Gregor Tkachov

List of Publications by Year
in descending order

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57	1,592	377584	325983
papers	citations	21	40
		h-index	g-index

58	58	58	1663
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Quantum Diffusion in the Lowest Landau Level of Disordered Graphene. Nanomaterials, 2022, 12, 1675.	1.9	1
2	Diffusive transport in the lowest Landau level of disordered 2d semimetals: the mean-square-displacement approach. European Physical Journal B, 2022, 95, .	0.6	2
3	Topological electronic states and thermoelectric transport at phase boundaries in single-layer WSe₂: An effective Hamiltonian theory. Journal of Physics Condensed Matter, 2021, 33, .	0.7	0
4	Transport in two-dimensional topological materials: recent developments in experiment and theory. 2D Materials, 2020, 7, 022007.	2.0	92
5	Chiral current-phase relation of topological Josephson junctions: A signature of the 4Ï€ -periodic Josephson effect. Physical Review B, 2019, 100, .	1.1	5
6	Soliton defects and topological ${4pi}$ -periodic superconductivity from an orbital magnetic field effect in edge Josephson junctions. Journal of Physics Condensed Matter, 2019, 31, 175301.	0.7	5
7	Probing the magnetoelectric effect in noncentrosymmetric superconductors by equal-spin Andreev tunneling. Journal of Physics Condensed Matter, 2019, 31, 055301.	0.7	4
8	Magnetoelectric Andreev Effect due to Proximity-Induced Nonunitary Triplet Superconductivity in Helical Metals. Physical Review Letters, 2017, 118, 016802.	2.9	20
9	Observation of the universal magnetoelectric effect in a 3D topological insulator. Nature Communications, 2017, 8, 15197.	5.8	136
10	Giant spin splitting and <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mn>0</mml:mn><mml:mo>â^’</mml:mo><mml:mi>Ï€</mml:mi> Josephson transitions from the Edelstein effect in quantum spin Hall insulators. Physical Review B, 2017, 95, .	1.1	9
11	Quantum interference of edge supercurrents in a two-dimensional topological insulator. Physical Review B, 2015, 92, .	1.1	42
12	Superconducting quantum spin Hall systems with giant orbital<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>g</mml:mi></mml:math>factors. Physical Review B, 2015, 92, .	1.1	5
13	Superconducting proximity effect in three-dimensional topological insulators in the presence of a magnetic field. Physical Review B, 2015, 92, .	1.1	53
14	Nonsinusoidal Current-Phase Relationship in Josephson Junctions from the 3D Topological Insulator HgTe. Physical Review Letters, 2015, 114, 066801.	2.9	99
15	One-Dimensional Weak Antilocalization Due to the Berry Phase in HgTe Wires. Physical Review Letters, 2014, 112, 146803.	2.9	12
16	Weak localization and Berry flux in topological crystalline insulators with a quadratic surface spectrum. Physical Review B, 2013, 88, .	1.1	4
17	Terahertz quantum Hall effect of Dirac fermions in a topological insulator. Physical Review B, 2013, 87, .	1.1	33
18	Spinâ€helical transport in normal and superconducting topological insulators. Physica Status Solidi (B): Basic Research, 2013, 250, 215-232.	0.7	75

#	Article	IF	Citations
19	Josephson Supercurrent through the Topological Surface States of Strained Bulk HgTe. Physical Review X, 2013, 3, .	2.8	73
20	Suppression of surface<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>p</mml:mi></mml:math>-wave superconductivity in disordered topological insulators. Physical Review B, 2013, 87, .	1.1	36
21	Helical Andreev bound states and superconducting Klein tunneling in topological insulator Josephson junctions. Physical Review B, 2013, 88, .	1.1	63
22	Induced Superconductivity in the Three-Dimensional Topological Insulator HgTe. Physical Review Letters, 2012, 109, 186806.	2.9	63
23	Diffusion on edges of insulating graphene with intravalley and intervalley scattering. Physical Review B, 2012, 86, .	1.1	7
24	Two-dimensional topological insulators in quantizing magnetic fields. Physica E: Low-Dimensional Systems and Nanostructures, 2012, 44, 900-905.	1.3	11
25	Weak antilocalization in HgTe quantum wells and topological surface states: Massive versus massless Dirac fermions. Physical Review B, 2011, 84, .	1.1	92
26	Backscattering of Dirac Fermions in HgTe Quantum Wells with a Finite Gap. Physical Review Letters, 2011, 106, 076802.	2.9	40
27	Anomalous galvanomagnetism, cyclotron resonance, and microwave spectroscopy of topological insulators. Physical Review B, 2011, 84, .	1.1	26
28	Single valley Dirac fermions in zero-gap HgTe quantum wells. Nature Physics, 2011, 7, 418-422.	6.5	238
29	Nonmonotonic inelastic tunneling spectra due to surface spin excitations in ferromagnetic junctions. European Physical Journal B, 2011, 82, 319-327.	0.6	0
30	Photoabsorption spectra and the X-ray edge problem in graphene. Europhysics Letters, 2011, 94, 67002.	0.7	4
31	Transition between ordinary and topological insulator regimes in two-dimensional resonant magnetotransport. Physical Review B, 2011, 83, .	1.1	20
32	Ballistic Quantum Spin Hall State and Enhanced Edge Backscattering in Strong Magnetic Fields. Physical Review Letters, 2010, 104, 166803.	2.9	72
33	Doppler shift in Andreev reflection from a moving superconducting condensate in Nb/InAs Josephson junctions. Physical Review B, 2009, 80, .	1.1	31
34	Coupling between chirality and pseudospin of Dirac fermions: Non-analytical particle-hole asymmetry and a proposal for a tunneling device. Physical Review B, 2009, 79, .	1.1	6
35	Spin-orbit coupling, edge states and quantum spin Hall criticality due to Dirac fermion confinement: the case study of graphene. European Physical Journal B, 2009, 69, 499-504.	0.6	6
36	Dirac fermion quantization on graphene edges: Isospin-orbit coupling, zero modes, and spontaneous valley polarization. Physical Review B, 2009, 79, .	1.1	26

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37	Spin-polarized tunneling through randomly transparent magnetic junctions: Reentrant magnetoresistance approaching the JulliÃ¨re limit. Physical Review B, 2008, 77, .	1.1	4
38	Fine structure of the local pseudogap and Fano effect for superconducting electrons near a zigzag graphene edge. Physical Review B, 2007, 76, .	1.1	19
39	Effect of magnetic pair breaking on Andreev bound states and resonant supercurrent in quantum dot Josephson junctions. Physical Review B, 2007, 75, .	1.1	6
40	Nonmetallic thermal transport in low-dimensional proximity structures with partially preserved time-reversal symmetry in a magnetic field. Physica C: Superconductivity and Its Applications, 2005, 417, 127-140.	0.6	15
41	Andreev magnetotransport in low-dimensional proximity structures:â€ƒSpin-dependent conductance enhancement. Physical Review B, 2005, 71, .	1.1	15
42	Geometrical enhancement of the proximity effect in quantum wires with extended superconducting tunnel contacts. Physical Review B, 2005, 71, .	1.1	42
43	Magnetic field influence on the proximity effect in semiconductor-superconductor hybrid structures and their thermal conductance. Physical Review B, 2004, 69, .	1.1	30
44	ANDREEV REFLECTION AND SUBGAP TRANSPORT DUE TO ELECTRON-MAGNON INTERACTIONS IN FERROMAGNET-SUPERCONDUCTOR JUNCTIONS. International Journal of Modern Physics B, 2003, 17, 5001-5005.	1.0	3
45	Magnon-assisted Andreev transport across ferromagnetâ€“superconductor junctions. Physica E: Low-Dimensional Systems and Nanostructures, 2002, 12, 938-941.	1.3	3
46	ANDREEV REFLECTION AND SUBGAP TRANSPORT DUE TO ELECTRON-MAGNON INTERACTIONS IN FERROMAGNET-SUPERCONDUCTOR JUNCTIONS. , 2002, , .		0
47	Anomalous penetration of an electromagnetic signal in a thin metallic plate under strong magnetodynamic nonlinearity conditions. Journal of Experimental and Theoretical Physics, 2001, 93, 630-641.	0.2	1
48	Subgap transport in ferromagnet-superconductor junctions due to magnon-assisted Andreev reflection. Physical Review B, 2001, 65, .	1.1	32
49	Impedance of a thin metal film in the regime of strong magnetodynamic nonlinearity. Low Temperature Physics, 2000, 26, 831-837.	0.2	0
50	Nonlinear interaction of an electromagnetic wave and a dc current in a metallic film. Low Temperature Physics, 2000, 26, 64-71.	0.2	1
51	The nonlinear effect of transport current on the response of metals to electromagnetic radiation. Journal of Physics Condensed Matter, 2000, 12, 4613-4627.	0.7	1
52	Nonstationary effects induced by a strong direct current in a compensated metal. Low Temperature Physics, 1999, 25, 895-900.	0.2	0
53	Non-linear conductivity and magnetoplasma waves in compensated metals and semi-metals. Journal of Physics Condensed Matter, 1998, 10, 1033-1052.	0.7	3
54	Sign-alternating current structure and oscillations in I-V characteristics of a metal plate. Journal of Physics Condensed Matter, 1995, 7, 625-637.	0.7	4

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55	Current states in a metal plate. Journal of Physics Condensed Matter, 1993, 5, 7469-7480.	0.7	2
56	Non-linear magnetoplasma excitations in compensated metals: periodic and solitary waves. , 0, , .		0
57	Peculiarities in the nonlinear electromagnetic response of a thin metal film carrying a strong DC current. , 0, , .		0