

Tay-Rong Chang

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/7765997/publications.pdf>

Version: 2024-02-01

131
papers

14,579
citations

30070

54
h-index

18130

120
g-index

133
all docs

133
docs citations

133
times ranked

12552
citing authors

#	ARTICLE	IF	CITATIONS
1	Enormous Berry-Curvature-Based Anomalous Hall Effect in Topological Insulator (Bi,Sb) ₂ Te ₃ on Ferrimagnetic Europium Iron Garnet beyond 400 K. ACS Nano, 2022, 16, 2369-2380.	14.6	6
2	Evidence of magnetism-induced topological protection in the axion insulator candidate EuSn ₂ P ₂ . Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	7.1	12
3	Observation of a van Hove singularity of a surface Fermi arc with prominent coupling to phonons in a Weyl semimetal. Physical Review B, 2022, 105, .	3.2	4
4	Topological charge-entropy scaling in kagome Chern magnet TbMn ₆ Sn ₆ . Nature Communications, 2022, 13, 1197.	12.8	33
5	Drastic enhancement of magnetic critical temperature and amorphization in topological magnet EuSn ₂ P ₂ under pressure. Npj Quantum Materials, 2022, 7, .	5.2	9
6	Magnetically tunable Dirac and Weyl fermions in the Zintl materials family. Physical Review Materials, 2022, 6, .	2.4	9
7	Evidence of a room-temperature quantum spin Hall edge state in a higher-order topological insulator. Nature Materials, 2022, 21, 1111-1115.	27.5	32
8	Room-temperature nonlinear Hall effect and wireless radiofrequency rectification in Weyl semimetal TaIrTe ₄ . Nature Nanotechnology, 2021, 16, 421-425.	31.5	91
9	Room-temperature intrinsic ferromagnetism in epitaxial CrTe ₂ ultrathin films. Nature Communications, 2021, 12, 2492.	12.8	179
10	Layer Hall effect in a 2D topological axion antiferromagnet. Nature, 2021, 595, 521-525.	27.8	136
11	Tuning magnetism and band topology through antisite defects in Sb-doped $\text{MnBi}_4\text{Mn}_2\text{Sb}_2$. Physical Review B, 2021, 104, .	3.2	10
12	Robust topological state against magnetic impurities observed in the superconductor PbTaSe_2 . Physical Review B, 2021, 104, .	3.2	10
13	Topological Proximity-Induced Dirac Fermion in Two-Dimensional Antimonene. ACS Nano, 2021, 15, 15085-15095.	14.6	8
14	Magnetic and electronic structures of antiferromagnetic topological material candidate EuMg ₂ Bi ₂ . Journal of Applied Physics, 2021, 129, .	2.5	19
15	Observation of symmetry-protected Dirac states in nonsymmorphic \hat{I}_2 -antimonene. Physical Review B, 2021, 104, .	3.2	11
16	Many-Body Resonance in a Correlated Topological Kagome Antiferromagnet. Physical Review Letters, 2020, 125, 046401.	7.8	24
17	Quantum-limit Chern topological magnetism in TbMn ₆ Sn ₆ . Nature, 2020, 583, 533-536.	27.8	253
18	Fermion-boson many-body interplay in a frustrated kagome paramagnet. Nature Communications, 2020, 11, 4003.	12.8	35

#	ARTICLE	IF	CITATIONS
19	Realization of an intrinsic ferromagnetic topological state in MnBi ₈ Te ₁₃ . Science Advances, 2020, 6, eaba4275.	10.3	122
20	Bond-breaking induced Lifshitz transition in robust Dirac semimetal VAl ₃ . Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 15517-15523.	7.1	8
21	Enhanced anomalous Hall effect in the magnetic topological semimetal $\text{Co}_3\text{Sn}_2\text{S}_4$. Physical Review B, 2020, 101, .	3.1	31
22	Field-free platform for Majorana-like zero mode in superconductors with a topological surface state. Physical Review B, 2020, 101, .	3.2	22
23	A Novel Magnetic Material by Design: Observation of Yb ³⁺ with Spin-1/2 in Yb ₃ Pt ₅ . ACS Central Science, 2020, 6, 2023-2030.	11.3	8
24	Spontaneous gyrotropic electronic order in a transition-metal dichalcogenide. Nature, 2020, 578, 545-549.	27.8	80
25	Recent Advances in Novel Topological Materials. Crystals, 2020, 10, 94.	2.2	0
26	Band gap engineered ternary semiconductor Pb _x Cd _{1-x} S: Nanoparticle-sensitized solar cells with an efficiency of 8.5% under 1% sun—A combined theoretical and experimental study. Progress in Photovoltaics: Research and Applications, 2020, 28, 328-341.	8.1	9
27	Fermiology and type-I superconductivity in the chiral superconductor $\text{Nb}_3\text{Co}_2\text{Ni}$ with Kramers-Weyl fermions. Physical Review B, 2020, 102, .	3.2	9
28	Termination-dependent topological surface states in nodal-loop semimetal $\text{HfPt}_2\text{Mn}_4\text{S}_8$. Physical Review Materials, 2020, 4, .	2.4	15
29	Crystal growth and quantum oscillations in the topological chiral semimetal CoSi. Physical Review B, 2019, 100, .	3.2	48
30	Highly mobile carriers in a candidate of quasi-two-dimensional topological semimetal AuTe ₂ Br. APL Materials, 2019, 7, 101110.	5.1	6
31	Discovery of topological Weyl fermion lines and drumhead surface states in a room temperature magnet. Science, 2019, 365, 1278-1281.	12.6	374
32	Band Topology of Bismuth Quantum Films. Crystals, 2019, 9, 510.	2.2	20
33	Topology on a new facet of bismuth. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 13255-13259.	7.1	61
34	Unconventional topological phase transition in non-symmorphic material KHgX (X=As, Sb, Bi). Npj Computational Materials, 2019, 5, .	8.7	9
35	Impact of Semiconductor Permittivity Reduction on Electrical Characteristics of Nanoscale MOSFETs. IEEE Transactions on Electron Devices, 2019, 66, 2509-2512.	3.0	4
36	A New Magnetic Topological Quantum Material Candidate by Design. ACS Central Science, 2019, 5, 900-910.	11.3	63

#	ARTICLE	IF	CITATIONS
37	Topological chiral crystals with helicoid-arc quantum states. Nature, 2019, 567, 500-505.	27.8	249
38	Quantum oscillations in the noncentrosymmetric superconductor and topological nodal-line semimetal PbTaSe . Physical Review B, 2019, 99, .	3.2	21
39	Purely rotational symmetry-protected topological crystalline insulator Bi_4Br_4 . 2D Materials, 2019, 6, 031004.	4.4	41
40	Saddle-point Van Hove singularity and dual topological state in PtBi . Physical Review B, 2019, 100, .	2.2	21
41	Observation of the nonlinear Hall effect under time-reversal-symmetric conditions. Nature, 2019, 565, 337-342.	27.8	372
42	Realization of a Type-II Nodal-Line Semimetal in Mg_3Bi_2 . Advanced Science, 2019, 6, 1800897.	11.2	84
43	Moiré superlattices and 2D electronic properties of graphite/MoS2 heterostructures. Journal of Physics and Chemistry of Solids, 2019, 128, 325-330.	4.0	14
44	Prediction of threefold fermions in a nearly ideal Dirac semimetal BaAgAs . Physical Review Materials, 2019, 3, .	2.4	24
45	Room-Temperature Nanoseconds Spin Relaxation in WTe_2 and MoTe_2 Thin Films. Advanced Science, 2018, 5, 1700912.	11.2	34
46	Magnetic and noncentrosymmetric Weyl fermion semimetals in the $\text{R}^2\text{Bi}_2\text{Te}_5$ family.		

#	ARTICLE	IF	CITATIONS
55	Superconducting SrSnP with Strong Sn–P Antibonding Interaction: Is the Sn Atom Single or Mixed Valent?. Chemistry of Materials, 2018, 30, 6005-6013.	6.7	11
56	Single-layer dual germanene phases on Ag(111). Physical Review Materials, 2018, 2, .	2.4	72
57	Multiple topological electronic phases in superconductor MoC. Physical Review Materials, 2018, 2, .	2.4	10
58	Inter-Layer Coupling Induced Valence Band Edge Shift in Mono- to Few-Layer MoS ₂ . Scientific Reports, 2017, 7, 40559.	3.3	32
59	Hallmarks of Hund's coupling in the Mott insulator Ca ₂ RuO ₄ . Nature Communications, 2017, 8, 15176.	12.8	66
60	Polymorphic Layered MoTe ₂ from Semiconductor, Topological Insulator, to Weyl Semimetal. Chemistry of Materials, 2017, 29, 699-707.	6.7	52
61	Evidence of indirect gap in monolayer WSe ₂ . Nature Communications, 2017, 8, 929.	12.8	98
62	Selective Hydrogen Etching Leads to 2D Bi(111) Bilayers on Bi ₂ Se ₃ : Large Rashba Splitting in Topological Insulator Heterostructure. Chemistry of Materials, 2017, 29, 8992-9000.	6.7	13
63	Quasiparticle Interference on Cubic Perovskite Oxide Surfaces. Physical Review Letters, 2017, 119, 086801.	7.8	19
64	Atomic-scale visualization of surface-assisted orbital order. Science Advances, 2017, 3, eaao0362.	10.3	14
65	Nexus fermions in topological symmorphic crystalline metals. Scientific Reports, 2017, 7, 1688.	3.3	116
66	Unconventional Chiral Fermions and Large Topological Fermi Arcs in RhSi. Physical Review Letters, 2017, 119, 206401.	7.8	270
67	Signatures of a time-reversal symmetric Weyl semimetal with only four Weyl points. Nature Communications, 2017, 8, 942.	12.8	98
68	Mirror Protected Dirac Fermions on a Weyl Semimetal NbP Surface. Physical Review Letters, 2017, 119, 196403.	7.8	20
69	Ultraquantum magnetoresistance in the Kramers-Weyl semimetal candidate $\hat{\Gamma}_2^-$ -Ag ₂ Se. Physical Review B, 2017, 96, .	3.2	27
70	Type-II Symmetry-Protected Topological Dirac Semimetals. Physical Review Letters, 2017, 119, 026404.	7.8	145
71	Magnetotransport properties of the single-crystalline nodal-line semimetal candidates $\langle \text{Ca} \rangle \langle \text{T} \rangle \langle \text{X} \rangle \langle \text{Mo} \rangle$. Physical Review B, 2017, 95, .		
72	Large Area and High Quality 2D Transition Metal Telluride. Advanced Materials, 2017, 29, 1603471.	21.0	181

#	ARTICLE	IF	CITATIONS
73	Metal–Semiconductor Phase Transition in $\text{WSe}_2(1\text{1}\bar{1})\text{Te}_2$ Monolayer. <i>Advanced Materials</i> , 2017, 29, 1603991.	21.0	123
74	Monoclinic 122 -Type BaIr_2Ge_2 with a Channel Framework: A Structural Connection between Clathrate and Layered Compounds. <i>Materials</i> , 2017, 10, 818.	2.9	4
75	Anisotropic superconducting property studies of single crystal PbTaSe_2 . <i>Journal of Physics Condensed Matter</i> , 2017, 29, 095601.	1.8	16
76	Prediction of nontrivial band topology and superconductivity in $M\text{gPb}$. <i>Physical Review Materials</i> , 2017, 1, .	2.4	8
77	Discovery of Lorentz-violating type II Weyl fermions in LaAlGe . <i>Science Advances</i> , 2017, 3, e1603266.	10.3	176
78	Newtype large Rashba splitting in quantum well states induced by spin chirality in metal/topological insulator heterostructures. <i>NPG Asia Materials</i> , 2016, 8, e332-e332.	7.9	6
79	Atomic-Scale Visualization of Quasiparticle Interference on a Type-II Weyl Semimetal Surface. <i>Physical Review Letters</i> , 2016, 117, 266804.	7.8	56
80	Large transverse Hall-like signal in topological Dirac semimetal Cd_3As_2 . <i>Scientific Reports</i> , 2016, 6, 27487.	3.3	16
81	Discovery of a new type of topological Weyl fermion semimetal state in $\text{MoxW}_1\text{xTe}_2$. <i>Nature Communications</i> , 2016, 7, 13643.	12.8	163
82	Experimental observation of two massless Dirac-fermion gases in graphene-topological insulator heterostructure. <i>2D Materials</i> , 2016, 3, 021009.	4.4	21
83	Three-dimensional Dirac cone carrier dynamics in Na_3Cd_3 . <i>Physical Review B</i> , 2016, 94, .	3.2	57
84	Fermi arc electronic structure and Chern numbers in the type-II Weyl semimetal candidate Mo_3W . <i>Physical Review B</i> , 2016, 94, .	3.2	115
85	Drumhead surface states and topological nodal-line fermions in TiTaSe_2 . <i>Physical Review B</i> , 2016, 93, .	3.2	208
86	Signatures of Fermi Arcs in the Quasiparticle Interferences of the Weyl Semimetals TaAs and NbP. <i>Physical Review Letters</i> , 2016, 116, 066601.	7.8	54
87	Spin Polarization and Texture of the Fermi Arcs in the Weyl Fermion Semimetal TaAs. <i>Physical Review Letters</i> , 2016, 116, 096801.	7.8	102
88	Topological Dirac surface states and superconducting pairing correlations in PbTaSe_2 . <i>Physical Review B</i> , 2016, 93, .	3.2	79
89	A strongly robust type II Weyl fermion semimetal state in Ta_3S_2 . <i>Science Advances</i> , 2016, 2, e1600295.	10.3	114
90	Observation of the spin-polarized surface state in a noncentrosymmetric superconductor BiPd . <i>Nature Communications</i> , 2016, 7, 13315.	12.8	42

#	ARTICLE	IF	CITATIONS
91	Signatures of the Adler-Bell-Jackiw chiral anomaly in a Weyl fermion semimetal. Nature Communications, 2016, 7, 10735.	12.8	603
92	Ab initio study of the PbTaSe ₂ -related superconducting topological metals. Physical Review B, 2016, 94, .	3.2	22
93	Atomic-Scale Visualization of Quantum Interference on a Weyl Semimetal Surface by Scanning Tunneling Microscopy. ACS Nano, 2016, 10, 1378-1385.	14.6	112
94	Prediction of an arc-tunable Weyl Fermion metallic state in Mo _x W _{1-x} Te ₂ . Nature Communications, 2016, 7, 10639.	12.8	249
95	Topological nodal-line fermions in spin-orbit metal PbTaSe ₂ . Nature Communications, 2016, 7, 10556.	12.8	688
96	Criteria for Directly Detecting Topological Fermi Arcs in Weyl Semimetals. Physical Review Letters, 2016, 116, 066802.	7.8	134
97	New type of Weyl semimetal with quadratic double Weyl fermions. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 1180-1185.	7.1	291
98	Two distinct topological phases in the mixed-valence compound YbB ₆ and its differences from SmB ₆ . Physical Review B, 2015, 91, .	3.2	19
99	Topological phase transition in MoS ₂ and WS ₂ . Physical Review B, 2015, 91, .	3.2	116
100	Surface versus bulk Dirac state tuning in a three-dimensional topological Dirac semimetal. Physical Review B, 2015, 91, .	3.2	16
101	Lifshitz transition and Van Hove singularity in a three-dimensional topological Dirac semimetal. Physical Review B, 2015, 92, .	3.2	31
102	Fermi surface topology and hot spot distribution in the Kondo lattice system CeB ₆ . Physical Review B, 2015, 92, .	3.2	29
103	Tunable spin helical Dirac quasiparticles on the surface of three-dimensional HgTe. Physical Review B, 2015, 92, .	3.2	19
104	Direct transition resonance in atomically uniform topological Sb(111) thin films. Physical Review B, 2015, 92, .	3.2	3
105	Controlled Synthesis of Organic/Inorganic van der Waals Solid for Tunable Light-Matter Interactions. Advanced Materials, 2015, 27, 7800-7808.	21.0	109
106	Experimental discovery of a topological Weyl semimetal state in TaP. Science Advances, 2015, 1, e1501092.	10.3	337
107	Non-Kondo-like Electronic Structure in the Correlated Rare-Earth Hexaboride YB ₆ . Physical Review Letters, 2015, 114, 016403.	7.8	46
108	Unconventional transformation of spin Dirac phase across a topological quantum phase transition. Nature Communications, 2015, 6, 6870.	12.8	34

#	ARTICLE	IF	CITATIONS
109	Discovery of a Weyl fermion state with Fermi arcs in niobium arsenide. <i>Nature Physics</i> , 2015, 11, 748-754.	16.7	817
110	Significantly enhanced giant Rashba splitting in a thin film of binary alloy. <i>New Journal of Physics</i> , 2015, 17, 083015.	2.9	7
111	Observation of Fermi arc surface states in a topological metal. <i>Science</i> , 2015, 347, 294-298.	12.6	603
112	Rashba effect within the space-charge layer of a semiconductor. <i>New Journal of Physics</i> , 2014, 16, 045003.	2.9	7
113	Observation of a three-dimensional topological Dirac semimetal phase in high-mobility Cd ₃ As ₂ . <i>Nature Communications</i> , 2014, 5, 3786.	12.8	1,166
114	Observation of quantum-tunnelling-modulated spin texture in ultrathin topological insulator Bi ₂ Se ₃ films. <i>Nature Communications</i> , 2014, 5, 3841.	12.8	112
115	Direct observation of the transition from indirect to direct bandgap in atomically thin epitaxial MoSe ₂ . <i>Nature Nanotechnology</i> , 2014, 9, 111-115.	31.5	1,129
116	Nanoscale Interplay of Strain and Doping in a High-Temperature Superconductor. <i>Nano Letters</i> , 2014, 14, 6749-6753.	9.1	23
117	Spin-correlated electronic state on the surface of a spin-orbit Mott system. <i>Physical Review B</i> , 2014, 90, .	3.2	11
118	Resonant Tunneling through Discrete Quantum States in Stacked Atomic-Layered MoS ₂ . <i>Nano Letters</i> , 2014, 14, 2381-2386.	9.1	40
119	Thickness dependence of spin polarization and electronic structure of ultra-thin films of MoS ₂ and related transition-metal dichalcogenides. <i>Scientific Reports</i> , 2014, 4, 6270.	3.3	36
120	Surface electronic structure of the topological Kondo-insulator candidate correlated electron system SmB ₆ . <i>Nature Communications</i> , 2013, 4, 2991.	12.8	308
121	Gated silicene as a tunable source of nearly 100% spin-polarized electrons. <i>Nature Communications</i> , 2013, 4, 1500.	12.8	408
122	Imaging the evolution of metallic states in a correlated iridate. <i>Nature Materials</i> , 2013, 12, 707-713.	27.5	71
123	Topological surface states and Dirac point tuning in ternary topological insulators. <i>Physical Review B</i> , 2012, 85, .	3.2	171
124	Hedgehog spin texture and Berry's phase tuning in a magnetic topological insulator. <i>Nature Physics</i> , 2012, 8, 616-622.	16.7	353
125	Electronic structures of quasi-one-dimensional ferrimagnetic insulator Ca ₃ Co ₂ O ₆ . <i>Computer Physics Communications</i> , 2011, 182, 93-95.	7.5	3
126	Consonant diminution of lattice and electronic coupling between a film and a substrate: Pb on Ge(100). <i>Physical Review B</i> , 2011, 84, .	3.2	7

#	ARTICLE	IF	CITATIONS
127	Electronic versus Lattice Match for Metal-Semiconductor Epitaxial Growth: Pb on Ge(111). Physical Review Letters, 2011, 107, 066802. Charge-orbital ordering and ferroelectric polarization in multiferroic TbMn 2O	7.8	20
128	Bilayer oscillation of subband effective masses in Pb/Ge(111) thin-film quantum wells. Applied Physics Letters, 2010, 96, 103106.	3.2	19
129	Dispersive resonance bands within the space-charge layer of a metal-semiconductor junction. Physical Review B, 2010, 81, .	3.3	7
130	Band gap tunable quaternary $\text{Pb}_x\text{Cd}_{1-x}\text{S}_1-y\text{Se}_y$ quantum dot-sensitized solar cells with an efficiency of 9.24% under 1% Sun. Sustainable Energy and Fuels, 0, , .	3.2	9
131		4.9	1