

Zhi-Qiang Fan

List of Publications by Year in descending order

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73
papers

2,057
citations

218677

26
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44
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73
all docs

73
docs citations

73
times ranked

1459
citing authors

#	ARTICLE	IF	CITATIONS
1	Negative differential resistance and rectifying behaviors in phenalenyl molecular device with different contact geometries. Applied Physics Letters, 2010, 96, .	3.3	166
2	Transition from insulator to metal induced by hybridized connection of graphene and boron nitride nanoribbons. Applied Physics Letters, 2010, 97, .	3.3	135
3	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
4	Theoretical investigation of the negative differential resistance in squashed C60 molecular device. Applied Physics Letters, 2008, 92, .	3.3	97
5	Improving Performances of In-Plane Transition-Metal Dichalcogenide Schottky Barrier Field-Effect Transistors. ACS Applied Materials & Interfaces, 2018, 10, 19271-19277.	8.0	89
6	A Dramatic Odd-Even Oscillating Behavior for the Current Rectification and Negative Differential Resistance in Carbon-Chain-Modified Donor-Acceptor Molecular Devices. Advanced Functional Materials, 2013, 23, 2765-2774.	14.9	86
7	Gate-controlled reversible rectifying behaviour in tunnel contacted atomically-thin MoS2 transistor. Nature Communications, 2017, 8, 970.	12.8	68
8	Electronic structure and magnetic properties of penta-graphene nanoribbons. Physical Chemistry Chemical Physics, 2017, 19, 9528-9536.	2.8	65
9	Gate-controlled reversible rectifying behavior investigated in a two-dimensional MoS_2 diode. Physical Review B, 2021, 104, .	11.2	64
10	O-Vacancy-line defective Ti_2CO_2 nanoribbons: novel magnetism, tunable carrier mobility, and magnetic device behaviors. Journal of Materials Chemistry C, 2019, 7, 7745-7759.	5.5	63
11	Tunable Electronic Structures of GeSe Nanosheets and Nanoribbons. Journal of Physical Chemistry C, 2017, 121, 14373-14379.	3.1	62
12	High-performance 5.1 nm in-plane Janus WSeTe Schottky barrier field effect transistors. Nanoscale, 2020, 12, 21750-21756.	5.6	62
13	Rectifying behaviors induced by BN-doping in trigonal graphene with zigzag edges. Applied Physics Letters, 2012, 100, .	3.3	57
14	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
15	Giant decreasing of spin current in a single molecular junction with twisted zigzag graphene nanoribbon electrodes. Carbon, 2016, 110, 200-206.	10.3	53
16	Tunable spin electronic and thermoelectric properties in twisted triangulene <i>b</i> -dimer junctions. Applied Physics Letters, 2021, 119, .	3.3	48
17	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
18	Redox control of magnetic transport properties of a single anthraquinone molecule with different contacted geometries. Carbon, 2017, 113, 18-25.	10.3	40

#	ARTICLE	IF	CITATIONS
19	Two dimensional Schottky contact structure based on in-plane zigzag phosphorene nanoribbon. <i>Organic Electronics</i> , 2017, 44, 20-24.	2.6	38
20	Symmetry-dependent spin transport properties of a single phenalenyl or pyrene molecular device. <i>Carbon</i> , 2017, 122, 687-693.	10.3	37
21	The site effects of B or N doping on I-V characteristics of a single pyrene molecular device. <i>Applied Physics Letters</i> , 2012, 101, 073104.	3.3	33
22	Edge contact dependent spin transport for n-type doping zigzag-graphene with asymmetric edge hydrogenation. <i>Scientific Reports</i> , 2014, 4, 4038.	3.3	33
23	Controllable low-bias negative differential resistance and rectifying behaviors induced by symmetry breaking. <i>Applied Physics Letters</i> , 2013, 102, .	3.3	30
24	Sn-Doping and Li ₂ SnO ₃ Nano-Coating Layer Co-Modified LiNi _{0.5} Co _{0.2} Mn _{0.3} O ₂ with Improved Cycle Stability at 4.6 V Cut-off Voltage. <i>Nanomaterials</i> , 2020, 10, 868.	4.1	30
25	Reversible switching in gold-atom-organic-molecule complex induced by reversible bond formation. <i>Organic Electronics</i> , 2015, 18, 101-106.	2.6	29
26	Stable Two-Dimensional Conductance Switch of Polyaniline Molecule Connecting to Graphene Nanoribbons. <i>Scientific Reports</i> , 2014, 4, 5976.	3.3	26
27	Electronic transport properties in a bimolecular device modulated with different side groups. <i>Journal of Applied Physics</i> , 2010, 107, .	2.5	25
28	Altering regularities of electronic transport properties in twisted graphene nanoribbons. <i>Applied Physics Letters</i> , 2012, 101, .	3.3	23
29	First-principles study of side groups effects on the electronic transport in conjugated molecular device. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2010, 42, 1492-1496.	2.7	22
30	Spin-dependent carrier mobility and its gate-voltage modifying effects for functionalized single walled black phosphorus tubes. <i>Nanotechnology</i> , 2019, 30, 145201.	2.6	21
31	Electronic and spin transport properties in zigzag silicene nanoribbons with edge protrusions. <i>RSC Advances</i> , 2014, 4, 58941-58948.	3.6	20
32	Controllable rectifying performance in a C ₆₀ molecular device with asymmetric electrodes. <i>Journal of Applied Physics</i> , 2011, 109, 124505.	2.5	19
33	Tuning spin filtering and spin rectifying behaviors of zigzag silicon carbon nanoribbons by edge dual-hydrogenation. <i>Organic Electronics</i> , 2020, 84, 105808.	2.6	19
34	Structural and magneto-electronic properties and electric field-mediated effects for transition metal-terminated zigzag h-BN nanoribbons. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 4469-4477.	2.8	17
35	Altering regularities on resistances of doped Au-alkanedithiol-Au junctions. <i>Organic Electronics</i> , 2013, 14, 2705-2710.	2.6	16
36	Switchable Spin Filters in Magnetic Molecular Junctions Based on Quantum Interference. <i>Advanced Electronic Materials</i> , 2020, 6, 2000689.	5.1	15

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37	Magneto-electronics, transport properties, and tuning effects of arsenene armchair nanotubes doped with transition metal atoms. <i>Nanotechnology</i> , 2020, 31, 315206.	2.6	15
38	Structural and magneto-electronic properties of transition metal doped phosphorus nanotubes. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 13574-13579.	2.8	14
39	High tunneling magnetoresistance induced by symmetry and quantum interference in magnetic molecular junctions. <i>Journal of Materials Chemistry C</i> , 2021, 9, 5876-5884.	5.5	14
40	Enhancement of tunneling current in phosphorene tunnel field effect transistors by surface defects. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 5699-5707.	2.8	13
41	Large negative differential resistance behavior in arsenene nanoribbons induced by vacant defects. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2019, 383, 1629-1635.	2.1	13
42	Electrical contacts and tunable rectifications in monolayer GeSe-metal junctions. <i>Journal Physics D: Applied Physics</i> , 2018, 51, 335104.	2.8	12
43	Electronic structure, strain effects and transport property of armchair graphene nanoribbon with variously possible edge oxidation. <i>Journal Physics D: Applied Physics</i> , 2019, 52, 475301.	2.8	12
44	High-Performance Schottky-Barrier Field-Effect Transistors Based on Monolayer SiC Contacting Different Metals. <i>IEEE Transactions on Electron Devices</i> , 2019, 66, 5111-5116.	3.0	12
45	Methane gas adsorption and detection using the metal-decorated blue phosphorene. <i>Applied Surface Science</i> , 2022, 596, 153511.	6.1	11
46	Ab initio performance predictions of single-layer In ϵ V tunnel field-effect transistors. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 20121-20126.	2.8	10
47	Electronic and transport properties and physical field coupling effects for net-Y nanoribbons. <i>Nanotechnology</i> , 2019, 30, 485703.	2.6	10
48	Edge chemistry and tensile strain effects on the magnetic properties of 1D VSe ϵ 2 structures. <i>Journal of Materials Chemistry C</i> , 2021, 9, 12904-12919.	5.5	10
49	BN nanoflake quantum-dot arrays: structural stability, and electronic and half-metallic properties. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 20137-20146.	2.8	9
50	Large negative differential resistance effect induced by boron-doping in zigzag phagraphene nanoribbon junctions. <i>AIP Advances</i> , 2018, 8, 095006.	1.3	9
51	Impact of Gate ϵ Source/Drain Underlap on the Performance of Monolayer SiC Schottky-Barrier Field-Effect Transistor. <i>IEEE Transactions on Electron Devices</i> , 2020, 67, 4130-4135.	3.0	8
52	Effects of width and relative position of electrode on transport properties of spintronic nanodevice. <i>Journal Physics D: Applied Physics</i> , 2019, 52, 155102.	2.8	7
53	Design of Thermal Metamaterials with Excellent Thermal Control Functions by Using Functional Nanoporous Graphene. <i>Physica Status Solidi - Rapid Research Letters</i> , 2020, 14, 2000333.	2.4	7
54	Controlling the electronic transport property of a molecular organic device by the heavy metal atomic manipulation. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2020, 116, 113732.	2.7	6

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55	Selective adsorption of harmful molecules on zigzag phosphorene nanoribbon for sensing applications. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2020, 117, 113838.	2.7	5
56	Tunable negative differential resistance in a single cruciform diamine molecule with zigzag graphene nanoribbon electrodes. <i>RSC Advances</i> , 2016, 6, 84978-84984.	3.6	4
57	Phagraphene nanoribbons: half-metallicity and magnetic phase transition by functional groups and electric field. <i>Journal of Physics Condensed Matter</i> , 2018, 30, 445802.	1.8	4
58	Multifunctional spintronic device based on zigzag SiC nanoribbon heterojunction via edge asymmetric dual-hydrogenation. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2022, 138, 115098.	2.7	4
59	P-type doping induced performance improvement of two-dimensional SiC transistors with 1T-phase MoS ₂ electrode. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2022, 431, 128007.	2.1	4
60	Tunable rectifying performance of in-plane metal-semiconductor junctions based on passivated zigzag phosphorene nanoribbons. <i>RSC Advances</i> , 2018, 8, 31255-31260.	3.6	3
61	Geometry, induced magnetism and modified electronic behaviors for magnetic atom adsorption on antimonene nanotubes. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 23665-23677.	2.8	3
62	Simulations of monolayer SiC transistors with metallic 1T-phase MoS ₂ contact for high performance application*. <i>Chinese Physics B</i> , 2021, 30, 117102.	1.4	3
63	Structure stability, magneto-electronic properties, and modulation effects of Fe ₃ GeTe ₂ nanoribbons. <i>Wuli Xuebao/Acta Physica Sinica</i> , 2019, 68, 208502.	0.5	3
64	Strain engineering of electronic structure and mechanical switch device for edge modified Net-Y nanoribbons. <i>Wuli Xuebao/Acta Physica Sinica</i> , 2022, 71, 046102.	0.5	3
65	Magneto-electronic properties of InSe nanoribbons terminated with non-metallic atoms and its strain modulation. <i>Wuli Xuebao/Acta Physica Sinica</i> , 2019, 68, 198503.	0.5	2
66	Suppression of short channel effects in 5.1 nm WTe ₂ in-plane Schottky barrier field-effect transistors by Mo-doping. <i>Materials Science in Semiconductor Processing</i> , 2022, 139, 106327.	4.0	2
67	Effects of electrode type and anchoring group on transport properties of a single molecule electronic device. <i>Chemical Physics Letters</i> , 2018, 713, 26-31.	2.6	1
68	Tuning electronic transport properties of wide antimonene nanoribbon via edge hydrogenation and oxidation. <i>Chemical Physics</i> , 2020, 538, 110909.	1.9	1
69	Publisher's Note: In-plane Schottky-barrier field-effect transistors based on heterojunctions of transition-metal dichalcogenides [Phys. Rev. B, 96, 165402 (2017)]. <i>Physical Review B</i> , 2021, 103, ...	3.2	1
70	Structural stability, magneto-electronic properties, and tuning effects for transition metal-doped net-Y nanoribbons. <i>Journal Physics D: Applied Physics</i> , 2020, 53, 485001.	2.8	1
71	Giant rectification of ferromagnetic zigzag SiC nanoribbons connecting anthradithiophene molecules. <i>Wuli Xuebao/Acta Physica Sinica</i> , 2022, 71, 078501.	0.5	1
72	High-performance monolayer or bilayer SiC short channel transistors with metallic 1T-phase MoS ₂ contact. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2022, 436, 128070.	2.1	1

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73	Lateral heterostructures of zigzag phosphorene nanoribbons as a platform for high performance 5Ånm transistor. Journal of Physics and Chemistry of Solids, 2021, 157, 110201.	4.0	0