mml:mrow><mml:mi>Sn</mml:mi><mml:mi mathvariant="normal">S</mml:mi></mml:mrow><mml:mn>2</mml:mn></mml:msub></mml:math> MOSFETs for High-Performance and Low-Power Applications. Physical Review Applied, 2020, 14, .	1.5	21
42	Thermal infrared and broadband microwave stealth glass windows based on multi-band optimization. Optics Express, 2021, 29, 13610.	1.7	21
43	Modulating tunneling width and energy window for high-on-current two-dimensional tunnel field-effect transistors. Nano Energy, 2021, 81, 105642.	8.2	20
44	A computational study of monolayer hexagonal WTe₂ to metal interfaces. Physica Status Solidi (B): Basic Research, 2017, 254, 1600837.	0.7	17
45	Extending Channel Scaling Limit of p-MOSFETs Through Antimonene With Heavy Effective Mass and High Density of State. IEEE Transactions on Electron Devices, 2022, 69, 857-862.	1.6	17
46	Hydrothermal Synthesis of Carbon Nanoâ€Onions from Citric Acid. Chemistry - an Asian Journal, 2020, 15, 3428-3431.	1.7	16
47	Ballistic Quantum Transport of Subâ€10 nm 2D Sb 2 Te 2 Se Transistors. Advanced Electronic Materials, 2019, 5, 1900813.	2.6	14
48	Soft-chemistry synthesis, solubility and interlayer spacing of carbon nano-onions. RSC Advances, 2021, 11, 6850-6858.	1.7	14
49	n- and p-type ohmic contacts at monolayer gallium nitrideâ€“metal interfaces. Physical Chemistry Chemical Physics, 2018, 20, 24239-24249.	1.3	13
50	Computational Study of Ohmic Contact at Bilayer InSe-Metal Interfaces: Implications for Field-Effect Transistors. ACS Applied Nano Materials, 2019, 2, 6898-6908.	2.4	13
51	Layer-Dependent Photoabsorption and Photovoltaic Effects in Two-Dimensional <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll"><mml:msub><mml:mi>Bi</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:msub><mml:mrow><mml:mrow><mml:mi mathvariant="normal">O</mml:mi></mml:mrow></mml:mrow><mml:mn>2</mml:mn></mml:msub><mml:mi>X</mml:mi></mml:ma		

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55	Anisotropic interfacial properties of monolayer GeSeâ€”metal contacts. Semiconductor Science and Technology, 2019, 34, 095021.	1.0	7
56	Repairable integrated circuits for space. Nature Electronics, 2020, 3, 586-587.	13.1	5
57	Tunable and sizable band gap in silicene by surface adsorption. , 0, .		1