

Feng-Chuan Chuang

List of Publications by Year in descending order

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111
papers

3,176
citations

172386
29
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182361
51
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115
all docs

115
docs citations

115
times ranked

3869
citing authors

#	ARTICLE	IF	CITATIONS
1	Prediction of Large-Gap Two-Dimensional Topological Insulators Consisting of Bilayers of Group III Elements with Bi. Nano Letters, 2014, 14, 2505-2508.	4.5	173
2	Atomically precise bottom-up synthesis of Γ -extended [5]triangulene. Science Advances, 2019, 5, eaav7717.	4.7	159
3	Thickness dependent electronic properties of Pt dichalcogenides. Npj 2D Materials and Applications, 2019, 3, .	3.9	138
4	Structure of neutral aluminum clusters $Al_n(2 \leq n \leq 23)$: Genetic algorithm tight-binding calculations. Physical Review B, 2006, 73, .	1.1	113
5	Tunable topological electronic structures in Sb(111) bilayers: A first-principles study. Applied Physics Letters, 2013, 102, .	1.5	107
6	Robust Large Gap Two-Dimensional Topological Insulators in Hydrogenated III-V Buckled Honeycombs. Nano Letters, 2015, 15, 6568-6574.	4.5	105
7	The nontrivial electronic structure of Bi/Sb honeycombs on SiC(0001). New Journal of Physics, 2015, 17, 025005.	1.2	100
8	Nontrivial topological electronic structures in a single Bi(111) bilayer on different substrates: A first-principles study. Physical Review B, 2013, 88, .	1.1	83
9	Phase-Engineered $PtSe_2$ -Layered Films by a Plasma-Assisted Selenization Process toward All $PtSe_2$ -Based Field Effect Transistor to Highly Sensitive, Flexible, and Wide-Spectrum Photoresponse Photodetectors. Small, 2018, 14, e1800032.	5.2	83
10	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.	3.3	76
11	Hybridizing Plasmonic Materials with 2D-Transition Metal Dichalcogenides toward Functional Applications. Small, 2020, 16, e1904271.	5.2	74
12	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.	4.0	70
13	Thermally Strained Band Gap Engineering of Transition-Metal Dichalcogenide Bilayers with Enhanced Light-Matter Interaction toward Excellent Photodetectors. ACS Nano, 2017, 11, 8768-8776.	7.3	66
14	Magic Structures of H-Passivated C_{110} Silicon Nanowires. Nano Letters, 2006, 6, 277-281.	4.5	65
15	Giant Emission Enhancement of Solid-State Gold Nanoclusters by Surface Engineering. Angewandte Chemie - International Edition, 2020, 59, 8270-8276.	7.2	63
16	Finding the reconstructions of semiconductor surfaces via a genetic algorithm. Surface Science, 2004, 573, L375-L381.	0.8	62
17	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.	1.2	58
18	Hydrogenated ultra-thin tin films predicted as two-dimensional topological insulators. New Journal of Physics, 2014, 16, 115008.	1.2	56

#	ARTICLE	IF	CITATIONS
19	Dimensionality-Mediated Semimetal-Semiconductor Transition in Ultrathin PtTe_2 Films. Physical Review Letters, 2020, 124, 036402.	2.9	54
20	Predicting two-dimensional topological phases in Janus materials by substitutional doping in transition metal dichalcogenide monolayers. Npj 2D Materials and Applications, 2019, 3, .	3.9	53
21	Antisymmetric Magnetoresistance in a van der Waals Antiferromagnetic/Ferromagnetic Layered $\text{MnPS}_3/\text{Fe}_3\text{GeTe}_2$ Stacking Heterostructure. ACS Nano, 2020, 14, 12037-12044.	7.3	52
22	Melting of small Sn clusters by ab initio molecular dynamics simulations. Physical Review B, 2004, 69, .	1.1	50
23	Geometries and stabilities of Ag-doped Si_n ($n=1\sim 13$) clusters: A first-principles study. Journal of Chemical Physics, 2007, 127, 144313.	1.2	46
24	Predicted Growth of Two-Dimensional Topological Insulator Thin Films of III-V Compounds on Si(111) Substrate. Scientific Reports, 2015, 5, 15463.	1.6	46
25	Quantum Spin Hall States in Stanene/Ge(111). Scientific Reports, 2015, 5, 14196.	1.6	38
26	Synthesis and characterization of a single-layer conjugated metal-organic structure featuring a non-trivial topological gap. Nanoscale, 2019, 11, 878-881.	2.8	37
27	Structure of Si(114) determined by global optimization methods. Surface Science, 2005, 578, 183-195.	0.8	35
28	Nonsymmorphic cubic Dirac point and crossed nodal rings across the ferroelectric phase transition in LiOsO_3 . Physical Review Materials, 2018, 2, .	0.9	35
29	Spin-orbit quantum impurity in a topological magnet. Nature Communications, 2020, 11, 4415.	5.8	34
30	Sugar Folding: A Novel Structural Prediction Tool for Oligosaccharides and Polysaccharides 2. Journal of Chemical Theory and Computation, 2007, 3, 1629-1643.	2.3	30
31	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.	1.5	28
32	The Structure of Ultrathin H-Passivated [112] Silicon Nanowires. Journal of Physical Chemistry C, 2007, 111, 7933-7937.	1.5	27
33	Prediction of two-dimensional topological insulator by forming a surface alloy on Au/Si(111) substrate. Physical Review B, 2016, 93, .	1.1	27
34	Anisotropic Rashba splitting in Pt-based Janus monolayers PtXY ($X, Y = \text{S, Se, or Te}$). Nanoscale Advances, 2021, 3, 6608-6616.	2.2	27
35	First-principles study of Bi and Sb intercalated graphene on SiC(0001) substrate. Surface Science, 2013, 616, 149-154.	0.8	26
36	Correlating structural, electronic, and magnetic properties of epitaxial VSe_2 thin films. Physical Review B, 2020, 102, .	1.1	25

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37	Magnetic and topological properties in hydrogenated transition metal dichalcogenide monolayers. Chinese Journal of Physics, 2020, 66, 15-23.	2.0	25
38	Layer-dependent band engineering of Pd dichalcogenides: a first-principles study. New Journal of Physics, 2020, 22, 053010.	1.2	25
39	Ab initio molecular dynamics simulation of liquid Al ₈₈ Si ₁₂ alloys. Journal of Chemical Physics, 2005, 122, 034508.	1.2	24
40	Structural and electronic properties of hydrogen adsorptions on BC ₃ sheet and graphene: a comparative study. Nanotechnology, 2011, 22, 135703.	1.3	24
41	Large-gap topological insulators in functionalized ordered double transition metal carbide MXenes. Physical Review B, 2020, 102, .	1.1	24
42	Tailoring magnetism in self-intercalated CrTe ₂ epitaxial films. Physical Review Materials, 2020, 4, .	1.1	23
43	First-principles study of the atomic and electronic structure of the Si(111)-(5 \times 2) surface reconstruction. Physical Review B, 2007, 76, .	1.1	22
44	Growth of a predicted two-dimensional topological insulator based on InBi-Si(111)- $\sqrt{7}\times\sqrt{7}$ surface reconstruction. Physical Review B, 2018, 98, .	1.1	22
45	Itinerant ferromagnetism mediated by giant spin polarization of the metallic ligand band in the van der Waals magnet Fe ₅ Si ₂ . Physical Review B, 2021, 103, .	1.1	22
46	Electronic structures of an epitaxial graphene monolayer on SiC(0001) after gold intercalation: a first-principles study. Nanotechnology, 2011, 22, 275704.	1.3	21
47	Two-dimensional Topological Crystalline Insulator Phase in Sb/Bi Planar Honeycomb with Tunable Dirac Gap. Scientific Reports, 2016, 6, 18993.	1.6	21
48	Honeycomb chain structure of the Au-Si(111)-(5 \times 2) surface reconstruction: A first-principles study. Physical Review B, 2008, 77, .	1.1	20
49	Global structural optimization of Si magic clusters on the Si(111) $\sqrt{7}\times\sqrt{7}$ surface. Surface Science, 2005, 598, L339-L346.	0.8	19
50	Model reconstructions for the Si(337) orientation. Journal of Applied Physics, 2005, 98, 073507.	1.1	19
51	Quantum Phase Transition of Correlated Iron-Based Superconductivity in LiFeAs. Physical Review Letters, 2019, 123, 217004.	2.9	19
52	Evolution of the Electronic Properties of ZrX ₂ (X = S, Se, or Te) Thin Films under Varying Thickness. Journal of Physical Chemistry C, 2021, 125, 1134-1142.	1.5	19
53	Quantum anomalous Hall insulator phase in asymmetrically functionalized germanene. Physical Review B, 2017, 96, .	1.1	18
54	Sugar Folding: A Novel Structural Prediction Tool for Oligosaccharides and Polysaccharides 1. Journal of Chemical Theory and Computation, 2007, 3, 1620-1628.	2.3	17

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55	Room-temperature deposition of group III metals on Si(100): A comparative study of nucleation behavior. <i>Surface Science</i> , 2010, 604, 396-403.	0.8	17
56	Selection Role of Metal Oxides into Transition Metal Dichalcogenide Monolayers by a Direct Selenization Process. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 9645-9652.	4.0	17
57	Band Engineering and Van Hove Singularity on HfX_2 Thin Films (X = S, Se, or Te). <i>ACS Applied Electronic Materials</i> , 2021, 3, 1071-1079.	2.0	17
58	Quantum spin Hall insulating phase and van Hove singularities in Zintl single-quintuple-layer AM_2X_2 (A = Ca, Sr, or Ba; M = Zn or Cd; X = Sb or Bi) family. <i>Applied Physics Reviews</i> , 2022, 9, .	5.5	17
59	Tuning topological phases and electronic properties of monolayer ternary transition metal chalcogenides (ABX_4 , A/B = Zr, Hf, or Ti; X = S, Se, or Te). <i>Applied Physics Letters</i> , 2021, 118, .	1.5	16
60	Electronic structure of the indium-adsorbed $\text{Au/Si(111)-3\times 3}$ surface: A first-principles study. <i>Physical Review B</i> , 2012, 85, .	1.1	15
61	Tunable magnetic states on the zigzag edges of hydrogenated and halogenated group-IV nanoribbons. <i>Scientific Reports</i> , 2016, 6, 39083.	1.6	15
62	Chemically induced large-gap quantum anomalous Hall insulator states in III-Bi honeycombs. <i>Npj Computational Materials</i> , 2017, 3, .	3.5	15
63	Giant Emission Enhancement of Solid-State Gold Nanoclusters by Surface Engineering. <i>Angewandte Chemie</i> , 2020, 132, 8347-8353.	1.6	15
64	A kinetic Monte Carlo study on the role of defects and detachment in the formation and growth of In chains on Si(100). <i>Journal of Physics Condensed Matter</i> , 2009, 21, 405002.	0.7	13
65	Dimensional crossover and band topology evolution in ultrathin semimetallic NiTe_2 films. <i>Npj 2D Materials and Applications</i> , 2021, 5, .	3.9	13
66	Prediction of topological Dirac semimetal in Ca-based Zintl layered compounds CaM_2X_2 (M = Zn or Cd; Tj ETQq0 0.0 rgBT /OV	1.6	13
67	Electronic structure of the $\text{Pb/Si(111)-3\times 3}$ surface. <i>Physical Review B</i> , 2010, 81, .		
68	Prediction of Quantum Anomalous Hall Insulator in half-fluorinated GaBi Honeycomb. <i>Scientific Reports</i> , 2016, 6, 31317.	1.6	12
69	Prediction of Quantum Anomalous Hall Effect in MBI and MSb (M:Ti, Zr, and Hf) Honeycombs. <i>Nanoscale Research Letters</i> , 2018, 13, 43.	3.1	12
70	Prediction of two-dimensional organic topological insulator in metal-DCB lattices. <i>Applied Physics Letters</i> , 2018, 113, .	1.5	12
71	Structural and electronic properties of T graphene nanotubes: a first-principles study. <i>New Journal of Physics</i> , 2019, 21, 053015.	1.2	12
72	Tunable topological electronic structure of silicene on a semiconducting $\text{Bi/Si(111)-3\times 3}$ substrate. <i>Physical Review B</i> , 2014, 90, .	1.1	11

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73	First-principles calculated decomposition pathways for LiBH ₄ nanoclusters. Scientific Reports, 2016, 6, 26056.	1.6	11
74	Theoretical prediction of topological insulators in two-dimensional ternary transition metal chalcogenides (MM'X ₄ , M \hat{A} = \hat{A} Ta, Nb, or V; M' = Ir, Rh, or Co; X \hat{A} = \hat{A} Se or Te). Chinese Journal of Physics, 2021, 73, 95-102.	2.0	11
75	High Thermoelectric Performance in 2D Technetium Dichalcogenides TcX ₂ (X = S, Se, or Te). Journal of Applied Physics, 2021, 124, 104301.	2.5	11
76	The screening effect on field enhancement factor of the finite-length small radius single-walled carbon nanotubes. Journal of Applied Physics, 2009, 106, 014301.	1.1	10
77	First-principles study of atomic structures and electronic properties of ultrathin Bi films on Ge(111). Surface Science, 2014, 626, 68-75.	0.8	9
78	Quantum anomalous Hall insulator phases in Fe-doped GaBi honeycomb. Chinese Journal of Physics, 2020, 67, 246-252.	2.0	9
79	Manifold dynamic non-covalent interactions for steering molecular assembly and cyclization. Chemical Science, 2021, 12, 11659-11667.	3.7	9
80	On the structure of the Si(103) surface. Applied Physics Letters, 2007, 91, 171909.	1.5	8
81	Atomic and electronic structures of Ag/Si(103) surface: A first-principles study. Physical Review B, 2008, 78, .	1.5	8
82	Enhanced nucleation of Al islands on H-dosed Si(100)-2 \times 1 surface: A combined density functional theory and kinetic Monte Carlo study. Surface Science, 2013, 617, 73-80.	0.8	8
83	Effects of oxygen stoichiometry on the phase stability of sputter-deposited C _d X _n Z _n . Physical Review B, 2021, 103, .	0.9	8
84	First-principles study of indium-stabilized {103} facets in Ge quantum dots. Physical Review B, 2007, 75, .	1.1	7
85	Coexistence of topological nontrivial and spin-gapless semiconducting behavior in MnPO ₄ : A composite quantum compound. Physical Review B, 2021, 103, .	1.1	7
86	Interplay between anisotropic spin texture and large gap topological insulating phases in functionalized MXenes. Chinese Journal of Physics, 2022, 77, 2346-2354.	2.0	7
87	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.	0.8	6
88	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.	1.0	6
89	Controlling the Polarity of the Molecular Beam Epitaxy Grown In-Bi Atomic Film on the Si(111) Surface. Scientific Reports, 2019, 9, 756.	1.6	6
90	Extended $\hat{1}\pm$ -phase Bi atomic layer on Si(1 $\hat{1}$ $\hat{1}$) fabricated by thermal desorption. Applied Surface Science, 2020, 504, 144103.	3.1	6

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109	Effects of the Growth Environment on the Phase Stability of Sputter-deposited Cd _x Zn _{1-x} O Alloys. , 2019, , .		0
110	2D Transition Metal Dichalcogenides: Hybridizing Plasmonic Materials with 2D Transition Metal Dichalcogenides toward Functional Applications (Small 15/2020). Small, 2020, 16, 2070081.	5.2	0
111	Large Scale and High-Yield Janus Monolayer Mosse with Controllable Composition By Plasma-Assisted Chemical Vapor Reaction. ECS Meeting Abstracts, 2021, MA2021-02, 969-969.	0.0	0