Feng-Chuan Chuang

List of Publications by Year in Descending Order

102 papers	2,231 citations	26 h-index	43 g-index
115 ext. papers	2,770 ext. citations	5.2 avg, IF	4.98 L-index

#	Paper	IF	Citations
102	Quantum spin Hall insulating phase and van Hove singularities in Zintl single-quintuple-layer AM2X2 (A = Ca, Sr, or Ba; M = Zn or Cd; X = Sb or Bi) family. *Applied Physics Reviews*, **2022**, 9, 011410	17.3	2
101	Prediction of topological Dirac semimetal in Ca-based Zintl layered compounds CaMX (M = Zn or Cd; X = N, P, As, Sb, or Bi).. *Scientific Reports*, **2022**, 12, 4582	4.9	0
100	Robust Tunable Large-Gap Quantum Spin Hall States in Monolayer CuS on Insulating Substrates.. *ACS Omega*, **2022**, 7, 15760-15768	3.9	0
99	Doping limitation due to self-compensation by native defects in In-doped rocksalt CdZnO. *Journal of Physics Condensed Matter*, **2021**, 34,	1.8	1
98	Tuning topological phases and electronic properties of monolayer ternary transition metal chalcogenides (ABX4, A/B = Zr, Hf, or Ti; X = S, Se, or Te). *Applied Physics Letters*, **2021**, 118, 111901	3.4	7
97	Band Engineering and Van Hove Singularity on HfX2 Thin Films (X = S, Se, or Te). *ACS Applied Electronic Materials*, **2021**, 3, 1071-1079	4	3
96	Dimensional crossover and band topology evolution in ultrathin semimetallic NiTe2 films. *Npj 2D Materials and Applications*, **2021**, 5,	8.8	2
95	Coexistence of topological nontrivial and spin-gapless semiconducting behavior in MnPO4: A composite quantum compound. *Physical Review B*, **2021**, 103,	3.3	1
94	Quantum well electronic states in spatially decoupled 2D Pb nanoislands on Nb-doped SrTiO3(0 0 1). *Applied Surface Science*, **2021**, 537, 147967	6.7	0
93	Tailoring long-range superlattice chirality in molecular self-assemblies weak fluorine-mediated interactions. *Physical Chemistry Chemical Physics*, **2021**, 23, 21489-21495	3.6	0
92	Manifold dynamic non-covalent interactions for steering molecular assembly and cyclization. *Chemical Science*, **2021**, 12, 11659-11667	9.4	3
91	Evolution of the Electronic Properties of ZrX2 (X = S, Se, or Te) Thin Films under Varying Thickness. *Journal of Physical Chemistry C*, **2021**, 125, 1134-1142	3.8	7
90	Itinerant ferromagnetism mediated by giant spin polarization of the metallic ligand band in the van der Waals magnet Fe5GeTe2. *Physical Review B*, **2021**, 103,	3.3	5
89	Prediction of massless Dirac fermions in a carbon nitride covalent network. *Applied Physics Letters*, **2021**, 118, 133104	3.4	2
88	Theoretical prediction of topological insulators in two-dimensional ternary transition metal chalcogenides (MMPX4, M□=□Ta, Nb, or V; MP= Ir, Rh, or Co; X□=□Se or Te). *Chinese Journal of Physics*, **2021**, 73, 95-102	3.5	6
87	Magnetic and topological properties in hydrogenated transition metal dichalcogenide monolayers. *Chinese Journal of Physics*, **2020**, 66, 15-23	3.5	12
86	Layer-dependent band engineering of Pd dichalcogenides: a first-principles study. *New Journal of Physics*, **2020**, 22, 053010	2.9	13

85	Hybridizing Plasmonic Materials with 2D-Transition Metal Dichalcogenides toward Functional Applications. *Small*, **2020**, 16, e1904271	11	49
84	Dimensionality-Mediated Semimetal-Semiconductor Transition in Ultrathin PtTe_{2} Films. *Physical Review Letters*, **2020**, 124, 036402	7.4	28
83	Giant Emission Enhancement of Solid-State Gold Nanoclusters by Surface Engineering. *Angewandte Chemie*, **2020**, 132, 8347-8353	3.6	7
82	Tailoring magnetism in self-intercalated Cr1+Te2 epitaxial films. *Physical Review Materials*, **2020**, 4,	3.2	7
81	HOT Graphene and HOT Graphene Nanotubes: New Low Dimensional Semimetals and Semiconductors. *Nanoscale Research Letters*, **2020**, 15, 56	5	1
80	Extended phase Bi atomic layer on Si(1 1 1) fabricated by thermal desorption. *Applied Surface Science*, **2020**, 504, 144103	6.7	3
79	Correlating structural, electronic, and magnetic properties of epitaxial VSe2 thin films. *Physical Review B*, **2020**, 102,	3.3	7
78	Quantum anomalous Hall insulator phases in Fe-doped GaBi honeycomb. *Chinese Journal of Physics*, **2020**, 67, 246-252	3.5	4
77	Large-gap topological insulators in functionalized ordered double transition metal carbide MXenes. *Physical Review B*, **2020**, 102,	3.3	7
76	Fermionic order by disorder in a van der Waals antiferromagnet. *Scientific Reports*, **2020**, 10, 15311	4.9	3
75	Antisymmetric Magnetoresistance in a van der Waals Antiferromagnetic/Ferromagnetic Layered MnPS/FeGeTe Stacking Heterostructure. *ACS Nano*, **2020**, 14, 12037-12044	16.7	20
74	Spin-orbit quantum impurity in a topological magnet. *Nature Communications*, **2020**, 11, 4415	17.4	20
73	2D Transition Metal Dichalcogenides: Hybridizing Plasmonic Materials with 2D-Transition Metal Dichalcogenides toward Functional Applications (Small 15/2020). *Small*, **2020**, 16, 2070081	11	
72	Giant Emission Enhancement of Solid-State Gold Nanoclusters by Surface Engineering. *Angewandte Chemie - International Edition*, **2020**, 59, 8270-8276	16.4	28
71	Predicting two-dimensional topological phases in Janus materials by substitutional doping in transition metal dichalcogenide monolayers. *Npj 2D Materials and Applications*, **2019**, 3,	8.8	25
70	Synthesis and characterization of a single-layer conjugated metal-organic structure featuring a non-trivial topological gap. *Nanoscale*, **2019**, 11, 878-881	7.7	25
69	Controlling the Polarity of the Molecular Beam Epitaxy Grown In-Bi Atomic Film on the Si(111) Surface. *Scientific Reports*, **2019**, 9, 756	4.9	4
68	Structural and electronic properties of T graphene nanotubes: a first-principles study. *New Journal of Physics*, **2019**, 21, 053015	2.9	6

67	Engineering Surface Structure of Spinel Oxides via High-Valent Vanadium Doping for Remarkably Enhanced Electrocatalytic Oxygen Evolution Reaction. *ACS Applied Materials & Interfaces*, **2019** , 11, 33012-33021	9.5	36
66	Edge states in the honeycomb reconstruction of two-dimensional silicon nanosheets. *Applied Physics Letters*, **2019**, 115, 023102	3.4	2
65	Atomically precise bottom-up synthesis of extended [5]triangulene. *Science Advances*, **2019**, 5, eaav7717	14.3	86
64	Effects of oxygen stoichiometry on the phase stability of sputter-deposited CdxZn1 O alloys. *Physical Review Materials*, **2019**, 3,	3.2	7
63	Quantum Phase Transition of Correlated Iron-Based Superconductivity in LiFe_{1-x}Co_{x}As. *Physical Review Letters*, **2019**, 123, 217004	7.4	11
62	Thickness dependent electronic properties of Pt dichalcogenides. *Npj 2D Materials and Applications*, **2019**, 3,	8.8	84
61	Phase-Engineered PtSe -Layered Films by a Plasma-Assisted Selenization Process toward All PtSe -Based Field Effect Transistor to Highly Sensitive, Flexible, and Wide-Spectrum Photoresponse Photodetectors. *Small*, **2018**, 14, e1800032	11	54
60	Selection Role of Metal Oxides into Transition Metal Dichalcogenide Monolayers by a Direct Selenization Process. *ACS Applied Materials & Interfaces*, **2018**, 10, 9645-9652	9.5	12
59	Prediction of Quantum Anomalous Hall Effect in MBi and MSb (M:Ti, Zr, and Hf) Honeycombs. *Nanoscale Research Letters*, **2018**, 13, 43	5	9
58	Nonsymmorphic cubic Dirac point and crossed nodal rings across the ferroelectric phase transition in LiOsO3. *Physical Review Materials*, **2018**, 2,	3.2	24
57	Carrier recombination dynamics in electronically coupled multi-layer InAs/GaAs quantum dots. *Journal of Luminescence*, **2018**, 195, 109-115	3.8	2
56	Prediction of two-dimensional organic topological insulator in metal-DCB lattices. *Applied Physics Letters*, **2018**, 113, 233301	3.4	6
55	Growth of a predicted two-dimensional topological insulator based on InBi-Si(111)-7 . *Physical Review B*, **2018**, 98,	3.3	17
54	Chemically induced large-gap quantum anomalous Hall insulator states in III-Bi honeycombs. *Npj Computational Materials*, **2017**, 3,	10.9	11
53	Quantum anomalous Hall insulator phase in asymmetrically functionalized germanene. *Physical Review B*, **2017**, 96,	3.3	13
52	Thermally Strained Band Gap Engineering of Transition-Metal Dichalcogenide Bilayers with Enhanced Light-Matter Interaction toward Excellent Photodetectors. *ACS Nano*, **2017**, 11, 8768-8776	16.7	47
51	Two-dimensional Topological Crystalline Insulator Phase in Sb/Bi Planar Honeycomb with Tunable Dirac Gap. *Scientific Reports*, **2016**, 6, 18993	4.9	14
50	Prediction of two-dimensional topological insulator by forming a surface alloy on Au/Si(111) substrate. *Physical Review B*, **2016**, 93,	3.3	22

49	Prediction of Quantum Anomalous Hall Insulator in half-fluorinated GaBi Honeycomb. *Scientific Reports*, **2016**, 6, 31317	4.9	8
48	Tunable magnetic states on the zigzag edges of hydrogenated and halogenated group-IV nanoribbons. *Scientific Reports*, **2016**, 6, 39083	4.9	11
47	Direct evidence of interaction-induced Dirac cones in a monolayer silicene/Ag(111) system. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, 14656-14661	11.5	52
46	First-principles calculated decomposition pathways for LiBH4 nanoclusters. *Scientific Reports*, **2016**, 6, 26056	4.9	11
45	The nontrivial electronic structure of Bi/Sb honeycombs on SiC(0001). *New Journal of Physics*, **2015**, 17, 025005	2.9	75
44	Robust Large Gap Two-Dimensional Topological Insulators in Hydrogenated III-V Buckled Honeycombs. *Nano Letters*, **2015**, 15, 6568-74	11.5	80
43	Predicted Growth of Two-Dimensional Topological Insulator Thin Films of III-V Compounds on Si(111) Substrate. *Scientific Reports*, **2015**, 5, 15463	4.9	39
42	Quantum Spin Hall States in Stanene/Ge(111). *Scientific Reports*, **2015**, 5, 14196	4.9	35
41	Prediction of large-gap two-dimensional topological insulators consisting of bilayers of group III elements with Bi. *Nano Letters*, **2014**, 14, 2505-8	11.5	153
40	First-principles study of atomic structures and electronic properties of ultrathin Bi films on Ge(111). *Surface Science*, **2014**, 626, 68-75	1.8	8
39	Strain driven topological phase transitions in atomically thin films of group IV and V elements in the honeycomb structures. *New Journal of Physics*, **2014**, 16, 105018	2.9	48
38	Tunable topological electronic structure of silicene on a semiconducting Bi/Si(111)-3□ substrate. *Physical Review B*, **2014**, 90,	3.3	11
37	Stable structure of high In coverage on Si(111)□□-Au. *Physical Review B*, **2014**, 90,	3.3	4
36	Hydrogenated ultra-thin tin films predicted as two-dimensional topological insulators. *New Journal of Physics*, **2014**, 16, 115008	2.9	49
35	First-principles study of Bi and Sb intercalated graphene on SiC(0001) substrate. *Surface Science*, **2013**, 616, 149-154	1.8	19
34	Enhanced nucleation of Al islands on H-dosed Si(100)-2 □1 surface: A combined density functional theory and kinetic Monte Carlo study. *Surface Science*, **2013**, 617, 73-80	1.8	6
33	Tunable topological electronic structures in Sb(111) bilayers: A first-principles study. *Applied Physics Letters*, **2013**, 102, 022424	3.4	92
32	Nontrivial topological electronic structures in a single Bi(111) bilayer on different substrates: A first-principles study. *Physical Review B*, **2013**, 88,	3.3	73

31	Electronic structure of the indium-adsorbed Au/Si(111)-3×3 surface: A first-principles study. *Physical Review B*, **2012**, 85,	3.3	12
30	Electronic structures of an epitaxial graphene monolayer on SiC(0001) after metal intercalation (metal = Al, Ag, Au, Pt, and Pd): A first-principles study. *Applied Physics Letters*, **2012**, 100, 063115	3.4	26
29	Structural and electronic properties of hydrogen adsorptions on BC3 sheet and graphene: a comparative study. *Nanotechnology*, **2011**, 22, 135703	3.4	22
28	MODELING OF CO-DEPOSITION OF INDIUM AND TIN ON SILICON(100): A KINETIC MONTE CARLO STUDY. *International Journal of Modern Physics B*, **2011**, 25, 1889-1898	1.1	6
27	Electronic structures of an epitaxial graphene monolayer on SiC(0001) after gold intercalation: a first-principles study. *Nanotechnology*, **2011**, 22, 275704	3.4	17
26	Influence of strain on the hexagonal motifs of the Ir(100) surface reconstructions: A first-principles study. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2010**, 28, 1366-1370	2.9	3
25	Electronic structure of the Pb/Si(111)(7×3) surface reconstruction: A first-principles study. *Physical Review B*, **2010**, 81,	3.3	10
24	Atomic structure and mechanical properties of BC2N superlattice. *Diamond and Related Materials*, **2010**, 19, 1341-1347	3.5	5
23	Room-temperature deposition of group III metals on Si(100): A comparative study of nucleation behavior. *Surface Science*, **2010**, 604, 396-403	1.8	16
22	The screening effect on field enhancement factor of the finite-length small radius single-walled carbon nanotubes. *Journal of Applied Physics*, **2009**, 106, 014301	2.5	10
21	A kinetic Monte Carlo study on the role of defects and detachment in the formation and growth of In chains on Si(100). *Journal of Physics Condensed Matter*, **2009**, 21, 405002	1.8	11
20	Kinetic Monte Carlo simulation of an atomistic model for oxide island formation and step pinning during etching by oxygen of vicinal Si(100). *Thin Solid Films*, **2009**, 517, 1949-1957	2.2	6
19	Honeycomb chain structure of the Au-Si(111)(5×2) surface reconstruction: A first-principles study. *Physical Review B*, **2008**, 77,	3.3	20
18	Atomic and electronic structures of Ag/Si(111)-c(12×2) surface: A first-principles study. *Physical Review B*, **2008**, 78,	3.3	7
17	The Structure of Ultrathin H-Passivated [112] Silicon Nanowires. *Journal of Physical Chemistry C*, **2007**, 111, 7933-7937	3.8	24
16	Geometries and stabilities of Ag-doped Si n (n=1-13) clusters: a first-principles study. *Journal of Chemical Physics*, **2007**, 127, 144313	3.9	45
15	First-principles study of indium-stabilized {103} facets in Ge quantum dots. *Physical Review B*, **2007**, 75,	3.3	6
14	On the structure of the Si(103) surface. *Applied Physics Letters*, **2007**, 91, 171909	3.4	7

13	Sugar Folding: A Novel Structural Prediction Tool for Oligosaccharides and Polysaccharides 1. *Journal of Chemical Theory and Computation*, **2007**, 3, 1620-8	6.4	16
12	Sugar Folding: A Novel Structural Prediction Tool for Oligosaccharides and Polysaccharides 2. *Journal of Chemical Theory and Computation*, **2007**, 3, 1629-43	6.4	28
11	First-principles study of the atomic and electronic structure of the Si(111)(5?2)-Au surface reconstruction. *Physical Review B*, **2007**, 76,	3.3	22
10	Structure of neutral aluminum clusters Aln (2?n?23): Genetic algorithm tight-binding calculations. *Physical Review B*, **2006**, 73,	3.3	103
9	Magic structures of h-passivated 110 silicon nanowires. *Nano Letters*, **2006**, 6, 277-81	11.5	63
8	Ab initio molecular dynamics simulation of liquid Al88Si12 alloys. *Journal of Chemical Physics*, **2005**, 122, 34508	3.9	21
7	Structure of Si(114) determined by global optimization methods. *Surface Science*, **2005**, 578, 183-195	1.8	33
6	Global structural optimization of Si magic clusters on the Si(111) 7×7 surface. *Surface Science*, **2005**, 598, L339-L346	1.8	19
5	Model reconstructions for the Si(337) orientation. *Journal of Applied Physics*, **2005**, 98, 073507	2.5	19
4	Finding the reconstructions of semiconductor surfaces via a genetic algorithm. *Surface Science*, **2004**, 573, L375-L381	1.8	56
3	Melting of small Sn clusters by ab initio molecular dynamics simulations. *Physical Review B*, **2004**, 69,	3.3	44
2	Ab initio molecular dynamics simulation of liquid AlxGe1-x alloys. *Physical Review B*, **2004**, 70,	3.3	5
1	Anisotropic Rashba splitting in Pt-based Janus monolayers PtXY (X,Y = S, Se, or Te). *Nanoscale Advances*,	5.1	5