Zhi-Qiang Fan

List of Publications by Year
in descending order

73 papers	2,057 citations	218677 26 h-index	243625 44 g-index
73 all docs	73 docs citations	73 times ranked	1459 citing authors

#	Article	IF	Citations
1	Suppression ofâ€,short channelâ€,effects in 5.1Ânm WTe2 in-plane Schottky barrier field-effect transistors by Mo-doping. Materials Science in Semiconductor Processing, 2022, 139, 106327.	4.0	2
2	Multifunctional spintronic device based on zigzag SiC nanoribbon heterojunction via edge asymmetric dual-hydrogenation. Physica E: Low-Dimensional Systems and Nanostructures, 2022, 138, 115098.	2.7	4
3	Giant rectification of ferromagnetic zigzag SiC nanoribbons connecting anthradithiophene molecules. Wuli Xuebao/Acta Physica Sinica, 2022, 71, 078501.	0.5	1
4	Strain engineering of electronic structure and mechanical switch device for edge modified Net-Y nanoribbons. Wuli Xuebao/Acta Physica Sinica, 2022, 71, 046102.	0.5	3
5	P-type doping induced performance improvement of two-dimensional SiC transistors with 1T-phase MoS2 electrode. Physics Letters, Section A: General, Atomic and Solid State Physics, 2022, 431, 128007.	2.1	4
6	High-performance monolayer or bilayer SiC short channel transistors with metallic 1T-phase MoS2 contact. Physics Letters, Section A: General, Atomic and Solid State Physics, 2022, 436, 128070.	2.1	1
7	Methane gas adsorption and detection using the metal-decorated blue phosphorene. Applied Surface Science, 2022, 596, 153511.	6.1	11
8	High tunneling magnetoresistance induced by symmetry and quantum interference in magnetic molecular junctions. Journal of Materials Chemistry C, 2021, 9, 5876-5884.	5.5	14
9	Edge chemistry and tensile strain effects on the magnetic properties of 1D VSe₂ structures. Journal of Materials Chemistry C, 2021, 9, 12904-12919.	5.5	10
10	Publisher's Note: In-plane Schottky-barrier field-effect transistors based on <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mn>1</mml:mn><mml:mi>T</mml:mi><mml:mo>/</mml:mo><mml:mn>2 heterojunctions of transition-metal dichalcogenides [Phys. Rev. B 96 , 165402 (2017)]. Physical Review B, 2021, 103, .	3.2	1
11	Simulations of monolayer SiC transistors with metallic 1T-phase MoS₂ contact for high performance application*. Chinese Physics B, 2021, 30, 117102.	1.4	3
12	Gate-controlled reversible rectifying behavior investigated in a two-dimensional <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>MoS</mml:mi><mml:mn>2</mml:mn></mm diode. Physical Review B, 2021, 104, .	3.2	64
13	Tunable spin electronic and thermoelectric properties in twisted triangulene <i>Ï€</i> -dimer junctions. Applied Physics Letters, 2021, 119, .	3.3	48
14	Lateral heterostructures of zigzag phosphorene nanoribbons as a platform for high performance 5Ânm transistor. Journal of Physics and Chemistry of Solids, 2021, 157, 110201.	4.0	0
15	Controlling the electronic transport property of a molecular organic device by the heavy metal atomic manipulation. Physica E: Low-Dimensional Systems and Nanostructures, 2020, 116, 113732.	2.7	6
16	Selective adsorption of harmful molecules on zigzag phosphorene nanoribbon for sensing applications. Physica E: Low-Dimensional Systems and Nanostructures, 2020, 117, 113838.	2.7	5
17	Geometry, induced magnetism and modified electronic behaviors for magnetic atom adsorption on antimonene nanotubes. Physical Chemistry Chemical Physics, 2020, 22, 23665-23677.	2.8	3
18	High-performance 5.1 nm in-plane Janus WSeTe Schottky barrier field effect transistors. Nanoscale, 2020, 12, 21750-21756.	5.6	62

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19	Switchable Spin Filters in Magnetic Molecular Junctions Based on Quantum Interference. Advanced Electronic Materials, 2020, 6, 2000689.	5.1	15
20	Design of Thermal Metamaterials with Excellent Thermal Control Functions by Using Functional Nanoporous Graphene. Physica Status Solidi - Rapid Research Letters, 2020, 14, 2000333.	2.4	7
21	Impact of Gateâ€“Source/Drain Underlap on the Performance of Monolayer SiC Schottky-Barrier Field-Effect Transistor. IEEE Transactions on Electron Devices, 2020, 67, 4130-4135.	3.0	8
22	Sn-Doping and Li2SnO3 Nano-Coating Layer Co-Modified LiNi0.5Co0.2Mn0.3O2 with Improved Cycle Stability at 4.6 V Cut-off Voltage. Nanomaterials, 2020, 10, 868.	4.1	30
23	Tuning spin filtering and spin rectifying behaviors of zigzag silicon carbon nanoribbons by edge dual-hydrogenation. Organic Electronics, 2020, 84, 105808.	2.6	19
24	Tuning electronic transport properties of wide antimonene nanoribbon via edge hydrogenation and oxidation. Chemical Physics, 2020, 538, 110909.	1.9	1
25	Magneto-electronics, transport properties, and tuning effects of arsenene armchair nanotubes doped with transition metal atoms. Nanotechnology, 2020, 31, 315206.	2.6	15
26	Structural stability, magneto-electronic properties, and tuning effects for transition metal-doped net-Y nanoribbons. Journal Physics D: Applied Physics, 2020, 53, 485001.	2.8	1
27	Electronic and transport properties and physical field coupling effects for net-Y nanoribbons. Nanotechnology, 2019, 30, 485703.	2.6	10
28	Electronic structure, strain effects and transport property of armchair graphene nanoribbon with variously possible edge oxidation. Journal Physics D: Applied Physics, 2019, 52, 475301.	2.8	12
29	High-Performance Schottky-Barrier Field-Effect Transistors Based on Monolayer SiC Contacting Different Metals. IEEE Transactions on Electron Devices, 2019, 66, 5111-5116.	3.0	12
30	O-Vacancy-line defective Ti₂CO₂ nanoribbons: novel magnetism, tunable carrier mobility, and magnetic device behaviors. Journal of Materials Chemistry C, 2019, 7, 7745-7759.	5.5	63
31	Effects of width and relative position of electrode on transport properties of spintronic nanodevice. Journal Physics D: Applied Physics, 2019, 52, 155102.	2.8	7
32	Large negative differential resistance behavior in arsenene nanoribbons induced by vacant defects. Physics Letters, Section A: General, Atomic and Solid State Physics, 2019, 383, 1629-1635.	2.1	13
33	Spin-dependent carrier mobility and its gate-voltage modifying effects for functionalized single walled black phosphorus tubes. Nanotechnology, 2019, 30, 145201.	2.6	21
34	Structure stability, magneto-electronic properties, and modulation effects of Fe₃GeTe₂ nanoribbons. Wuli Xuebao/Acta Physica Sinica, 2019, 68, 208502.	0.5	3
35	Magneto-electronic properties of InSe nanoribbons terminated with non-metallic atoms and its strain modulation. Wuli Xuebao/Acta Physica Sinica, 2019, 68, 198503.	0.5	2
36	Structural and magneto-electronic properties of transition metal doped phosphorus nanotubes. Physical Chemistry Chemical Physics, 2018, 20, 13574-13579.	2.8	14

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37	Enhancement of tunneling current in phosphorene tunnel field effect transistors by surface defects. Physical Chemistry Chemical Physics, 2018, 20, 5699-5707.	2.8	13
38	Large negative differential resistance effect induced by boron-doping in zigzag phagraphene nanoribbon junctions. AIP Advances, 2018, 8, 095006.	1.3	9
39	Effects of electrode type and anchoring group on transport properties of a single molecule electronic device. Chemical Physics Letters, 2018, 713, 26-31.	2.6	1
40	Tunable rectifying performance of in-plane metalâ€“semiconductor junctions based on passivated zigzag phosphorene nanoribbons. RSC Advances, 2018, 8, 31255-31260.	3.6	3
41	Phagraphene nanoribbons: half-metallicity and magnetic phase transition by functional groups and electric field. Journal of Physics Condensed Matter, 2018, 30, 445802.	1.8	4
42	Electrical contacts and tunable rectifications in monolayer GeSe-metal junctions. Journal Physics D: Applied Physics, 2018, 51, 335104.	2.8	12
43	Improving Performances of In-Plane Transition-Metal Dichalcogenide Schottky Barrier Field-Effect Transistors. ACS Applied Materials & Interfaces, 2018, 10, 19271-19277.	8.0	89
44	Two dimensional Schottky contact structure based on in-plane zigzag phosphorene nanoribbon. Organic Electronics, 2017, 44, 20-24.	2.6	38
45	Ab initio performance predictions of single-layer Inâ€“V tunnel field-effect transistors. Physical Chemistry Chemical Physics, 2017, 19, 20121-20126.	2.8	10
46	Electronic structure and magnetic properties of penta-graphene nanoribbons. Physical Chemistry Chemical Physics, 2017, 19, 9528-9536.	2.8	65
47	Structural and magneto-electronic properties and electric field-mediated effects for transition metal-terminated zigzag h-BN nanoribbons. Physical Chemistry Chemical Physics, 2017, 19, 4469-4477.	2.8	17
48	Tuning of the electronic and transport properties of phosphorene nanoribbons by edge types and edge defects. Organic Electronics, 2017, 42, 21-27.	2.6	54
49	In-plane Schottky-barrier field-effect transistors based on 1 <i>T</i> /2 <i>H</i> heterojunctions of transition-metal dichalcogenides. Physical Review B, 2017, 96, .	3.2	117
50	Gate-controlled reversible rectifying behaviour in tunnel contacted atomically-thin MoS2 transistor. Nature Communications, 2017, 8, 970.	12.8	68
51	BN nanoflake quantum-dot arrays: structural stability, and electronic and half-metallic properties. Physical Chemistry Chemical Physics, 2017, 19, 20137-20146.	2.8	9
52	Symmetry-dependent spin transport properties of a single phenalenyl or pyrene molecular device. Carbon, 2017, 122, 687-693.	10.3	37
53	Tunable Electronic Structures of GeSe Nanosheets and Nanoribbons. Journal of Physical Chemistry C, 2017, 121, 14373-14379.	3.1	62
54	Redox control of magnetic transport properties of a single anthraquinone molecule with different contacted geometries. Carbon, 2017, 113, 18-25.	10.3	40

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55	Giant decreasing of spin current in a single molecular junction with twisted zigzag graphene nanoribbon electrodes. Carbon, 2016, 110, 200-206.	10.3	53
56	Tunable negative differential resistance in a single cruciform diamine molecule with zigzag graphene nanoribbon electrodes. RSC Advances, 2016, 6, 84978-84984.	3.6	4
57	Reversible switching in gold-atomâ€"organic-molecule complex induced by reversible bond formation. Organic Electronics, 2015, 18, 101-106.	2.6	29
58	Magnetic structure and magnetic transport characteristics of nanostructures based on armchair-edged graphene nanoribbons. Journal of Materials Chemistry C, 2015, 3, 9657-9663.	5.5	40
59	Electronic and spin transport properties in zigzag silicene nanoribbons with edge protrusions. RSC Advances, 2014, 4, 58941-58948.	3.6	20
60	Edge contact dependent spin transport for n-type doping zigzag-graphene with asymmetric edge hydrogenation. Scientific Reports, 2014, 4, 4038.	3.3	33
61	Stable Two-Dimensional Conductance Switch of Polyaniline Molecule Connecting to Graphene Nanoribbons. Scientific Reports, 2014, 4, 5976.	3.3	26
62	Altering regularities on resistances of doped Auâ€"alkanedithiolâ€"Au junctions. Organic Electronics, 2013, 14, 2705-2710.	2.6	16
63	A Dramatic Oddâ€"Even Oscillating Behavior for the Current Rectification and Negative Differential Resistance in Carbonâ€Chainâ€Modified Donorâ€"Acceptor Molecular Devices. Advanced Functional Materials, 2013, 23, 2765-2774.	14.9	86
64	Controllable low-bias negative differential resistance and rectifying behaviors induced by symmetry breaking. Applied Physics Letters, 2013, 102, .	3.3	30
65	The site effects of B or N doping on I-V characteristics of a single pyrene molecular device. Applied Physics Letters, 2012, 101, 073104.	3.3	33
66	Altering regularities of electronic transport properties in twisted graphene nanoribbons. Applied Physics Letters, 2012, 101, .	3.3	23
67	Rectifying behaviors induced by BN-doping in trigonal graphene with zigzag edges. Applied Physics Letters, 2012, 100, .	3.3	57
68	Controllable rectifying performance in a C60 molecular device with asymmetric electrodes. Journal of Applied Physics, 2011, 109, 124505.	2.5	19
69	First-principles study of side groups effects on the electronic transport in conjugated molecular device. Physica E: Low-Dimensional Systems and Nanostructures, 2010, 42, 1492-1496.	2.7	22
70	Negative differential resistance and rectifying behaviors in phenalenyl molecular device with different contact geometries. Applied Physics Letters, 2010, 96, .	3.3	166
71	Electronic transport properties in a bimolecular device modulated with different side groups. Journal of Applied Physics, 2010, 107, .	2.5	25
72	Transition from insulator to metal induced by hybridized connection of graphene and boron nitride nanoribbons. Applied Physics Letters, 2010, 97, .	3.3	135

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73	Theoretical investigation of the negative differential resistance in squashed C60 molecular device. Applied Physics Letters, 2008, 92, .	3.3	97