

# Timo Hyart

## List of Publications by Year in descending order

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57  
papers

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331259

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57  
all docs

57  
docs citations

57  
times ranked

1633  
citing authors

#	ARTICLE	IF	CITATIONS
1	Non-Hermitian many-body topological excitations in interacting quantum dots. Physical Review Research, 2022, 4, .	1.3	17
2	Corner states, hinge states, and Majorana modes in SnTe nanowires. Physical Review B, 2022, 105, .	1.1	7
3	Quantum-metric-enabled exciton condensate in double twisted bilayer graphene. Physical Review B, 2022, 105, .	1.1	10
4	Dissipative Parametric Gain in a $\text{GaAs}/\text{AlGaAs}$ Superlattice. Physical Review Letters, 2022, 128, .	1.1	7
5	Many-body Majorana-like zero modes without gauge symmetry breaking. Physical Review Research, 2021, 3, .	1.3	3
6	Topological charge, spin, and heat transistor. Physical Review B, 2021, 103, .	1.1	3
7	Signatures of dephasing by mirror-symmetry breaking in weak-antilocalization magnetoresistance across the topological transition in $\text{Pb}_{1-x}\text{Sn}_x$ . Physical Review B, 2021, 103, .	1.1	7
8	Designing Three-Dimensional Flat Bands in Nodal-Line Semimetals. Physical Review X, 2021, 11, .	2.8	17
9	Tunable topological states hosted by unconventional superconductors with adatoms. Physical Review Research, 2021, 3, .	1.3	7
10	Yu-Shiba-Rusinov Qubit. PRX Quantum, 2021, 2, .	3.5	14
11	Topological valley currents via ballistic edge modes in graphene superlattices near the primary Dirac point. Communications Physics, 2020, 3, .	2.0	11
12	Transition between canted antiferromagnetic and spin-polarized ferromagnetic quantum Hall states in graphene on a ferrimagnetic insulator. Physical Review B, 2020, 101, .	1.1	8
13	Topological domain wall states in a nonsymmorphic chiral chain. Physical Review B, 2020, 101, .	1.1	4
14	Non-Hermitian topological end-mode lasing in polariton systems. Physical Review Research, 2020, 2, .	1.3	38
15	Hidden Chern number in one-dimensional non-Hermitian chiral-symmetric systems. Physical Review B, 2019, 100, .	1.1	27
16	Topological properties of multilayers and surface steps in the SnTe material class. Physical Review B, 2019, 100, .	1.1	12
17	Moiré with flat bands is different. Europhysics News, 2019, 50, 24-26.	0.1	1
18	Geometric and Conventional Contribution to the Superfluid Weight in Twisted Bilayer Graphene. Physical Review Letters, 2019, 123, 237002.	2.9	116

#	ARTICLE	IF	CITATIONS
19	Two Topologically Distinct Dirac-Line Semimetal Phases and Topological Phase Transitions in Rhombohedrally Stacked Honeycomb Lattices. <i>Journal of Low Temperature Physics</i> , 2018, 191, 35-48.	0.6	34
20	A Magnetic-Field-Free Exciton Condensate. <i>Physics Magazine</i> , 2018, 11, .	0.1	1
21	Competition of electron-phonon mediated superconductivity and Stoner magnetism on a flat band. <i>Physical Review B</i> , 2018, 98, .	1.1	37
22	Robust semi-Dirac points and unconventional topological phase transitions in doped superconducting Sr <sub>2</sub> IrO <sub>4</sub> tunnel coupled to t <sub>2</sub> g electron systems. <i>SciPost Physics</i> , 2017, 3, .	1.5	4
23	Collective amplitude mode fluctuations in a flat band superconductor formed at a semimetal surface. <i>Physical Review B</i> , 2016, 93, .	1.1	9
24	Enhancing triplet superconductivity by the proximity to a singlet superconductor in oxide heterostructures. <i>Physical Review B</i> , 2016, 93, .	1.1	7
25	Existence of zero-energy impurity states in different classes of topological insulators and superconductors and their relation to topological phase transitions. <i>Physical Review B</i> , 2016, 93, .	1.1	32
26	Momentum-space structure of surface states in a topological semimetal with a nexus point of Dirac lines. <i>Physical Review B</i> , 2016, 93, .	1.1	55
27	Confinement-deconfinement transition due to spontaneous symmetry breaking in quantum Hall bilayers. <i>Nature Communications</i> , 2016, 7, 10462.	5.8	12
28	Symmetry-protected topological invariant and Majorana impurity states in time-reversal-invariant superconductors. <i>Physical Review B</i> , 2015, 91, .	1.1	11
29	Andreev-Bragg Reflection from an Amperian Superconductor. <i>Physical Review Letters</i> , 2015, 115, 097001.	2.9	3
30	Mapping an electron wave function by a local electron scattering probe. <i>New Journal of Physics</i> , 2015, 17, 113048.	1.2	3
31	Physical principles of the amplification of electromagnetic radiation due to negative electron masses in a semiconductor superlattice. <i>JETP Letters</i> , 2015, 100, 766-770.	0.4	13
32	Minimal circuit for a flux-controlled Majorana qubit in a quantum spin-Hall insulator. <i>Physica Scripta</i> , 2015, T164, 014007.	1.2	7
33	Giant Negative Magnetoresistance Driven by Spin-Orbit Coupling at the $\text{LaAlO}_3/\text{SrTiO}_3$ Interface. <i>Physical Review Letters</i> , 2015, 115, 016803.	2.9	63
34	Zeeman-field-induced topological phase transitions in triplet superconductors. <i>Physical Review B</i> , 2014, 90, .	1.1	20
35	Disorder and magnetic-field-induced breakdown of helical edge conduction in an inverted electron-hole bilayer. <i>Physical Review B</i> , 2014, 89, .	1.1	25
36	Interplay of Exciton Condensation and the Quantum Spin Hall Effect in $\text{InAs}/\text{GaSb}$ Bilayer. <i>Physical Review Letters</i> , 2014, 112, 176403.	2.9	78

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37	Backscattering between helical edge states via dynamic nuclear polarization. Physical Review B, 2013, 87, .	1.1	47
38	Superfluid Stiffness of a Driven Dissipative Condensate with Disorder. Physical Review Letters, 2013, 111, 230403.	2.9	36
39	Influence of Topological Excitations on Shapiro Steps and Microwave Dynamical Conductance in Bilayer Exciton Condensates. Physical Review Letters, 2013, 110, 076806.	2.9	8
40	Effects of disorder on Coulomb-assisted braiding of Majorana zero modes. Physical Review B, 2013, 88, .	1.1	19
41	Fermion-Parity Anomaly of the Critical Supercurrent in the Quantum Spin-Hall Effect. Physical Review Letters, 2013, 110, 017003.	2.9	116
42	Flux-controlled quantum computation with Majorana fermions. Physical Review B, 2013, 88, .	1.1	253
43	Competition between $d$ -wave and topological $p$ -wave superconducting phases in the doped Kitaev-Hubbard model. Physical Review B, 2012, 85, .	1.1	54
44	Quantitative description of Josephson-like tunneling in $\nu=1$ quantum Hall bilayers. Physical Review B, 2011, 83, .	1.1	28
45	Robust one-dimensional wires in lattice mismatched bilayer graphene. Applied Physics Letters, 2011, 98, 251902.	1.5	13
46	Generation of direct current in a semiconductor superlattice under the action of a bichromatic field as a parametric effect. Journal of Experimental and Theoretical Physics, 2010, 111, 822-829.	0.2	9
47	Terahertz Bloch Oscillator with a Modulated Bias. Physical Review Letters, 2009, 102, 140405.	2.9	47
48	NONDEGENERATE PARAMETRIC AMPLIFICATION IN SUPERLATTICES AND THE LIMITS OF STRONG AND WEAK DISSIPATION. International Journal of Modern Physics B, 2009, 23, 4403-4413.	1.0	7
49	TERAHERTZ BLOCH OSCILLATOR WITH SUPPRESSED ELECTRIC DOMAINS: EFFECT OF ELASTIC SCATTERING. International Journal of Modern Physics B, 2009, 23, 4459-4472.	1.0	4
50	Possible THz Bloch gain in dc-ac-driven superlattices. Microelectronics Journal, 2009, 40, 719-721.	1.1	5
51	Model of the Influence of an External Magnetic Field on the Gain of Terahertz Radiation from Semiconductor Superlattices. Physical Review Letters, 2009, 103, 117401.	2.9	35
52	Bloch gain in dc-ac-driven semiconductor superlattices in the absence of electric domains. Physical Review B, 2008, 77, .	1.1	43
53	Terahertz parametric gain in semiconductor superlattices. , 2007, , .		1
54	Theory of Parametric Amplification in Superlattices. Physical Review Letters, 2007, 98, 220404.	2.9	37

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55	Suppressed absolute negative conductance and generation of high-frequency radiation in semiconductor superlattices. Europhysics Letters, 2006, 73, 934-940.	0.7	41
56	Suppressed absolute negative conductance and generation of high-frequency radiation in semiconductor superlattices. Europhysics Letters, 2006, 74, 567-567.	0.7	7
57	Terahertz parametric gain in semiconductor superlattices in the absence of electric domains. Applied Physics Letters, 2006, 89, 132105.	1.5	21