

Christoph BrÄ¼ne

List of Publications by Year in descending order

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citing authors

#	ARTICLE	IF	CITATIONS
1	transfer matrix method in the study of surface magnon polaritons via simulated attenuated total reflection measurements on the antiferromagnetic semiconductor Physical Review B, 2022, 105, .	3.2	4
2	Approaching Quantization in Macroscopic Quantum Spin Hall Devices through Gate Training. Physical Review Letters, 2019, 123, 047701.	7.8	40
3	Ultrafast nonlocal collective dynamics of Kane plasmon-polaritons in a narrow-gap semiconductor. Science Advances, 2019, 5, eaau9956.	10.3	16
4	Proximity-Induced Superconductivity in CdTe/HgTe Core/Shell Nanowires. Nano Letters, 2019, 19, 4078-4082.	9.1	14
5	Residual strain in free-standing CdTe nanowires overgrown with HgTe. Applied Physics Letters, 2019, 114, 153104.	3.3	3
6	Electron-hole asymmetry of the topological surface states in strained HgTe. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 3381-3386.	7.1	16
7	Observation of the universal magnetoelectric effect in a 3D topological insulator. Nature Communications, 2017, 8, 15197.	12.8	136
8	Interplay of Chiral and Helical States in a Quantum Spin Hall Insulator Lateral Junction. Physical Review Letters, 2017, 119, 226401.	7.8	17
9	Josephson Radiation from Gapless Andreev Bound States in HgTe-Based Topological Junctions. Physical Review X, 2017, 7, .	8.9	108
10	Gapless Andreev bound states in the quantum spin Hall insulator HgTe. Nature Nanotechnology, 2017, 12, 137-143.	31.5	237
11	Controlled finite momentum pairing and spatially varying order parameter in proximitized HgTe quantum wells. Nature Physics, 2017, 13, 87-93.	16.7	70
12	CdTe-HgTe core-shell nanowire growth controlled by RHEED. Physical Review Materials, 2017, 1, .	2.4	10
13	Anisotropic and strong negative magnetoresistance in the three-dimensional topological insulator Physical Review B, 2016, 94, .	3.2	59
14	Strain Engineering of the Band Gap of HgTe Quantum Wells Using Superlattice Virtual Substrates. Physical Review Letters, 2016, 117, 086403.	7.8	55
15	High-temperature quantum Hall effect in finite gapped HgTe quantum wells. Physical Review B, 2016, 93, .	3.2	19
16	4π -periodic Josephson supercurrent in HgTe-based topological Josephson junctions. Nature Communications, 2016, 7, 10303.	12.8	301
17	Unexpected edge conduction in mercury telluride quantum wells under broken time-reversal symmetry. Nature Communications, 2015, 6, 7252.	12.8	101
18	Temperature-driven transition from a semiconductor to a topological insulator. Physical Review B, 2015, 91, .	3.2	29

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19	Nonsinusoidal Current-Phase Relationship in Josephson Junctions from the 3D Topological Insulator HgTe. <i>Physical Review Letters</i> , 2015, 114, 066801.	7.8	99
20	Magneto-Optics of Massive Dirac Fermions in Bulk Bi_2Te_3 . <i>Physical Review Letters</i> , 2015, 114, 186401.	7.8	65
21	Phase-sensitive SQUIDs based on the 3D topological insulator HgTe. <i>Physica Scripta</i> , 2015, T164, 014002.	2.5	12
22	Dirac-Screening Stabilized Surface-State Transport in a Topological Insulator. <i>Physical Review X</i> , 2014, 4, .	8.9	35
23	Induced superconductivity in the quantum spin Hall edge. <i>Nature Physics</i> , 2014, 10, 638-643.	16.7	292
24	Self-consistent $k \cdot p$ calculations for gated thin layers of three-dimensional topological insulators. <i>Physical Review B</i> , 2014, 89, .	3.2	10
25	One-Dimensional Weak Antilocalization Due to the Berry Phase in HgTe Wires. <i>Physical Review Letters</i> , 2014, 112, 146803.	7.8	12
26	Terahertz quantum Hall effect of Dirac fermions in a topological insulator. <i>Physical Review B</i> , 2013, 87, .	3.2	33
27	Imaging currents in HgTe quantum wells in the quantum spin Hall regime. <i>Nature Materials</i> , 2013, 12, 787-791.	27.5	230
28	Room temperature electrically tunable terahertz Faraday effect. <i>Applied Physics Letters</i> , 2013, 102, .	3.3	32
29	Spatially Resolved Study of Backscattering in the Quantum Spin Hall State. <i>Physical Review X</i> , 2013, 3, .	8.9	76
30	Observing electronic structures on <i>ex situ</i> grown topological insulator thin films. <i>Physica Status Solidi - Rapid Research Letters</i> , 2013, 7, 130-132.	2.4	10
31	Josephson Supercurrent through the Topological Surface States of Strained Bulk HgTe. <i>Physical Review X</i> , 2013, 3, .	8.9	73
32	Molecular beam epitaxy of high structural quality Bi_2Se_3 on lattice matched InP(111) substrates. <i>Applied Physics Letters</i> , 2013, 102, .	3.3	79
33	Fabrication of samples for scanning probe experiments on quantum spin Hall effect in HgTe quantum wells. <i>Journal of Applied Physics</i> , 2012, 112, 103713.	2.5	9
34	Terahertz magneto-optical spectroscopy in HgTe thin films. <i>Semiconductor Science and Technology</i> , 2012, 27, 124004.	2.0	35
35	Induced Superconductivity in the Three-Dimensional Topological Insulator HgTe. <i>Physical Review Letters</i> , 2012, 109, 186806.	7.8	63
36	Spin polarization of the quantum spin Hall edge states. <i>Nature Physics</i> , 2012, 8, 485-490.	16.7	264

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37	Backscattering of Dirac Fermions in HgTe Quantum Wells with a Finite Gap. Physical Review Letters, 2011, 106, 076802.	7.8	40
38	Surface State Charge Dynamics of a High-Mobility Three-Dimensional Topological Insulator. Physical Review Letters, 2011, 107, 136803.	7.8	75
39	Giant Magneto-Optical Faraday Effect in HgTe Thin Films in the Terahertz Spectral Range. Physical Review Letters, 2011, 106, 107404.	7.8	102
40	Detection of THz radiation with devices made from wafers with HgTe and InSb quantum wells. , 2011, , .		0
41	The detection of terahertz waves by semimetallic and by semiconducting materials. Journal of Applied Physics, 2011, 109, 013106.	2.5	3
42	Fine structure of zero-mode Landau levels in HgTe/Hg _x Cd _{1-x} Te quantum wells. Physical Review B, 2011, 83, .	3.2	56
43	Single valley Dirac fermions in zero-gap HgTe quantum wells. Nature Physics, 2011, 7, 418-422.	16.7	238
44	Quantum Hall Effect from the Topological Surface States of Strained Bulk HgTe. Physical Review Letters, 2011, 106, 126803.	7.8	427
45	Publisher's Note: Surface State Charge Dynamics of a High-Mobility Three-Dimensional Topological Insulator [Phys. Rev. Lett. 107, 136803 (2011)]. Physical Review Letters, 2011, 107, .	7.8	1
46	THz photoresponse of quantum Hall devices based on HgTe-Quantum wells. , 2010, , .		0
47	Magnetotransport and THz-Optical Investigations at Devices with HgTe Quantum Wells. Journal of Low Temperature Physics, 2010, 159, 184-188.	1.4	2
48	Terahertz photoconductivity of a two-dimensional electron gas in HgCdTe/HgTe quantum wells. Physica Status Solidi (B): Basic Research, 2010, 247, 1495-1497.	1.5	4
49	Evidence for the ballistic intrinsic spin Hall effect in HgTe nanostructures. Nature Physics, 2010, 6, 448-454.	16.7	140
50	Circular photogalvanic effect in HgTe/CdHgTe quantum well structures. Semiconductor Science and Technology, 2010, 25, 095005.	2.0	30
51	THz detectors with HgTe and InSb quantum wells. , 2010, , .		0
52	Nonlinear magnetogyrotropic photogalvanic effect. Physical Review B, 2009, 80, .	3.2	12
53	Nonlocal Transport in the Quantum Spin Hall State. Science, 2009, 325, 294-297.	12.6	772
54	THz Photoresponse and Magnetotransport of detectors made of HgCdTe/HgTe quantum well structures. Journal of Physics: Conference Series, 2009, 193, 012066.	0.4	1

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55	Quantum Spin Hall Insulator State in HgTe Quantum Wells. <i>Science</i> , 2007, 318, 766-770.	12.6	5,070
56	The influence of interfaces and the modulation doping technique on the magneto-transport properties of HgTe based quantum wells. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2007, 4, 3382-3389.	0.8	17