

# M Zahid Hasan

## List of Publications by Year in descending order

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175  
papers

51,932  
citations

6613

79  
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4774

169  
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179  
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179  
docs citations

179  
times ranked

20056  
citing authors

#	ARTICLE	IF	CITATIONS
1	<i>Colloquium</i> : Topological insulators. <i>Reviews of Modern Physics</i> , 2010, 82, 3045-3067.	45.6	15,620
2	Observation of a large-gap topological-insulator class with a single Dirac cone on the surface. <i>Nature Physics</i> , 2009, 5, 398-402.	16.7	3,207
3	A topological Dirac insulator in a quantum spin Hall phase. <i>Nature</i> , 2008, 452, 970-974.	27.8	2,958
4	Discovery of a Weyl fermion semimetal and topological Fermi arcs. <i>Science</i> , 2015, 349, 613-617.	12.6	2,753
5	A tunable topological insulator in the spin helical Dirac transport regime. <i>Nature</i> , 2009, 460, 1101-1105.	27.8	1,737
6	A Weyl Fermion semimetal with surface Fermi arcs in the transition metal monpnictide TaAs class. <i>Nature Communications</i> , 2015, 6, 7373.	12.8	1,336
7	Observation of a three-dimensional topological Dirac semimetal phase in high-mobility Cd <sub>3</sub> As <sub>2</sub> . <i>Nature Communications</i> , 2014, 5, 3786.	12.8	1,166
8	Observation of Unconventional Quantum Spin Textures in Topological Insulators. <i>Science</i> , 2009, 323, 919-922.	12.6	1,084
9	Topological surface states protected from backscattering by chiral spin texture. <i>Nature</i> , 2009, 460, 1106-1109.	27.8	910
10	Observation of Time-Reversal-Protected Single-Dirac-Cone Topological-Insulator States in $\text{Bi}_2\text{Te}_3$ . <i>Physical Review Letters</i> , 2009, 103, 146401.	7.8	881
11	Discovery of a Weyl fermion state with Fermi arcs in niobium arsenide. <i>Nature Physics</i> , 2015, 11, 748-754.	16.7	817
12	Topological nodal-line fermions in spin-orbit metal PbTaSe <sub>2</sub> . <i>Nature Communications</i> , 2016, 7, 10556.	12.8	688
13	Half-Heusler ternary compounds as new multifunctional experimental platforms for topological quantum phenomena. <i>Nature Materials</i> , 2010, 9, 546-549.	27.5	633
14	Observation of Fermi arc surface states in a topological metal. <i>Science</i> , 2015, 347, 294-298.	12.6	603
15	Signatures of the Adler-Bell-Jackiw chiral anomaly in a Weyl fermion semimetal. <i>Nature Communications</i> , 2016, 7, 10735.	12.8	603
16	Observation of a topological crystalline insulator phase and topological phase transition in $\text{Pb}_{1-x}\text{Sn}_x\text{Te}$ . <i>Nature Communications</i> , 2012, 3, 1192.	12.8	574
17	Topological insulator and low-temperature thermoelectric applications. <i>Physical Review B</i> , 2009, 79,	3.2	571
18	A topological insulator surface under strong Coulomb, magnetic and disorder perturbations. <i>Nature Physics</i> , 2011, 7, 32-37.	16.7	527

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19	Three-Dimensional Topological Insulators. Annual Review of Condensed Matter Physics, 2011, 2, 55-78.	14.5	522
20	Development of ferromagnetism in the doped topological insulator $\text{Bi}_{1-x}\text{Sb}_x$ . Physical Review B, 2010, 81, .	3.2	424
21	Observation of topological order in a superconducting doped topological insulator. Nature Physics, 2010, 6, 855-859.	16.7	412
22	Topological Phase Transition and Texture Inversion in a Tunable Topological Insulator. Science, 2011, 332, 560-564.	12.6	404
23	Unconventional chiral charge order in kagome superconductor $\text{KV}_3\text{Sb}_5$ . Nature Materials, 2021, 20, 1353-1357.	27.5	391
24	Discovery of topological Weyl fermion lines and drumhead surface states in a room temperature magnet. Science, 2019, 365, 1278-1281.	12.6	374
25	Hedgehog spin texture and Berry's phase tuning in a magnetic topological insulator. Nature Physics, 2012, 8, 616-622.	16.7	353
26	Observation of topological surface state quantum Hall effect in an intrinsic three-dimensional topological insulator. Nature Physics, 2014, 10, 956-963.	16.7	352
27	Discovery of Weyl Fermion Semimetals and Topological Fermi Arc States. Annual Review of Condensed Matter Physics, 2017, 8, 289-309.	14.5	349
28	Experimental discovery of a topological Weyl semimetal state in TaP. Science Advances, 2015, 1, e1501092.	10.3	337
29	Observation of topological nodal fermion semimetal phase in $\text{ZrSiS}$ . Physical Review B, 2016, 93, .	3.2	309
30	Surface electronic structure of the topological Kondo-insulator candidate correlated electron system $\text{Sb}_2\text{Te}_3$ . Nature Communications, 2013, 4, 2991.	12.8	308
31	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
32	Negative flat band magnetism in a spin-orbit-coupled correlated kagome magnet. Nature Physics, 2019, 15, 443-448.	16.7	283
33	Unconventional Chiral Fermions and Large Topological Fermi Arcs in $\text{RhSi}$ . Physical Review Letters, 2017, 119, 206401.	7.8	270
34	Drumhead surface states and topological nodal-line fermions in $\text{TiTaSe}_2$ . Physical Review B, 2016, 93, .	3.2	268
35	Topological electronic structure in half-Heusler topological insulators. Physical Review B, 2010, 82, .	3.2	258
36	Weyl semimetals, Fermi arcs and chiral anomalies. Nature Materials, 2016, 15, 1140-1144.	27.5	255

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37	Giant and anisotropic many-body spin-orbit tunability in a strongly correlated kagome magnet. Nature, 2018, 562, 91-95.	27.8	255
38	Quantum-limit Chern topological magnetism in TbMn6Sn6. Nature, 2020, 583, 533-536.	27.8	253
39	Observation of Dirac Node Formation and Mass Acquisition in a Topological Crystalline Insulator. Science, 2013, 341, 1496-1499.	12.6	252
40	Topological quantum properties of chiral crystals. Nature Materials, 2018, 17, 978-985.	27.5	252
41	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
42	Topological chiral crystals with helicoid-arc quantum states. Nature, 2019, 567, 500-505.	27.8	249
43	Fermi Surface and Quasiparticle Dynamics of $\text{Na}_0.7\text{CoO}_2$ Investigated by Angle-Resolved Photoemission Spectroscopy. Physical Review Letters, 2004, 92, 246402.	7.8	214
44	Time-reversal symmetry-breaking charge order in a kagome superconductor. Nature, 2022, 602, 245-250.	27.8	207
45	Electronic Structure of Mott Insulators Studied by Inelastic X-ray Scattering. Science, 2000, 288, 1811-1814.	12.6	193
46	Topological-Metal to Band-Insulator Transition in $\text{Bi}_2\text{Te}_3$ . Physical Review Letters, 2012, 109, 186403.	7.8	184
47	Topological Hopf and Chain Link Semimetal States and Their Application to $\text{Co}_2\text{V}_2\text{O}_7$ . Physical Review Letters, 2017, 119, 156401.	7.8	183
48	Discovery of Lorentz-violating type II Weyl fermions in $\text{LaAlGe}$ . Science Advances, 2017, 3, e1603266.	10.3	176
49	Topological surface states and Dirac point tuning in ternary topological insulators. Physical Review B, 2012, 85, .	3.2	171
50	Discovery of a new type of topological Weyl fermion semimetal state in $\text{Mo}_x\text{W}_{1-x}\text{Te}_2$ . Nature Communications, 2016, 7, 13643.	12.8	163
51	Charge order and superconductivity in kagome materials. Nature Physics, 2022, 18, 137-143.	16.7	152
52	The Magnetic Genome of Two-Dimensional van der Waals Materials. ACS Nano, 2022, 16, 6960-7079.	14.6	149
53	Room-temperature magnetic topological Weyl fermion and nodal line semimetal states in half-metallic Heusler $\text{Co}_2\text{TiX}$ ( $X=\text{Si, Ge, or Sn}$ ). Scientific Reports, 2016, 6, 38839.	3.3	148
54	Type-II Symmetry-Protected Topological Dirac Semimetals. Physical Review Letters, 2017, 119, 026404.	7.8	145

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55	Topological electronic structure and Weyl semimetal in the TlBiSe $\langle \text{mml:math} \text{xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mn} \rangle 2 \langle \text{mml:mn} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:math} \rangle$ class of semiconductors. Physical Review B, 2012, 86, .	3.2	135
56	Momentum-space imaging of Cooper pairing in a half-Dirac-gas topological superconductor. Nature Physics, 2014, 10, 943-950.	16.7	134
57	Criteria for Directly Detecting Topological Fermi Arcs in Weyl Semimetals. Physical Review Letters, 2016, 116, 066802.	7.8	134
58	Magnetic and noncentrosymmetric Weyl fermion semimetals in the $\langle \text{mml:math} \text{xmlns:mml="http://www.w3.org/1998/Math/MathML"} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mi} \text{mathvariant="italic"} \rangle R \langle \text{mml:mi} \rangle \langle \text{mml:mi} \rangle$		

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73	Electronic nature of chiral charge order in the kagome superconductor $\text{CsV}_3\text{Sb}_5$ . Physical Review B, 2021, 104, .	8.2	108
74	Spin Polarization and Texture of the Fermi Arcs in the Weyl Fermion Semimetal TaAs. Physical Review Letters, 2016, 116, 096801.	7.8	102
75	Tuning a Schottky barrier in a photoexcited topological insulator with transient Dirac cone electron-hole asymmetry. Nature Communications, 2014, 5, 3003.	12.8	98
76	Signatures of a time-reversal symmetric Weyl semimetal with only four Weyl points. Nature Communications, 2017, 8, 942.	12.8	98
77	Gigantic Surface Lifetime of an Intrinsic Topological Insulator. Physical Review Letters, 2015, 115, 116801.	7.8	84
78	Momentum-Resolved Charge Excitations in a Prototype One-Dimensional Mott Insulator. Physical Review Letters, 2002, 88, 177403.	7.8	82
79	Weyl, Dirac and high-fold chiral fermions in topological quantum matter. Nature Reviews Materials, 2021, 6, 784-803.	48.7	82
80	Magnetic-tunnelling-induced Weyl node annihilation in TaP. Nature Physics, 2017, 13, 979-986.	16.7	80
81	Mapping the unconventional orbital texture in topological crystalline insulators. Nature Physics, 2014, 10, 572-577.	16.7	79
82	Topological Dirac surface states and superconducting pairing correlations in $\text{PbTaSe}_2$ . Physical Review B, 2016, 93, .	12.1	79
83	Rare Earth Engineering in $\text{RMn}_2\text{S}_2$ .		

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91	Observation of Weyl fermions in a magnetic non-centrosymmetric crystal. Nature Communications, 2020, 11, 3356.	12.8	55
92	Signatures of Fermi Arcs in the Quasiparticle Interferences of the Weyl Semimetals TaAs and NbP. Physical Review Letters, 2016, 116, 066601.	7.8	54
93	Superconducting properties in single crystals of the topological nodal semimetal $\text{PbTaSe}_2$ . Physical Review B, 2016, 93, .	3.2	48
94	A novel artificial condensed matter lattice and a new platform for one-dimensional topological phases. Science Advances, 2017, 3, e1501692.	10.3	48
95	Crystal growth and quantum oscillations in the topological chiral semimetal CoSi. Physical Review B, 2019, 100, .	3.2	48
96	Electron-phonon coupling in the charge density wave state of $\text{CsV}_3\text{Sb}_5$ . Physical Review B, 2022, 105, .	3.2	48
97	Geometry of the charge density wave in the kagome metal $\text{AV}_3\text{Sb}_5$ . Physical Review Letters, 2022, 128, 067201.	3.2	47
98	Non-Kondo-like Electronic Structure in the Correlated Rare-Earth Hexaboride $\text{Yb}_6\text{B}_6$ . Physical Review Letters, 2015, 114, 016403.	7.8	46
99	Structural and electronic properties of highly doped topological insulator $\text{Bi}_2\text{Se}_3$ crystals. Physica Status Solidi - Rapid Research Letters, 2013, 7, 133-135.	2.4	45
100	Observation of the spin-polarized surface state in a noncentrosymmetric superconductor $\text{BiPd}$ . Nature Communications, 2016, 7, 13315.	3.2	42
101	Unconventional Photocurrents from Surface Fermi Arcs in Topological Chiral Semimetals. Physical Review Letters, 2020, 124, 166404.	12.8	42
102	Oscillatory surface dichroism of the insulating topological insulator $\text{Bi}_2\text{Te}_3$ . Physical Review B, 2013, 88, .	7.8	40
103	Quasiparticle interference on type-I and type-II Weyl semimetal surfaces: a review. Advances in Physics: X, 2018, 3, 1466661.	3.2	38
104	High-resolution soft X-ray emission spectrograph at advanced light source. Journal of Physics and Chemistry of Solids, 2005, 66, 2173-2178.	4.1	38
105	Nodeless kagome superconductivity in $\text{LaRu}_3\text{Sb}_7$ . Physical Review Materials, 2021, 5, .	4.0	37
106	Observation of Dirac-like semi-metallic phase in NdSb. Journal of Physics Condensed Matter, 2016, 28, 23LT02.	1.8	35
107	Fermion-boson many-body interplay in a frustrated kagome paramagnet. Nature Communications, 2020, 11, 4003.	12.8	35



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127	X-ray imaging of dispersive charge modes in a doped Mott insulator near the antiferromagnet/superconductor transition. <i>Physical Review B</i> , 2008, 78, .	3.2	22
128	Field-free platform for Majorana-like zero mode in superconductors with a topological surface state. <i>Physical Review B</i> , 2020, 101, .	3.2	22
129	Electronic structure and relaxation dynamics in a superconducting topological material. <i>Scientific Reports</i> , 2016, 6, 22557.	3.3	21
130	Adiabatic transformation as a search tool for new topological insulators: Distorted ternary $\text{LiAgSb}$ -class semiconductors and related compounds. <i>Physical Review B</i> , 2013, 87, .	3.2	20
131	Mirror Protected Dirac Fermions on a Weyl Semimetal NbP Surface. <i>Physical Review Letters</i> , 2017, 119, 196403.	7.8	20
132	Magnetic-Field Control of Topological Electronic Response near Room Temperature in Correlated Kagome Magnets. <i>Physical Review Letters</i> , 2019, 123, 196604.	7.8	20
133	Nodeless superconductivity and its evolution with pressure in the layered dirac semimetal 2M-WS <sub>2</sub> . <i>Npj Quantum Materials</i> , 2019, 4, .	5.2	20
134	Unconventional scaling of the superfluid density with the critical temperature in transition metal dichalcogenides. <i>Science Advances</i> , 2019, 5, eaav8465.	10.3	20
135	Observation of sixfold degenerate fermions in $\text{PdSb}$ . <i>Physical Review B</i> , 2020, 101, .	3.2	20
136	Photocurrent-driven transient symmetry breaking in the Weyl semimetal TaAs. <i>Nature Materials</i> , 2022, 21, 62-66.	27.5	20
137	Two distinct topological phases in the mixed-valence compound $\text{YbB}_6$ and its differences from $\text{SmB}_6$ . <i>Physical Review B</i> , 2015, 91, .	3.2	19
138	Tunable spin helical Dirac quasiparticles on the surface of three-dimensional HgTe. <i>Physical Review B</i> , 2015, 92, .	3.2	19
139	Quantum Phase Transition of Correlated Iron-Based Superconductivity in $\text{LiFeAs}$ . <i>Physical Review Letters</i> , 2019, 123, 217004.	7.8	19
140	Observation of a linked-loop quantum state in a topological magnet. <i>Nature</i> , 2022, 604, 647-652.	27.8	18
141	Signatures of Weyl Fermion Annihilation in a Correlated Kagome Magnet. <i>Physical Review Letters</i> , 2021, 127, 256403.	7.8	17
142	Surface versus bulk Dirac state tuning in a three-dimensional topological Dirac semimetal. <i>Physical Review B</i> , 2015, 91, .	3.2	16
143	Observation of metallic surface states in the strongly correlated Kitaev-Heisenberg candidate $\text{Na}_2\text{Ir}_2\text{O}_7$ . <i>Physical Review B</i> , 2016, 93, .	3.2	16
144	Multiple quantum phase transitions of different nature in the topological kagome magnet $\text{Co}_3\text{Sn}_2\text{S}_2$ . <i>Npj Quantum Materials</i> , 2021, 6, .	5.2	16

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145	Vector field controlled vortex lattice symmetry in LiFeAs using scanning tunneling microscopy. Physical Review B, 2019, 99, .	3.2	15
146	Microscopic investigation of Bi <sub>2-x</sub> Sb <sub>x</sub> Te <sub>3-y</sub> Se <sub>y</sub> systems: On the origin of a robust intrinsic topological insulator. Journal of Physics and Chemistry of Solids, 2019, 128, 251-257.	4.0	15
147	Prediction on Domestic Violence in Bangladesh during the COVID-19 Outbreak Using Machine Learning Methods. Applied System Innovation, 2021, 4, 77.	4.6	15
148	Crystal growth and transport properties of Weyl semimetal TaAs. Journal of Physics Condensed Matter, 2018, 30, 015803.	1.8	12
149	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
150	Low-temperature magnetic crossover in the topological kagome magnet TbMn <sub>6</sub> Sn <sub>6</sub> . Communications Physics, 2022, 5, .	5.3	12
151	Electronic structure of the quantum spin Hall parent compound CdTe and related topological issues. Physical Review B, 2014, 90, .	3.2	11
152	Spin-correlated electronic state on the surface of a spin-orbit Mott system. Physical Review B, 2014, 90, .	3.2	11
153	Spectroscopic studies of CdTe(111) bulk and surface electronic structure. Physical Review B, 2015, 91, .	3.2	11
154	Experimental signatures of phase interference and subfemtosecond time dynamics on the incident energy axis of resonant inelastic x-ray scattering. Physical Review B, 2015, 91, .	3.2	11
155	Time-reversal invariant and fully gapped unconventional superconducting state in the bulk of the topological compound Nb <sub>0.25</sub> Bi <sub>2</sub> Se <sub>3</sub> . Physical Review B, 2020, 102, .	3.2	11
156	Structural instability and charge modulations in the kagome superconductor $A_3Sb_5$ . Physical Review B, 2022, 105, .	3.2	11
157	Dispersive collective charge modes in an incommensurately modulated cuprate Mott insulator. Physical Review B, 2007, 76, .	3.2	9
158	Field-Induced Metal-Insulator Transition in $\hat{I}^2$ -EuP <sub>3</sub> . Chinese Physics Letters, 2020, 37, 107501.	3.3	9
159	Visualizing the out-of-plane electronic dispersions in an intercalated transition metal dichalcogenide. Physical Review B, 2022, 105, .	3.2	9
160	MERLIN – A meV Resolution Beamline at the ALS. AIP Conference Proceedings, 2007, , .	0.4	7
161	Correlated Charge Excitations in Quasi-Low-Dimensional Mott Insulators. International Journal of Modern Physics B, 2003, 17, 3519-3524.	2.0	6
162	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

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163	Deviating band symmetries and many-body interactions in a model hole-doped iron pnictide superconductor. <i>Physical Review B</i> , 2012, 86, .	3.2	4
164	Pressure Induced Topological Quantum Phase Transition in Weyl Semimetal Td-MoTe <sub>2</sub> . <i>Journal of the Physical Society of Japan</i> , 2020, 89, 094707.	1.6	4
165	Direct transition resonance in atomically uniform topological Sb(111) thin films. <i>Physical Review B</i> , 2015, 92, .	3.2	3
166	Topological Surface States: A New Type of 2D Electron Systems. <i>Contemporary Concepts of Condensed Matter Science</i> , 2013, , 143-174.	0.5	2
167	Surface states in lightly hole-doped sodium cobaltate $\text{NaCoO}_2$ . <i>Physical Review B</i> , 2015, 91, .	3.2	2
168	An Effective Approach to Improving Cadmium Telluride (111)A Surface by Molecular-Beam-Epitaxy Growth of Tellurium Monolayer. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 726-735.	8.0	2
169	Low Energy Electronic Structures in Electron-Doped and Hole-Doped Superconducting (Ba/K)(Fe/Co) <sub>2</sub> As <sub>2</sub> . <i>Journal of Superconductivity and Novel Magnetism</i> , 2010, 23, 617-619.	1.8	1
170	Future Scientific Opportunities with Ultra-High Resolution Soft X-rays. <i>Synchrotron Radiation News</i> , 2003, 16, 15-17.	0.8	0
171	Topologically distinct Weyl fermion pairs. <i>Scientific Reports</i> , 2021, 11, 416.	3.3	0
172	Probabilistic modeling and predicting mean recurrence time of major earthquakes in Bangladesh. <i>Applied Mathematical Sciences</i> , 2021, 15, 239-247.	0.1	0
173	Robust topological state against magnetic impurities observed in the superconductor $\text{PbTaSe}_2$ . <i>Physical Review B</i> , 2021, 104, .	3.2	0
174	A New Regression Type Estimator and Its Application in Survey Sampling. <i>Open Journal of Statistics</i> , 2020, 10, 1010-1019.	0.7	0
175	Analyzing the Best Fitted Probabilistic Model for the Seasonal Rainfall Data in Khulna Region of Bangladesh. <i>Magna Scientia UCEVA</i> , 0, 2, 5.	0.2	0