

# Tero Heikkilä

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/1153205/publications.pdf>

Version: 2024-02-01

117  
papers

5,206  
citations

109321

35  
h-index

88630

70  
g-index

119  
all docs

119  
docs citations

119  
times ranked

4051  
citing authors

| #  | ARTICLE  | IF   | CITATIONS |
|----|--|------|-----------|
| 1  | Controlling magnetism through Ising superconductivity in magnetic van der Waals heterostructures. <i>Physical Review B</i> , 2022, 105, .  | 3.2  | 3         |
| 2  | Surprising superconductivity of graphene. <i>Science</i> , 2022, 375, 719-720.   | 12.6 | 13        |
| 3  | Current Rectification in Junctions with Spin-Split Superconductors. <i>Physical Review Applied</i> , 2022, 17, .   | 3.8  | 6         |
| 4  | Dynamics of Two Ferromagnetic Insulators Coupled by Superconducting Spin Current. <i>Physical Review Letters</i> , 2022, 128, 167701.  | 7.8  | 10        |
| 5  | Superconducting spintronic tunnel diode. <i>Nature Communications</i> , 2022, 13, 2431.  | 12.8 | 27        |
| 6  | Polariton response in the presence of Brownian dissipation from molecular vibrations. <i>Journal of Chemical Physics</i> , 2021, 154, 044108.  | 3.0  | 4         |
| 7  | Coexistence of superconductivity and spin-splitting fields in superconductor/ferromagnetic insulator bilayers of arbitrary thickness. <i>Physical Review Research</i> , 2021, 3, .       | 3.6  | 25        |
| 8  | Topological polarization, dual invariants, and surface flat bands in crystalline insulators. <i>Physical Review B</i> , 2021, 103, .   | 3.2  | 13        |
| 9  | Giant enhancement to spin battery effect in superconductor/ferromagnetic insulator systems. <i>Physical Review B</i> , 2021, 103, .  | 3.2  | 10        |
| 10 | Magnomechanics in suspended magnetic beams. <i>Physical Review B</i> , 2021, 104, .  | 3.2  | 7         |
| 11 | Superconductor-Ferromagnet Tunnel Junction Thermoelectric Bolometer and Calorimeter with a SQUID Readout. <i>Journal of Low Temperature Physics</i> , 2020, 199, 585-592.                | 1.4  | 9         |
| 12 | Nonlinear spin torque, pumping, and cooling in superconductor/ferromagnet systems. <i>Physical Review B</i> , 2020, 101, .   | 3.2  | 8         |
| 13 | Electron-induced massive dynamics of magnetic domain walls. <i>Physical Review B</i> , 2020, 101, .  | 3.2  | 7         |
| 14 | Superfluid weight and Berezinskii-Kosterlitz-Thouless transition temperature of twisted bilayer graphene. <i>Physical Review B</i> , 2020, 101, .  | 3.2  | 124       |
| 15 | Domain wall motion in a diffusive weak ferromagnet. <i>Physical Review B</i> , 2020, 101, .  | 3.2  | 1         |
| 16 | Flat-band superconductivity in periodically strained graphene: mean-field and Berezinskii-Kosterlitz-Thouless transition. <i>Journal of Physics Condensed Matter</i> , 2020, 32, 365603. | 1.8  | 7         |
| 17 | Spin and charge currents driven by the Higgs mode in high-field superconductors. <i>Physical Review Research</i> , 2020, 2, .  | 3.6  | 6         |
| 18 | Thermalization of hot electrons via interfacial electron-magnon interaction. <i>Physical Review B</i> , 2019, 100, .   | 3.2  | 1         |

| #  | ARTICLE   | IF   | CITATIONS |
|----|---|------|-----------|
| 19 | Charge transport through spin-polarized tunnel junction between two spin-split superconductors. Physical Review B, 2019, 100, .                                 | 3.2  | 19        |
| 20 | Proximity effect in superconducting heterostructures with strong spin-orbit coupling and spin splitting. Physical Review B, 2019, 100, .                        | 3.2  | 5         |
| 21 | Thermal, electric and spin transport in superconductor/ferromagnetic-insulator structures. Progress in Surface Science, 2019, 94, 100540.                       | 8.3  | 64        |
| 22 | Superconductivity near a magnetic domain wall. Physical Review B, 2019, 99, .   | 3.2  | 17        |
| 23 | Theory for the stationary polariton response in the presence of vibrations. Physical Review B, 2019, 100, .   | 3.2  | 7         |
| 24 | Nonadiabatic dynamics in strongly driven diffusive Josephson junctions. Physical Review Research, 2019, 1, .  | 3.6  | 8         |
| 25 | <i>Colloquium</i> : Nonequilibrium effects in superconductors with a spin-splitting field. Reviews of Modern Physics, 2018, 90, .                               | 45.6 | 127       |
| 26 | Thermoelectric radiation detector based on a superconductor-ferromagnet junction: Calorimetric regime. Journal of Applied Physics, 2018, 124, 123902.           | 2.5  | 13        |
| 27 | Competition of electron-phonon mediated superconductivity and Stoner magnetism on a flat band. Physical Review B, 2018, 98, .                                   | 3.2  | 37        |
| 28 | Noiseless Quantum Measurement and Squeezing of Microwave Fields Utilizing Mechanical Vibrations. Physical Review Letters, 2017, 118, 103601.                    | 7.8  | 51        |
| 29 | Dynamics of Strongly Coupled Modes between Surface Plasmon Polaritons and Photoactive Molecules: The Effect of the Stokes Shift. ACS Photonics, 2017, 4, 28-37. | 6.6  | 42        |
| 30 | Spin Pumping and Torque Statistics in the Quantum Noise Limit. Physical Review Letters, 2017, 118, 237701.  | 7.8  | 7         |
| 31 | Flat Bands as a Route to High-Temperature Superconductivity in Graphite. Springer Series in Materials Science, 2016, , 123-143.                                 | 0.6  | 21        |
| 32 | Stimulated quasiparticles in spin-split superconductors. Physical Review B, 2016, 93, .   | 3.2  | 13        |
| 33 | Collective amplitude mode fluctuations in a flat band superconductor formed at a semimetal surface. Physical Review B, 2016, 93, .                              | 3.2  | 9         |
| 34 | Flat-band superconductivity in strained Dirac materials. Physical Review B, 2016, 93, .   | 3.2  | 60        |
| 35 | Intrinsic spin-orbit interaction in diffusive normal wire Josephson weak links: Supercurrent and density of states. Physical Review B, 2016, 93, .              | 3.2  | 14        |
| 36 | Momentum-space structure of surface states in a topological semimetal with a nexus point of Dirac lines. Physical Review B, 2016, 93, .                         | 3.2  | 55        |

| #  | ARTICLE  | IF   | CITATIONS |
|----|--|------|-----------|
| 37 | Nexus and Dirac lines in topological materials. <i>New Journal of Physics</i> , 2015, 17, 093019.  | 2.9  | 101       |
| 38 | Very Large Thermophase in Ferromagnetic Josephson Junctions. <i>Physical Review Letters</i> , 2015, 114, 067001.   | 7.8  | 42        |
| 39 | Spin Hanle effect in mesoscopic superconductors. <i>Physical Review B</i> , 2015, 91, .  | 3.2  | 11        |
| 40 | Cross-Kerr nonlinearity in optomechanical systems. <i>Physical Review A</i> , 2015, 91, .  | 2.5  | 34        |
| 41 | Long-Range Spin Accumulation from Heat Injection in Mesoscopic Superconductors with Zeeman Splitting. <i>Physical Review Letters</i> , 2015, 114, 167002.                                  | 7.8  | 39        |
| 42 | Cavity optomechanics mediated by a quantum two-level system. <i>Nature Communications</i> , 2015, 6, 6981.   | 12.8 | 173       |
| 43 | On the superconductivity of graphite interfaces. <i>JETP Letters</i> , 2014, 100, 336-339.   | 1.4  | 61        |
| 44 | Predicted Very Large Thermoelectric Effect in Ferromagnet-Superconductor Junctions in the Presence of a Spin-Splitting Magnetic Field. <i>Physical Review Letters</i> , 2014, 112, 057001. | 7.8  | 143       |
| 45 | Lindblad-equation approach for the full counting statistics of work and heat in driven quantum systems. <i>Physical Review E</i> , 2014, 90, 022103.                                       | 2.1  | 52        |
| 46 | Size dependence of the Josephson critical behavior in pyrolytic graphite TEM lamellae. <i>Superconductor Science and Technology</i> , 2014, 27, 115014.                                    | 3.5  | 15        |
| 47 | Cold-Atom Thermoelectrics. <i>Science</i> , 2013, 342, 703-704.  | 12.6 | 3         |
| 48 | Energy and particle number fluctuations in superconducting heterostructures. , 2013, , .   |      | 0         |
| 49 | High-temperature surface superconductivity in rhombohedral graphite. <i>Physical Review B</i> , 2013, 87, .  | 3.2  | 80        |
| 50 | Tension-induced nonlinearities of flexural modes in nanomechanical resonators. <i>Physical Review B</i> , 2013, 87, .  | 3.2  | 10        |
| 51 | Nonuniversal shot noise in quasiequilibrium spin valves. <i>Physical Review B</i> , 2013, 87, .  | 3.2  | 2         |
| 52 | Nonequilibrium and proximity effects in superconductorâ€“normal metal junctions. <i>Physical Review B</i> , 2013, 88, .  | 3.2  | 11        |
| 53 | Microwave amplification with nanomechanical resonators. , 2013, , .  |      | 0         |
| 54 | Absorption of Heat into a Superconductorâ€“Normal Metalâ€“Superconductor Junction from a Fluctuating Environment. <i>Physical Review Letters</i> , 2012, 109, 067002.                      | 7.8  | 2         |

| #  | ARTICLE  | IF   | CITATIONS |
|----|--|------|-----------|
| 55 | Multimode circuit optomechanics near the quantum limit. Nature Communications, 2012, 3, 987.   | 12.8 | 193       |
| 56 | Microwave amplification with nanomechanical resonators. Nature, 2011, 480, 351-354.  | 27.8 | 253       |
| 57 | Dimensional crossover in topological matter: Evolution of the multiple Dirac point in the layered system to the flat band on the surface. JETP Letters, 2011, 93, 59-65. | 1.4  | 140       |
| 58 | Flat bands in topological media. JETP Letters, 2011, 94, 233-239.  | 1.4  | 271       |
| 59 | High-temperature surface superconductivity in topological flat-band systems. Physical Review B, 2011, 83, .  | 3.2  | 374       |
| 60 | Energy relaxation in graphene and its measurement with supercurrent. Physical Review B, 2011, 84, .  | 3.2  | 32        |
| 61 | Linear ac response of diffusive SNS junctions. Physical Review B, 2011, 83, .  | 3.2  | 22        |
| 62 | Electron-electron interaction induced spin thermalization in quasi-low-dimensional spin valves. Solid State Communications, 2010, 150, 475-479.                          | 1.9  | 6         |
| 63 | Fermions with cubic and quartic spectrum. JETP Letters, 2010, 92, 681-686.   | 1.4  | 20        |
| 64 | Theory of Microwave-Assisted Supercurrent in Quantum Point Contacts. Physical Review Letters, 2010, 105, 117001.   | 7.8  | 37        |
| 65 | Thermal Conductance by the Inverse Proximity Effect in a Superconductor. Physical Review Letters, 2010, 105, 097004.   | 7.8  | 27        |
| 66 | Fully Overheated Single-Electron Transistor. Physical Review Letters, 2010, 104, 196805.   | 7.8  | 24        |
| 67 | Electron-phonon heat transfer in monolayer and bilayer graphene. Physical Review B, 2010, 81, .  | 3.2  | 205       |
| 68 | Theory of Microwave-Assisted Supercurrent in Diffusive SNS Junctions. Physical Review Letters, 2010, 104, 247003.  | 7.8  | 28        |
| 69 | Physics of proximity Josephson sensor. Journal of Applied Physics, 2010, 107, .  | 2.5  | 15        |
| 70 | Giant current fluctuations in an overheated single-electron transistor. Physical Review B, 2010, 82, .   | 3.2  | 10        |
| 71 | Spin heat accumulation and its relaxation in spin valves. Physical Review B, 2010, 81, .   | 3.2  | 32        |
| 72 | Phase sensitive electron-phonon coupling in a superconducting proximity structure. Physical Review B, 2009, 79, .  | 3.2  | 14        |

| #  | ARTICLE   | IF   | CITATIONS |
|----|---|------|-----------|
| 73 | Statistics of Temperature Fluctuations in an Electron System out of Equilibrium. Physical Review Letters, 2009, 102, 130605.                    | 7.8  | 31        |
| 74 | Local and non-local shot noise in multiwalled carbon nanotubes. Europhysics Letters, 2009, 85, 37004.   | 2.0  | 1         |
| 75 | Charge transport in ballistic multiprobe graphene structures. Physical Review B, 2008, 78, .  | 3.2  | 8         |
| 76 | Ultrasensitive proximity Josephson sensor with kinetic inductance readout. Applied Physics Letters, 2008, 92, .                                 | 3.3  | 62        |
| 77 | Effective capacitance of a single-electron transistor. Physical Review B, 2008, 77, .   | 3.2  | 2         |
| 78 | Nonequilibrium transport in mesoscopic multi-terminal SNS Josephson junctions. Physical Review B, 2008, 77, .                                   | 3.2  | 27        |
| 79 | Nonequilibrium characteristics in all-superconducting tunnel structures. Physical Review B, 2007, 75, .   | 3.2  | 7         |
| 80 | Quantum detectors for the third cumulant of current fluctuations. Physical Review B, 2007, 75, .  | 3.2  | 10        |
| 81 | Peltier effects in Andreev interferometers. Physical Review B, 2007, 75, .  | 3.2  | 4         |
| 82 | Phase-dependent noise correlations in normal-superconducting structures. Physical Review B, 2007, 76, .   | 3.2  | 3         |
| 83 | Wideband Detection of the Third Moment of Shot Noise by a Hysteretic Josephson Junction. Physical Review Letters, 2007, 98, 207001.             | 7.8  | 59        |
| 84 | Phase States of Multiterminal Mesoscopic Normal-Metal-Superconductor Structures. Physical Review Letters, 2007, 99, 217003.                     | 7.8  | 1         |
| 85 | Photon heat transport in low-dimensional nanostructures. Physical Review B, 2007, 76, .   | 3.2  | 20        |
| 86 | Thermoelectric effects in superconducting proximity structures. Applied Physics A: Materials Science and Processing, 2007, 89, 625-637.         | 2.3  | 43        |
| 87 | Influence of Supercurrents on Low-temperature Thermopower in Mesoscopic N/S Structures. Journal of Low Temperature Physics, 2007, 146, 193-212. | 1.4  | 2         |
| 88 | Opportunities for mesoscopics in thermometry and refrigeration: Physics and applications. Reviews of Modern Physics, 2006, 78, 217-274.         | 45.6 | 890       |
| 89 | Rectifying Non-Gaussian Noise with Incoherent Cooper Pair Tunneling. AIP Conference Proceedings, 2006, , .                                      | 0.4  | 0         |
| 90 | Circuit theory for noise in incoherent normal-superconducting structures. New Journal of Physics, 2006, 8, 50-50.                               | 2.9  | 3         |

| #   | ARTICLE  | IF  | CITATIONS |
|-----|--|-----|-----------|
| 91  | Supercurrent-Induced Temperature Gradient across a Nonequilibrium SNS Josephson Junction. Physical Review Letters, 2006, 96, 167004. | 7.8 | 11        |
| 92  | Quantum transitions induced by the third cumulant of current fluctuations. Physical Review B, 2006, 73, .                            | 3.2 | 8         |
| 93  | Small Josephson Junction As Detector Of Non-Gaussian Noise. AIP Conference Proceedings, 2005, , .                                    | 0.4 | 0         |
| 94  | State-dependent impedance of a strongly coupled oscillator qubitsystem. Physical Review B, 2005, 72, .                               | 3.2 | 1         |
| 95  | Nonequilibrium phenomena in multiple normal-superconducting tunnel heterostructures. Physical Review B, 2005, 72, .                  | 3.2 | 12        |
| 96  | Cyclostationary measurement of low-frequency odd moments of current fluctuations. Physical Review B, 2005, 71, .                     | 3.2 | 2         |
| 97  | Resonant tunnelling through a C60molecular junction in a liquid environment. Nanotechnology, 2005, 16, 2143-2148.                    | 2.6 | 32        |
| 98  | Slow Vibrations in Transport through Molecules. Nano Letters, 2005, 5, 2088-2091.  | 9.1 | 0         |
| 99  | Observation of Shot-Noise-Induced Asymmetry in the Coulomb Blockaded Josephson Junction. Physical Review Letters, 2004, 93, 197002.  | 7.8 | 35        |
| 100 | Thermopower Induced by a Supercurrent in Superconductor/Normal-Metal Structures. Physical Review Letters, 2004, 92, 177004.          | 7.8 | 42        |
| 101 | Measuring Non-Gaussian Fluctuations through Incoherent Cooper-Pair Current. Physical Review Letters, 2004, 93, 247005.               | 7.8 | 37        |
| 102 | Thermopower in Andrew Interferometers. Journal of Low Temperature Physics, 2004, 136, 401-434.                                       | 1.4 | 23        |
| 103 | Mesoscopic Supercurrent Transistor Controlled by Nonequilibrium Cooling. Journal of Low Temperature Physics, 2004, 136, 435-452.     | 1.4 | 2         |
| 104 | Cyclostationary shot noise in mesoscopic measurements. Journal of Applied Physics, 2004, 96, 5927-5929.                              | 2.5 | 2         |
| 105 | Limitations in Cooling Electrons using Normal-Metal-Superconductor Tunnel Junctions. Physical Review Letters, 2004, 92, 056804.      | 7.8 | 98        |
| 106 | Tailoring Josephson Coupling through Superconductivity-Induced Nonequilibrium. Physical Review Letters, 2004, 92, 137001.            | 7.8 | 23        |
| 107 | Ultralow dissipation Josephson transistor. Applied Physics Letters, 2003, 83, 2877-2879.   | 3.3 | 9         |
| 108 | Supercurrent-induced Peltier-like effect in superconductor/normal-metal weak links. Physical Review B, 2003, 67, .                   | 3.2 | 15        |

| #   | ARTICLE   | IF  | CITATIONS |
|-----|---|-----|-----------|
| 109 | Direct Observation of the Transition from the Conventional Superconducting State to the $s$ -State in a Controllable Josephson Junction. <i>Physical Review Letters</i> , 2002, 89, 207002. | 7.8 | 51        |
| 110 | Nonlinear shot noise in mesoscopic diffusive normal-superconducting systems. <i>Physical Review B</i> , 2002, 66, .   | 3.2 | 13        |
| 111 | Observation of a controllable $\pi$ -junction in a 3-terminal Josephson device. <i>Physical Review B</i> , 2002, 66, .  | 3.2 | 41        |
| 112 | Supercurrent-carrying density of states in diffusive mesoscopic Josephson weak links. <i>Physical Review B</i> , 2002, 66, .  | 3.2 | 96        |
| 113 | Inverse proximity effect in superconductors near ferromagnetic material. <i>Europhysics Letters</i> , 2001, 56, 590-595.  | 2.0 | 37        |
| 114 | Universal conductance fluctuations in mesoscopic normal-superconducting structures. <i>Physica B: Condensed Matter</i> , 2000, 280, 432-433.  | 2.7 | 0         |
| 115 | Thermopower in mesoscopic normal-superconducting structures. <i>Physica B: Condensed Matter</i> , 2000, 284-288, 1862-1863.   | 2.7 | 5         |
| 116 | Non-equilibrium supercurrent through mesoscopic ferromagnetic weak links. <i>Europhysics Letters</i> , 2000, 51, 434-440.   | 2.0 | 47        |
| 117 | Superconducting proximity effect and universal conductance fluctuations. <i>Physical Review B</i> , 1999, 60, 9291-9294.  | 3.2 | 9         |