

M Zahid Hasan

List of Publications by Year in descending order

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175
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6613

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179
all docs

179
docs citations

179
times ranked

20056
citing authors

#	ARTICLE	IF	CITATIONS
1	Photocurrent-driven transient symmetry breaking in the Weyl semimetal TaAs. Nature Materials, 2022, 21, 62-66.	27.5	20
2	Charge order and superconductivity in kagome materials. Nature Physics, 2022, 18, 137-143.	16.7	152
3	Time-reversal symmetry-breaking charge order in a kagome superconductor. Nature, 2022, 602, 245-250.	27.8	207
4	Visualizing the out-of-plane electronic dispersions in an intercalated transition metal dichalcogenide. Physical Review B, 2022, 105, .	3.2	9
5	Electron-phonon coupling in the charge density wave state of CsV_3Sb_5 . Physical Review B, 2022, 105, .	3.2	9
6	The Magnetic Genome of Two-Dimensional van der Waals Materials. ACS Nano, 2022, 16, 6960-7079.	14.6	149
7	Observation of a linked-loop quantum state in a topological magnet. Nature, 2022, 604, 647-652.	27.8	18
8	Low-temperature magnetic crossover in the topological kagome magnet TbMn_6Sn_6 . Communications Physics, 2022, 5, .	5.3	12
9	Structural instability and charge modulations in the kagome superconductor AV_3Sb_5 . Physical Review B, 2022, 105, .	3.2	11
10	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
11	Topologically distinct Weyl fermion pairs. Scientific Reports, 2021, 11, 416.	3.3	0
12	Probabilistic modeling and predicting mean recurrence time of major earthquakes in Bangladesh. Applied Mathematical Sciences, 2021, 15, 239-247.	0.1	0
13	Nodeless kagome superconductivity in LaRu_2P_3 . Physical Review Materials, 2021, 5, .	2.4	7
14	Probing topological quantum matter with scanning tunnelling microscopy. Nature Reviews Physics, 2021, 3, 249-263.	26.6	60
15	Weyl, Dirac and high-fold chiral fermions in topological quantum matter. Nature Reviews Materials, 2021, 6, 784-803.	48.7	82
16	Multiple quantum phase transitions of different nature in the topological kagome magnet $\text{Co}_3\text{Sn}_2\text{As}_2\text{In}_x\text{S}_2$. Npj Quantum Materials, 2021, 6, .	5.2	16
17	Unconventional chiral charge order in kagome superconductor KV_3Sb_5 . Nature Materials, 2021, 20, 1353-1357.	27.5	391
18	Rare Earth Engineering in RMn_2P_3		

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37	Unconventional Photocurrents from Surface Fermi Arcs in Topological Chiral Semimetals. Physical Review Letters, 2020, 124, 166404.	7.8	40
38	A New Regression Type Estimator and Its Application in Survey Sampling. Open Journal of Statistics, 2020, 10, 1010-1019.	0.7	0
39	Crystal growth and quantum oscillations in the topological chiral semimetal CoSi. Physical Review B, 2019, 100, .	3.2	48
40	Magnetic-Field Control of Topological Electronic Response near Room Temperature in Correlated Kagome Magnets. Physical Review Letters, 2019, 123, 196604.	7.8	20
41	Discovery of topological Weyl fermion lines and drumhead surface states in a room temperature magnet. Science, 2019, 365, 1278-1281.	12.6	374
42	Possible manifestations of the chiral anomaly and evidence for a magnetic field induced topological phase transition in the type-I Weyl semimetal TaAs. Physical Review B, 2019, 100, .	3.2	12
43	Nodeless superconductivity and its evolution with pressure in the layered dirac semimetal 2M-WS ₂ . Npj Quantum Materials, 2019, 4, .	5.2	20
44	Vector field controlled vortex lattice symmetry in LiFeAs using scanning tunneling microscopy. Physical Review B, 2019, 99, .	3.2	15
45	Topological chiral crystals with helicoid-arc quantum states. Nature, 2019, 567, 500-505.	27.8	249
46	Negative flat band magnetism in a spin-orbit-coupled correlated kagome magnet. Nature Physics, 2019, 15, 443-448.	16.7	283
47	Quantum Phase Transition of Correlated Iron-Based Superconductivity in $\text{LiFe}(\text{As}_{1-x}\text{P}_x)_2$. Physical Review Letters, 2019, 123, 217004.	7.8	19
48	Unconventional scaling of the superfluid density with the critical temperature in transition metal dichalcogenides. Science Advances, 2019, 5, eaav8465.	10.3	20
49	Microscopic investigation of Bi _{2-x} Sb _x Te _{3-y} Se _y systems: On the origin of a robust intrinsic topological insulator. Journal of Physics and Chemistry of Solids, 2019, 128, 251-257.	4.0	15
50	Observation of gapless Dirac surface states in ZrGeTe. Physical Review B, 2018, 97, .	3.2	34
51	Magnetic and noncentrosymmetric Weyl fermion semimetals in the $\text{R}(\text{As}_{1-x}\text{P}_x)_2$ system.		

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55	Quasiparticle interference on type-I and type-II Weyl semimetal surfaces: a review. <i>Advances in Physics: X</i> , 2018, 3, 1466661.	4.1	38
56	Discovery of Weyl Fermion Semimetals and Topological Fermi Arc States. <i>Annual Review of Condensed Matter Physics</i> , 2017, 8, 289-309.	14.5	349
57	A novel artificial condensed matter lattice and a new platform for one-dimensional topological phases. <i>Science Advances</i> , 2017, 3, e1501692.	10.3	48
58	Topological Hopf and Chain Link Semimetal States and Their Application to Co_2ZrSiX . <i>Physical Review Letters</i> , 2017, 119, 156401.	7.8	183
59			

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73	Superconducting properties in single crystals of the topological nodal semimetal PbTaSe_2 . Physical Review B, 2016, 93, .	3.2	16
74	Drumhead surface states and topological nodal-line fermions in TiTaSe_2 . Physical Review B, 2016, 93, .	3.2	16
75	Observation of topological nodal fermion semimetal phase in ZrSiS . Physical Review B, 2016, 93, .	3.2	309
76	Observation of metallic surface states in the strongly correlated Kitaev-Heisenberg candidate Na_2IrO_6 . Physical Review B, 2016, 93, .	3.2	16
77	Signatures of Fermi Arcs in the Quasiparticle Interferences of the Weyl Semimetals TaAs and NbP. Physical Review Letters, 2016, 116, 066601.	7.8	54
78	Spin Polarization and Texture of the Fermi Arcs in the Weyl Fermion Semimetal TaAs. Physical Review Letters, 2016, 116, 096801.	7.8	102
79	Topological Dirac surface states and superconducting pairing correlations in PbTaSe_2 . Physical Review B, 2016, 93, .	3.2	16
80	Weyl semimetals, Fermi arcs and chiral anomalies. Nature Materials, 2016, 15, 1140-1144.	27.5	255
81	A strongly robust type II Weyl fermion semimetal state in TaS_3 . Science Advances, 2016, 2, e1600295.	10.3	114
82	Observation of the spin-polarized surface state in a noncentrosymmetric superconductor BiPd . Nature Communications, 2016, 7, 13315.	12.8	42
83	Signatures of the Adler-Bell-Jackiw chiral anomaly in a Weyl fermion semimetal. Nature Communications, 2016, 7, 10735.	12.8	603
84	Electronic structure and relaxation dynamics in a superconducting topological material. Scientific Reports, 2016, 6, 22557.	3.3	21
85	An Effective Approach to Improving Cadmium Telluride (111)A Surface by Molecular-Beam-Epitaxy Growth of Tellurium Monolayer. ACS Applied Materials & Interfaces, 2016, 8, 726-735.	8.0	2
86	Atomic-Scale Visualization of Quantum Interference on a Weyl Semimetal Surface by Scanning Tunneling Microscopy. ACS Nano, 2016, 10, 1378-1385.	14.6	112
87	Prediction of an arc-tunable Weyl Fermion metallic state in $\text{Mo}_x\text{W}_{1-x}\text{Te}_2$. Nature Communications, 2016, 7, 10639.	12.8	249
88	Topological nodal-line fermions in spin-orbit metal PbTaSe_2 . Nature Communications, 2016, 7, 10556.	12.8	688
89	Criteria for Directly Detecting Topological Fermi Arcs in Weyl Semimetals. Physical Review Letters, 2016, 116, 066802.	7.8	134
90	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

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91	Engineering Electronic Structure of a Two-Dimensional Topological Insulator Bi(111) Bilayer on Sb Nanofilms by Quantum Confinement Effect. ACS Nano, 2016, 10, 3859-3864.	14.6	29
92	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
93	Spectroscopic studies of CdTe(111) bulk and surface electronic structure. Physical Review B, 2015, 91, .	3.2	11
94	Surface versus bulk Dirac state tuning in a three-dimensional topological Dirac semimetal. Physical Review B, 2015, 91, .	3.2	16
95	Lifshitz transition and Van Hove singularity in a three-dimensional topological Dirac semimetal. Physical Review B, 2015, 92, .	3.2	31
96	Topological phase diagram and saddle point singularity in a tunable topological crystalline insulator. Physical Review B, 2015, 92, .	3.2	25
97	Fermi surface topology and hot spot distribution in the Kondo lattice system CeB_6 . Physical Review B, 2015, 92, .	3.2	29
98	Tunable spin helical Dirac quasiparticles on the surface of three-dimensional HgTe. Physical Review B, 2015, 92, .	3.2	19
99	Fermi surface interconnectivity and topology in Weyl fermion semimetals TaAs, TaP, NbAs, and NbP. Physical Review B, 2015, 92, .	3.2	127
100	Direct transition resonance in atomically uniform topological Sb(111) thin films. Physical Review B, 2015, 92, .	3.2	3
101	Gigantic Surface Lifetime of an Intrinsic Topological Insulator. Physical Review Letters, 2015, 115, 116801.	7.8	84
102	Large single crystal growth, transport property and spectroscopic characterizations of three-dimensional Dirac semimetal Cd ₃ As ₂ . Scientific Reports, 2015, 5, 12966.	3.3	31
103	Experimental discovery of a topological Weyl semimetal state in TaP. Science Advances, 2015, 1, e1501092.	10.3	337
104	Dirac mass generation from crystal symmetry breaking on the surfaces of topological crystalline insulators. Nature Materials, 2015, 14, 318-324.	27.5	113
105	Non-Kondo-like Electronic Structure in the Correlated Rare-Earth Hexaboride YbB_6 . Physical Review Letters, 2015, 114, 016403.	7.8	46
106	A Weyl Fermion semimetal with surface Fermi arcs in the transition metal monpnictide TaAs class. Nature Communications, 2015, 6, 7373.	12.8	1,336
107	Discovery of a Weyl fermion semimetal and topological Fermi arcs. Science, 2015, 349, 613-617.	12.6	2,753
108	Unconventional transformation of spin Dirac phase across a topological quantum phase transition. Nature Communications, 2015, 6, 6870.	12.8	34

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109	Surface states in lightly hole-doped sodium cobaltate $\text{Na}_{1-y}\text{CoO}_2$. <i>Physical Review B</i> , 2015, 91, .	12.6	12
110	Bulk crystal growth and electronic characterization of the 3D Dirac semimetal Na_3Bi . <i>APL Materials</i> , 2015, 3, .	5.1	76
111	Topological insulators, topological superconductors and Weyl fermion semimetals: discoveries, perspectives and outlooks. <i>Physica Scripta</i> , 2015, T164, 014001.	2.5	123
112	Experimental signatures of phase interference and subfemtosecond time dynamics on the incident energy axis of resonant inelastic x-ray scattering. <i>Physical Review B</i> , 2015, 91, .	3.2	11
113	Discovery of a Weyl fermion state with Fermi arcs in niobium arsenide. <i>Nature Physics</i> , 2015, 11, 748-754.	16.7	817
114	Observation of Fermi arc surface states in a topological metal. <i>Science</i> , 2015, 347, 294-298.	12.6	603
115	Electronic structure of the quantum spin Hall parent compound CdTe and related topological issues. <i>Physical Review B</i> , 2014, 90, .	3.2	11
116	Observation of a three-dimensional topological Dirac semimetal phase in high-mobility Cd_3As_2 . <i>Nature Communications</i> , 2014, 5, 3786.	12.8	1,166
117	Observation of quantum-tunnelling-modulated spin texture in ultrathin topological insulator Bi_2Se_3 films. <i>Nature Communications</i> , 2014, 5, 3841.	12.8	112
118	Tuning a Schottky barrier in a photoexcited topological insulator with transient Dirac cone electron-hole asymmetry. <i>Nature Communications</i> , 2014, 5, 3003.	12.8	98
119	Observation of topological surface state quantum Hall effect in an intrinsic three-dimensional topological insulator. <i>Nature Physics</i> , 2014, 10, 956-963.	16.7	352
120	Momentum-space imaging of Cooper pairing in a half-Dirac-gas topological superconductor. <i>Nature Physics</i> , 2014, 10, 943-950.	16.7	134
121	Fermi-level electronic structure of a topological-insulator/cuprate-superconductor based heterostructure in the superconducting proximity effect regime. <i>Physical Review B</i> , 2014, 90, .	3.2	34
122	Spin-correlated electronic state on the surface of a spin-orbit Mott system. <i>Physical Review B</i> , 2014, 90, .	3.2	11
123	Mapping the unconventional orbital texture in topological crystalline insulators. <i>Nature Physics</i> , 2014, 10, 572-577.	16.7	79
124	Observation of monolayer valence band spin-orbit effect and induced quantum well states in MoX_2 . <i>Nature Communications</i> , 2014, 5, 4673.	12.8	121
125	Optical evidence of surface state suppression in Bi-based topological insulators. <i>Physical Review B</i> , 2014, 89, .	3.2	56
126	Observation of Dirac Node Formation and Mass Acquisition in a Topological Crystalline Insulator. <i>Science</i> , 2013, 341, 1496-1499.	12.6	252

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127	Surface electronic structure of the topological Kondo-insulator candidate correlated electron system SmB ₆ . Nature Communications, 2013, 4, 2991.	12.8	308
128	Topological Surface States: A New Type of 2D Electron Systems. Contemporary Concepts of Condensed Matter Science, 2013, , 143-174.	0.5	2
129	Structural and electronic properties of highly doped topological insulator Bi ₂ Se ₃ crystals. Physica Status Solidi - Rapid Research Letters, 2013, 7, 133-135.	2.4	45
130	Nontrivial spin texture of the coaxial Dirac cones on the surface of topological crystalline insulator SnTe. Physical Review B, 2013, 87, .	3.2	65
131	Adiabatic transformation as a search tool for new topological insulators: Distorted ternary Li ₂ AgSb-class semiconductors and related compounds. Physical Review B, 2013, 87, .	3.2	20
132	Theory of quasiparticle interference in mirror-symmetric two-dimensional systems and its application to surface states of topological crystalline insulators. Physical Review B, 2013, 88, .	3.2	31
133	Oscillatory surface dichroism of the insulating topological insulator Bi ₂ Te ₃ . Physical Review B, 2013, 88, .	3.2	38
134	Deviating band symmetries and many-body interactions in a model hole-doped iron pnictide superconductor. Physical Review B, 2012, 86, .	3.2	4
135	Coexisting pseudogap, charge-transfer-gap, and Mott-gap energy scales in the resonant inelastic x-ray scattering spectra of electron-doped cuprate superconductors. Physical Review B, 2012, 85, .	3.2	6
136	Topological insulator Bi ₂ Te ₃ films synthesized by metal organic chemical vapor deposition. Applied Physics Letters, 2012, 101, .	3.3	70
137	Fermi surface topology and low-lying electronic structure of the iron-based superconductor Ca _{1-x} Fe _x As ₂ . Physical Review B, 2012, 86, .		

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145	Hedgehog spin texture and Berry's phase tuning in a magnetic topological insulator. Nature Physics, 2012, 8, 616-622.	16.7	353
146	Topological Phase Transition and Texture Inversion in a Tunable Topological Insulator. Science, 2011, 332, 560-564.	12.6	404
147	A topological insulator surface under strong Coulomb, magnetic and disorder perturbations. Nature Physics, 2011, 7, 32-37.	16.7	527
148	Three-Dimensional Topological Insulators. Annual Review of Condensed Matter Physics, 2011, 2, 55-78.	14.5	522
149	Spin texture on the warped Dirac-cone surface states in topological insulators. Physical Review B, 2011, 84, .	3.2	64
150	Spin-orbital ground states of superconducting doped topological insulators: A Majorana platform. Physical Review B, 2011, 83, .	3.2	33
151	Colloquium: Topological insulators. Reviews of Modern Physics, 2010, 82, 3045-3067.	45.6	15,620
152	Development of ferromagnetism in the doped topological insulator Bi_2Te_3 . Physical Review B, 2010, 81, .	3.2	424
153	Low Energy Electronic Structures in Electron-Doped and Hole-Doped Superconducting $(\text{Ba}/\text{K})(\text{Fe}/\text{Co})_2\text{As}_2$. Journal of Superconductivity and Novel Magnetism, 2010, 23, 617-619.	1.8	1
154	Half-Heusler ternary compounds as new multifunctional experimental platforms for topological quantum phenomena. Nature Materials, 2010, 9, 546-549.	27.5	633
155	Observation of topological order in a superconducting doped topological insulator. Nature Physics, 2010, 6, 855-859.	16.7	412
156	Topological electronic structure in half-Heusler topological insulators. Physical Review B, 2010, 82, .	3.2	258
157	A tunable topological insulator in the spin helical Dirac transport regime. Nature, 2009, 460, 1101-1105.	27.8	1,737
158	Topological surface states protected from backscattering by chiral spin texture. Nature, 2009, 460, 1106-1109.	27.8	910
159	Observation of a large-gap topological-insulator class with a single Dirac cone on the surface. Nature Physics, 2009, 5, 398-402.	16.7	3,207
160	Observation of Unconventional Quantum Spin Textures in Topological Insulators. Science, 2009, 323, 919-922.	12.6	1,084
161	Observation of Time-Reversal-Protected Single-Dirac-Cone Topological Insulator States in Bi_2Te_3 . Physical Review Letters, 2009, 103, 086802.	7.8	881
162	Observation of a large-gap topological-insulator class with a single Dirac cone on the surface. Physical Review B, 2009, 79, .	3.2	571

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163	A topological Dirac insulator in a quantum spin Hall phase. Nature, 2008, 452, 970-974.	27.8	2,958
164	X-ray imaging of dispersive charge modes in a doped Mott insulator near the antiferromagnet/superconductor transition. Physical Review B, 2008, 78, .	3.2	22
165	Acoustic plasmons and doping evolution of Mott physics in resonant inelastic x-ray scattering from cuprate superconductors. Physical Review B, 2008, 77, .	3.2	26
166	Momentum dependence of superconducting gap, strong-coupling dispersion kink, and tightly bound Cooper pairs in the high-Tc(Sr,Ba) $1-x$ (K,Na) x Fe ₂ As ₂ superconductors. Physical Review B, 2008, 78, .	3.2	127
167	MERLIN – A meV Resolution Beamline at the ALS. AIP Conference Proceedings, 2007, , .	0.4	7
168	Dispersive collective charge modes in an incommensurately modulated cuprate Mott insulator. Physical Review B, 2007, 76, .	3.2	9
169	High-resolution soft X-ray emission spectrograph at advanced light source. Journal of Physics and Chemistry of Solids, 2005, 66, 2173-2178.	4.0	37
170	Fermi Surface and Quasiparticle Dynamics of Na _{0.7} CoO ₂ Investigated by Angle-Resolved Photoemission Spectroscopy. Physical Review Letters, 2004, 92, 246402.	7.8	214
171	Future Scientific Opportunities with Ultra-high Resolution Soft X-rays. Synchrotron Radiation News, 2003, 16, 15-17.	0.8	0
172	Correlated Charge Excitations in Quasi-Low-Dimensional Mott Insulators. International Journal of Modern Physics B, 2003, 17, 3519-3524.	2.0	6
173	Momentum-Resolved Charge Excitations in a Prototype One-Dimensional Mott Insulator. Physical Review Letters, 2002, 88, 177403.	7.8	82
174	Electronic Structure of Mott Insulators Studied by Inelastic X-ray Scattering. Science, 2000, 288, 1811-1814.	12.6	193
175	Analyzing the Best Fitted Probabilistic Model for the Seasonal Rainfall Data in Khulna Region of Bangladesh. Magna Scientia UCEVA, 0, 2, 5.	0.2	0