

# Barry Bradlyn

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

42  
papers

2,582  
citations

23  
h-index

50  
g-index

50  
ext. papers

3,704  
ext. citations

9.9  
avg, IF

5.62  
L-index

#	Paper	IF	Citations
42	Topology invisible to eigenvalues in obstructed atomic insulators. <i>Physical Review B</i> , <b>2022</b> , 105,	3.3	2
41	IrRep: symmetry eigenvalues and irreducible representations of ab initio band structures. <i>Computer Physics Communications</i> , <b>2021</b> , 108226	4.2	1
40	Magnetic topological quantum chemistry. <i>Nature Communications</i> , <b>2021</b> , 12, 5965	17.4	15
39	Optical response from charge-density waves in Weyl semimetals. <i>Physical Review B</i> , <b>2021</b> , 104,	3.3	1
38	Physics of the Inverted Harmonic Oscillator: From the lowest Landau level to event horizons. <i>Annals of Physics</i> , <b>2021</b> , 168470	2.5	4
37	Simulating higher-order topological insulators in density wave insulators. <i>Physical Review B</i> , <b>2021</b> , 103,	3.3	1
36	Band Representations and Topological Quantum Chemistry. <i>Annual Review of Condensed Matter Physics</i> , <b>2021</b> , 12, 225-246	19.7	11
35	Topological crystalline phases in a disordered inversion-symmetric chain. <i>Physical Review B</i> , <b>2021</b> , 103,	3.3	3
34	Cubic 3D Chern photonic insulators with orientable large Chern vectors.. <i>Nature Communications</i> , <b>2021</b> , 12, 7330	17.4	3
33	Pairing Obstructions in Topological Superconductors. <i>Physical Review Letters</i> , <b>2020</b> , 124, 247001	7.4	7
32	Observation and control of maximal Chern numbers in a chiral topological semimetal. <i>Science</i> , <b>2020</b> , 369, 179-183	33.3	39
31	Strong and fragile topological Dirac semimetals with higher-order Fermi arcs. <i>Nature Communications</i> , <b>2020</b> , 11, 627	17.4	68
30	Axionic band topology in inversion-symmetric Weyl-charge-density waves. <i>Physical Review Research</i> , <b>2020</b> , 2,	3.9	11
29	Robustness of topological corner modes in photonic crystals. <i>Physical Review Research</i> , <b>2020</b> , 2,	3.9	20
28	Tutorial: Computing Topological Invariants in 2D Photonic Crystals. <i>Advanced Quantum Technologies</i> , <b>2020</b> , 3, 1900117	4.3	26
27	Hall Viscosity in Quantum Systems with Discrete Symmetry: Point Group and Lattice Anisotropy. <i>Physical Review X</i> , <b>2020</b> , 10,	9.1	14
26	Disconnected elementary band representations, fragile topology, and Wilson loops as topological indices: An example on the triangular lattice. <i>Physical Review B</i> , <b>2019</b> , 99,	3.3	61

25	Chiral topological semimetal with multifold band crossings and long Fermi arcs. <i>Nature Physics</i> , <b>2019</b> , 15, 759-765	16.2	98
24	Viscoelastic response of quantum Hall fluids in a tilted field. <i>Physical Review B</i> , <b>2019</b> , 99,	3.3	8
23	Quasinormal Modes and the Hawking-Unruh Effect in Quantum Hall Systems: Lessons from Black Hole Phenomena. <i>Physical Review Letters</i> , <b>2019</b> , 123, 156802	7.4	15
22	Multifold nodal points in magnetic materials. <i>APL Materials</i> , <b>2019</b> , 7, 101125	5.7	24
21	Engineering fragile topology in photonic crystals: Topological quantum chemistry of light. <i>Physical Review Research</i> , <b>2019</b> , 1,	3.9	30
20	Higher-order and crystalline topology in a phenomenological tight-binding model of lead telluride. <i>Physical Review Materials</i> , <b>2019</b> , 3,	3.2	7
19	Band connectivity for topological quantum chemistry: Band structures as a graph theory problem. <i>Physical Review B</i> , <b>2018</b> , 97,	3.3	37
18	Building blocks of topological quantum chemistry: Elementary band representations. <i>Physical Review B</i> , <b>2018</b> , 97,	3.3	90
17	Wallpaper fermions and the nonsymmorphic Dirac insulator. <i>Science</i> , <b>2018</b> , 361, 246-251	33.3	73
16	Structure of the entanglement entropy of (3+1)-dimensional gapped phases of matter. <i>Physical Review B</i> , <b>2018</b> , 97,	3.3	4
15	Chiral optical response of multifold fermions. <i>Physical Review B</i> , <b>2018</b> , 98,	3.3	66
14	Topology of Disconnected Elementary Band Representations. <i>Physical Review Letters</i> , <b>2018</b> , 120, 266401	7.4	67
13	Investigating Anisotropic Quantum Hall States with Bimetric Geometry. <i>Physical Review Letters</i> , <b>2017</b> , 119, 146602	7.4	25
12	Double crystallographic groups and their representations on the Bilbao Crystallographic Server. <i>Journal of Applied Crystallography</i> , <b>2017</b> , 50, 1457-1477	3.8	101
11	Graph theory data for topological quantum chemistry. <i>Physical Review E</i> , <b>2017</b> , 96, 023310	2.4	65
10	Topological quantum chemistry. <i>Nature</i> , <b>2017</b> , 547, 298-305	50.4	537
9	Chiral anomaly factory: Creating Weyl fermions with a magnetic field. <i>Physical Review B</i> , <b>2017</b> , 95,	3.3	56
8	Supersymmetric waves in Bose-Fermi mixtures. <i>Physical Review A</i> , <b>2016</b> , 93,	2.6	4

7	Beyond Dirac and Weyl fermions: Unconventional quasiparticles in conventional crystals. <i>Science</i> , <b>2016</b> , 353, aaf5037	33:3	601
6	Geometry and Response of Lindbladians. <i>Physical Review X</i> , <b>2016</b> , 6,	9:1	72
5	Low-energy effective theory in the bulk for transport in a topological phase. <i>Physical Review B</i> , <b>2015</b> , 91,	3:3	72
4	Topological central charge from Berry curvature: Gravitational anomalies in trial wave functions for topological phases. <i>Physical Review B</i> , <b>2015</b> , 91,	3:3	45
3	Kubo formulas for viscosity: Hall viscosity, Ward identities, and the relation with conductivity. <i>Physical Review B</i> , <b>2012</b> , 86,	3:3	158
2	Effective action approach for quantum phase transitions in bosonic lattices. <i>Physical Review A</i> , <b>2009</b> , 79,	2:6	29
1	Topological materials discovery from crystal symmetry. <i>Nature Reviews Materials</i> ,	7:3	10