Bin Wang

List of Publications by Year
in descending order

53	956	471371 17	477173 29
papers	citations	h-index	g-index

53	53	53	923
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Spin-dependent transport in Fe-doped carbon nanotubes. Physical Review B, 2007, 75, .	1.1	72
2	Spin-dependent Seebeck effects in graphene-based molecular junctions. Physical Review B, 2016, 93, .	1.1	63
3	Spin-polarized and valley helical edge modes in graphene nanoribbons. Physical Review B, 2011, 84, .	1.1	53
4	Novel Two-Dimensional Layered MoSi2Z4 (Z = P, As): New Promising Optoelectronic Materials. Nanomaterials, 2021, 11, 559.	1.9	52
5	Electronics and optoelectronics of lateral heterostructures within monolayer indium monochalcogenides. Journal of Materials Chemistry C, 2016, 4, 11253-11260.	2.7	49
6	Ab initiocalculation of transverse spin current in graphene nanostructures. Physical Review B, 2009, 79, .	1.1	43
7	KAgSe: A New Two-Dimensional Efficient Photovoltaic Material with Layer-Independent Behaviors. ACS Applied Materials & Interfaces, 2018, 10, 41670-41677.	4.0	41
8	Modulation of Electronic Structure of Armchair MoS₂ Nanoribbon. Journal of Physical Chemistry C, 2015, 119, 22164-22171.	1.5	39
9	First-principles investigation of dynamical properties of molecular devices under a steplike pulse. Physical Review B, 2010, 82, .	1.1	36
10	C₂N/BlueP van der Waals hetero-structure: an efficient photocatalytic water splitting 2D material. Physical Chemistry Chemical Physics, 2020, 22, 1485-1492.	1.3	34
11	Giant tunnel magneto-resistance in graphene based molecular tunneling junction. Nanoscale, 2016, 8, 3432-3438.	2.8	30
12	BX₁â€“BX₂ (X₁, X₂ = P, As, Sb) lateral heterostructure: novel and efficient two-dimensional photovoltaic materials with ultra-high carrier mobilities. Journal of Materials Chemistry A, 2019, 7, 10684-10695.	5.2	30
13	Transient dynamics of molecular devices under a steplike pulse bias. Physical Review B, 2010, 81, .	1.1	29
14	Oscillation of dynamic conductance of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>Al-C</mml:mtext></mml:mrow><mml:mi>n</mml:mi></mml:msub> Nonequilibrium Greenâ€™s function and density functional theory study. Physical Review B, 2009, 79, .	1.1	25
15	First-principles investigation of transport properties through longitudinal unzipped carbon nanotubes. Physical Review B, 2010, 81, .	1.1	22
16	Gate-tunable large spin polarization in a few-layer black phosphorus-based spintronic device. Nanoscale, 2019, 11, 11872-11878.	2.8	19
17	First-principles calculation of current density in molecular devices. Physical Review B, 2011, 84, .	1.1	18
18	Transmission spectra and valley processing of graphene and carbon nanotube superlattices with inter-valley coupling. New Journal of Physics, 2016, 18, 113011.	1.2	18

#	Article	IF	Citations
19	Emerging negative differential resistance effects and novel tunable electronic behaviors of the broken-gap KAgSe/SiC₂ van der Waals heterojunction. Journal of Materials Chemistry C, 2020, 8, 8107-8119.	2.7	17
20	Pure spin current and phonon thermoelectric transport in a triangulene-based molecular junction. Physical Chemistry Chemical Physics, 2018, 20, 15736-15745.	1.3	16
21	First-principles investigation of alternating current density distribution in molecular devices. Physical Review B, 2012, 86, .	1.1	15
22	Spin-resolved quantum transport in graphene-based nanojunctions. Frontiers of Physics, 2017, 12, 1.	2.4	14
23	Spin polarizedI-Vcharacteristics and shot noise of Pt atomic wires. Physical Review B, 2011, 84, .	1.1	12
24	Transient dynamics of magnetic Coâ€“graphene systems. Nanoscale, 2015, 7, 10030-10038.	2.8	12
25	One-dimensional topological superconductivity at the edges of twisted bilayer graphene nanoribbons. Physical Review B, 2019, 100, .	1.1	12
26	Two-dimensional few-layered PC₃ as a promising photocatalyst for overall water splitting. Physical Chemistry Chemical Physics, 2020, 22, 9477-9486.	1.3	12
27	Majorana polarization in non-Hermitian topological superconductors. Physical Review B, 2021, 103, .	1.1	12
28	On the origin of enhanced resistive switching behaviors of Ti-doped HfO2 film with nitrogen annealing atmosphere. Surface and Coatings Technology, 2019, 359, 150-154.	2.2	11
29	Photoinduced valley-polarized current of layered MoS₂by electric tuning. Nanotechnology, 2016, 27, 185202.	1.3	10
30	Coreâ€“shell PdAu nanocluster catalysts to suppress sulfur poisoning. Physical Chemistry Chemical Physics, 2021, 23, 15010-15019.	1.3	10
31	Tunable electronic properties and band alignments of Inâ€“arsenene heterostructures via external strain and electric field. New Journal of Chemistry, 2021, 45, 2508-2519.	1.4	10
32	Charge relaxation resistance at atomic scale: Anab initiocalculation. Physical Review B, 2008, 77, .	1.1	9
33	Multiphoton absorption of three chiral diketopyrrolopyrrole derivatives in near-infrared window I and II. Optical Materials Express, 2017, 7, 3529.	1.6	9
34	Two-Dimensional As/BlueP van der Waals Hetero-Structure as a Promising Photocatalyst for Water Splitting: A DFT Study. Coatings, 2020, 10, 1160.	1.2	9
35	Unconventional real-complex spectral transition and Majorana zero modes in nonreciprocal quasicrystals. Physical Review B, 2021, 104, .	1.1	9
36	First-principles calculation of chiral current and quantum self-inductance of carbon nanotubes. Physical Review B, 2009, 80, .	1.1	7

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37	Thermoelectric transport properties of ferromagnetic graphene with <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>C</mml:mi><mml:mi>T</mml:mi></mml:mrow></mml: -invariant quantum spin Hall effect. Physical Review B, 2020, 102, .	3.7	7
38	Universal co-existence of photovoltaics and ferroelectricity from a two-dimensional 3R bilayer BX (X) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	2.7	7
39	First-principles calculation of the Andreev conductance of carbon wires. Physical Review B, 2012, 86, .	1.1	6
40	Hydrogenation Induced Carrier Mobility Polarity Reversal in Monolayer AlN. Physica Status Solidi - Rapid Research Letters, 2017, 11, 1700260.	1.2	6
41	First-principles investigation of quantum transport in GeP3 nanoribbon-based tunneling junctions. Frontiers of Physics, 2018, 13, 1.	2.4	6
42	Fundamental understanding of electrocatalysis over layered double hydroxides from the aspects of crystal and electronic structures. Nanoscale, 2022, 14, 1107-1122.	2.8	6
43	Topological superconductors and exact mobility edges in non-Hermitian quasicrystals. Physical Review B, 2022, 105, .	1.1	6
44	Shot noise of spin current and spin transfer torque. Nanotechnology, 2013, 24, 155202.	1.3	5
45	First principles modeling of pure black phosphorus devices under pressure. Beilstein Journal of Nanotechnology, 2019, 10, 1943-1951.	1.5	5
46	First principles research on the dynamic conductance and transient current of black phosphorus transistor. Journal Physics D: Applied Physics, 2019, 52, 165303.	1.3	5
47	Transport features of topological corner states in honeycomb lattice with multihollow structure. Frontiers of Physics, 2022, 17, 1.	2.4	5
48	ac response of a carbon chain under a finite frequency bias. Journal of Chemical Physics, 2007, 127, 104701.	1.2	4
49	The topological quantum phase transitions in Lieb lattice driven by the Rashba SOC and exchange field. European Physical Journal B, 2016, 89, 1.	0.6	3
50	Spin-related thermoelectric transport in wedge-shaped graphene nanoribbon junctions. Physica E: Low-Dimensional Systems and Nanostructures, 2019, 112, 109-114.	1.3	2
51	Frequency-dependent transport properties in disordered systems: A generalized coherent potential approximation approach. Physical Review B, 2019, 99, .	1.1	2
52	Dynamic response of silicon nanostructures at finite frequency: An orbital-free density functional theory and non-equilibrium Green's function study. Journal of Applied Physics, 2013, 114, 153703.	1.1	1
53	Spin-orbit proximity effect and topological superconductivity in graphene/transition-metal dichalcogenide nanoribbons. New Journal of Physics, 0, , .	1.2	1