Päivi Törmä

List of Publications by Year in descending order

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		81743	64668
162	7,081	39	79
papers	citations	h-index	g-index
163	163	163	6286
all docs	docs citations	times ranked	citing authors

#	Article	IF	CITATIONS
1	Quasi-BIC Mode Lasing in a Quadrumer Plasmonic Lattice. ACS Photonics, 2022, 9, 224-232.	3.2	22
2	Magnetic on–off switching of a plasmonic laser. Nature Photonics, 2022, 16, 27-32.	15.6	18
3	Mark Stockman: Evangelist for Plasmonics. ACS Photonics, 2021, 8, 683-698.	3.2	2
4	Flat-band-induced non-Fermi-liquid behavior of multicomponent fermions. Physical Review A, 2021, 103,	1.0	5
5	Interaction-induced topological superconductivity in antiferromagnet-superconductor junctions. Physical Review Research, 2021, 3, .	1.3	2
6	Flat-band transport and Josephson effect through a finite-size sawtooth lattice. Physical Review B, 2021, 103, .	1.1	15
7	High-temperature superconductivity. Nature Reviews Physics, 2021, 3, 462-465.	11.9	54
8	Polarization and Phase Textures in Lattice Plasmon Condensates. Nano Letters, 2021, 21, 5262-5268.	4.5	2
9	Possible insulator-pseudogap crossover in the attractive Hubbard model on the Lieb lattice. Physical Review B, 2021, 103, .	1.1	1
10	Light-matter coupling and quantum geometry in moir \tilde{A} \otimes materials. Physical Review B, 2021, 104, .	1.1	29
11	Excitations of a Bose-Einstein condensate and the quantum geometry of a flat band. Physical Review B, 2021, 104, .	1.1	16
12	Quantum Geometry and Flat Band Bose-Einstein Condensation. Physical Review Letters, 2021, 127, 170404.	2.9	30
13	Spatial and Temporal Coherence in Strongly Coupled Plasmonic Bose-Einstein Condensates. Physical Review Letters, 2021, 127, 255301.	2.9	9
14	All-Optical Emission Control and Lasing in Plasmonic Lattices. ACS Photonics, 2020, 7, 2850-2858.	3.2	15
15	Multimode Organic Polariton Lasing. Physical Review Letters, 2020, 125, 233603.	2.9	36
16	Sub-picosecond thermalization dynamics in condensation of strongly coupled lattice plasmons. Nature Communications, 2020, 11, 3139.	5.8	32
17	Strong coupling between organic dye molecules and lattice modes of a dielectric nanoparticle array. Nanophotonics, 2020, 9, 267-276.	2.9	17
18	Scaling and Diabatic Effects in Quantum Annealing with a D-Wave Device. Physical Review Letters, 2020, 124, 090502.	2.9	44

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19	Superfluid weight and Berezinskii-Kosterlitz-Thouless transition temperature of twisted bilayer graphene. Physical Review B, 2020, 101, .	1.1	124
20	Converting an Organic Light-Emitting Diode from Blue to White with Bragg Modes. ACS Photonics, 2019, 6, 2655-2662.	3.2	12
21	Turning the challenge of quantum biology on its head: biological control of quantum optical systems. Faraday Discussions, 2019, 216, 57-71.	1.6	7
22	Lasing in Ni Nanodisk Arrays. ACS Nano, 2019, 13, 5686-5692.	7.3	40
23	Lasing at <mml:math display="inline" xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>K</mml:mi></mml:math> Points of a Honeycomb Plasmonic Lattice. Physical Review Letters, 2019, 122, 013901.	2.9	61
24	The Fuldeâ€"Ferrellâ€"Larkinâ€"Ovchinnikov state for ultracold fermions in lattice and harmonic potentials: a review. Reports on Progress in Physics, 2018, 81, 046401.	8.1	90
25	Ultrafast Pulse Generation in an Organic Nanoparticle-Array Laser. Nano Letters, 2018, 18, 2658-2665.	4.5	36
26	One-Dimensional Plasmonic Nanoparticle Chain Lasers. ACS Photonics, 2018, 5, 1822-1826.	3.2	27
27	Quantum metric and effective mass of a two-body bound state in a flat band. Physical Review B, 2018, 98, .	1.1	44
28	Spin-imbalanced Fermi superfluidity in a Hubbard model on a Lieb lattice. Physical Review B, 2018, 98, .	1.1	11
29	A synthetic biological quantum optical system. Nanoscale, 2018, 10, 13064-13073.	2.8	10
30	Spin-imbalanced pairing and Fermi surface deformation in flat bands. Physical Review B, 2018, 97, .	1.1	14
31	Coupled dipole approximation across the Γ-point in a finite-sized nanoparticle array. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2017, 375, 20160316.	1.6	13
32	Spin-asymmetric Josephson plasma oscillations. Physical Review A, 2017, 95, .	1.0	2
33	Wave-packet dynamics of Bogoliubov quasiparticles: Quantum metric effects. Physical Review B, 2017, 96, .	1.1	21
34	Geometry dependence of surface lattice resonances in plasmonic nanoparticle arrays. Physical Review B, 2017, 95, .	1.1	126
35	Band geometry, Berry curvature, and superfluid weight. Physical Review B, 2017, 95, .	1.1	129
36	Decoherence of an impurity in a one-dimensional fermionic bath with mass imbalance. Physical Review A, 2016, 94, .	1.0	4

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37	Excitations and impurity dynamics in a fermionic Mott insulator with nearest-neighbor interactions. Physical Review B, 2016, 93, .	1.1	4
38	Topological Phase Transitions in the Repulsively Interacting Haldane-Hubbard Model. Physical Review Letters, 2016, 116, 225305.	2.9	72
39	Geometric Origin of Superfluidity in the Lieb-Lattice Flat Band. Physical Review Letters, 2016, 117, 045303.	2.9	186
40	Population imbalance in the extended Fermi-Hubbard model. Physical Review B, 2016, 94, .	1.1	8
41	Larkin-Ovchinnikov phases in two-dimensional square lattices. Journal of Modern Optics, 2016, 63, 1795-1804.	0.6	12
42	Controlling quantum dot emission by plasmonic nanoarrays. Optics Express, 2015, 23, 28206.	1.7	53
43	Topological states with broken translational and time-reversal symmetries in a honeycomb-triangular lattice. Physical Review A, 2015, 91, .	1.0	1
44	Dynamical symmetry and pair tunneling in a one-dimensional Bose gas colliding with a mobile impurity. Physical Review A, 2015, 92, .	1.0	3
45	Superfluid phases of fermions with hybridizedsandporbitals. Physical Review A, 2015, 92, .	1.0	13
46	Superfluidity and density order in a bilayer extended Hubbard model. Physical Review B, 2015, 91, .	1.1	16
47	Superfluidity in topologically nontrivial flat bands. Nature Communications, 2015, 6, 8944.	5.8	297
48	Surface lattice resonances and magneto-optical response in magnetic nanoparticle arrays. Nature Communications, 2015, 6, 7072.	5.8	126
49	Strong coupling between surface plasmon polaritons and emitters: a review. Reports on Progress in Physics, 2015, 78, 013901.	8.1	1,109
50	Tunable critical supercurrent and spin-asymmetric Josephson effect in superlattices. Physical Review B, 2014, 89, .	1.1	1
51	One-dimensional Fermi polaron in a combined harmonic and periodic potential. Physical Review A, 2014, 89, .	1.0	14
52	Nonlocal Quantum Fluctuations and Fermionic Superfluidity in the Imbalanced Attractive Hubbard Model. Physical Review Letters, 2014, 113, 185301.	2.9	20
53	Condensation phenomena in plasmonics. Physical Review A, 2014, 90, .	1.0	19
54	Fulde-Ferrell states and Berezinskii-Kosterlitz-Thouless phase transition in two-dimensional imbalanced Fermi gases. Physical Review B, 2014, 89, .	1.1	36

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55	Moving perturbation in a one-dimensional Fermi gas. Physical Review A, 2014, 90, .	1.0	3
56	Collective excitations of a trapped Fermi gas at finite temperature. Physical Review A, 2014, 89, .	1.0	6
57	Spatial Coherence Properties of Organic Molecules Coupled to Plasmonic Surface Lattice Resonances in the Weak and Strong Coupling Regimes. Physical Review Letters, 2014, 112, 153002.	2.9	167
58	Plasmonic Surface Lattice Resonances at the Strong Coupling Regime. Nano Letters, 2014, 14, 1721-1727.	4.5	275
59	Virus-Encapsulated DNA Origami Nanostructures for Cellular Delivery. Nano Letters, 2014, 14, 2196-2200.	4.5	254
60	Selfâ€Assembled Silver Nanoparticles in a Bowâ€Tie Antenna Configuration. Small, 2014, 10, 1057-1062.	5.2	18
61	Coherent fluorescence emission by using hybrid photonic–plasmonic crystals. Laser and Photonics Reviews, 2014, 8, 717-725.	4.4	24
62	Dynamics of an impurity in a one-dimensional lattice. New Journal of Physics, 2013, 15, 045018.	1.2	34
63	Assembling gold nanoparticle chains using an AC electrical field: Electrical detection of organic thiols. Sensors and Actuators B: Chemical, 2013, 176, 368-373.	4.0	17
64	Topological Transitions of Gapless Paired States in Mixed-Geometry Lattices. Physical Review Letters, 2013, 110, 055301.	2.9	7
65	Finite-temperature stability and dimensional crossover of exotic superfluidity in lattices. Physical Review B, 2013, 87, .	1.1	23
66	Fulde-Ferrell-Larkin-Ovchinnikov state in the dimensional crossover between one- and three-dimensional lattices. Physical Review B, 2012, 85, .	1.1	20
67	Nanoantenna structures for strong coupling studies of surface plasmon polaritons and quantum dots. , 2012, , .		0
68	Controlling the Formation of DNA Origami Structures with External Signals. Small, 2012, 8, 2016-2020.	5.2	12
69	Surface plasmon polariton-controlled tunable quantum-dot emission. Applied Physics Letters, 2012, 100, 221111.	1.5	11
70	Density response of a trapped Fermi gas: A crossover from the pair vibration mode to the Goldstone mode. Physical Review A, 2011, 84, .	1.0	6
71	Surface plasmon effects on carbon nanotube field effect transistors. Applied Physics Letters, 2011, 99, 031105.	1.5	6
72	Collision of one dimensional (1D) spin polarized Fermi gases in an optical lattice. European Physical Journal D, 2011, 65, 91-98.	0.6	4

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73	Assembly of Singleâ€Walled Carbon Nanotubes on DNAâ€Origami Templates through Streptavidin–Biotin Interaction. Small, 2011, 7, 746-750.	5.2	86
74	From vacuum Rabi splitting towards stimulated emission with surface plasmon polaritons. , 2011, , .		2
75	Coexistence of pairing gaps in three-component Fermi gases. New Journal of Physics, 2011, 13, 055013.	1.2	5
76	Expansion dynamics of the Fulde-Ferrell-Larkin-Ovchinnikov state. Physical Review A, 2011, 84, .	1.0	32
77	Collective modes and the speed of sound in the Fulde-Ferrell-Larkin-Ovchinnikov state. Physical Review A, 2011, 83, .	1.0	14
78	Expansion Dynamics in the One-Dimensional Fermi-Hubbard Model. Physical Review Letters, 2011, 106, 206401.	2.9	45
79	Exotic Superfluid States of Lattice Fermions in Elongated Traps. Physical Review Letters, 2011, 106, 095301.	2.9	23
80	Vacuum Rabi splitting for surface plasmon polaritons and Rhodamine 6G molecules. Proceedings of SPIE, $2011, $, .	0.8	2
81	Spin-Asymmetric Josephson Effect. Physical Review Letters, 2010, 105, 225301.	2.9	6
82	Probing the Fulde-Ferrell-Larkin-Ovchinnikov Phase by Double Occupancy Modulation Spectroscopy. Physical Review Letters, 2010, 104, 236402.	2.9	37
83	Fermi-polaron-like effects in a one-dimensional (1D) optical lattice. New Journal of Physics, 2010, 12, 073044.	1.2	12
84	Negative Differential Resistance in Carbon Nanotube Field-Effect Transistors with Patterned Gate Oxide. ACS Nano, 2010, 4, 3356-3362.	7.3	29
85	Fermi Condensates for Dynamic Imaging of Electromagnetic Fields. Physical Review Letters, 2009, 102, 165301.	2.9	3
86	Bakhtiari, Leskinen, and Țrm̮eply:. Physical Review Letters, 2009, 102, .	2.9	1
87	Dynamics of a many-particle Landau-Zener model: Inverse sweep. Physical Review A, 2009, 79, .	1.0	37
88	Induced Interactions for Ultracold Fermi Gases in Optical Lattices. Physical Review Letters, 2009, 102, 245301.	2.9	23
89	Hopping Modulation in a One-Dimensional Fermi-Hubbard Hamiltonian. Physical Review Letters, 2009, 103, 066404.	2.9	15
90	Induced Interactions and the Superfluid Transition Temperature in a Three-Component Fermi Gas. Physical Review Letters, 2009, 103, 260403.	2.9	20

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91	Characterization of the Conductance Mechanisms of DNA Origami by AC Impedance Spectroscopy. Small, 2009, 5, 2382-2386.	5.2	40
92	Fieldâ€Induced Nanolithography for Highâ€Throughput Pattern Transfer. Small, 2009, 5, 2683-2686.	5.2	9
93	DNA origami as a nanoscale template for protein assembly. Nanotechnology, 2009, 20, 235305.	1.3	104
94	Vacuum Rabi Splitting and Strong-Coupling Dynamics for Surface-Plasmon Polaritons and Rhodamine 6G Molecules. Physical Review Letters, 2009, 103, 053602.	2.9	265
95	High-Speed Memory from Carbon Nanotube Field-Effect Transistors with High-κ Gate Dielectric. Nano Letters, 2009, 9, 643-647.	4.5	82
96	Dielectrophoretic Trapping of DNA Origami. Small, 2008, 4, 447-450.	5.2	88
97	Effect of humidity on the hysteresis of single walled carbon nanotube fieldâ€effect transistors. Physica Status Solidi (B): Basic Research, 2008, 245, 2315-2318.	0.7	38
98	High-yield of memory elements from carbon nanotube field-effect transistors with atomic layer deposited gate dielectric. New Journal of Physics, 2008, 10, 103019.	1.2	21
99	Noise correlations of the ultracold Fermi gas in an optical lattice. Physical Review A, 2008, 77, .	1.0	15
100	FFLO state in 1-, 2- and 3-dimensional optical lattices combined with a non-uniform background potential. New Journal of Physics, 2008, 10, 045014.	1.2	60
101	Spectral Signatures of the Fulde-Ferrell-Larkin-Ovchinnikov Order Parameter in One-Dimensional Optical Lattices. Physical Review Letters, 2008, 101, 120404.	2.9	48
102	Frequency conversion of propagating surface plasmon polaritons by organic molecules. Applied Physics Letters, 2008, 93, 123307.	1.5	10
103	Quasiparticles, coherence, and nonlinearity: Exact simulations of rf spectroscopy of strongly interacting one-dimensional Fermi gases. Physical Review A, 2008, 78, .	1.0	4
104	Atomic lattice excitons: from condensates to crystals. New Journal of Physics, 2007, 9, 407-407.	1.2	10
105	Trapping of 27 bp–8 kbp DNA and immobilization of thiol-modified DNA using dielectrophoresis. Nanotechnology, 2007, 18, 295204.	1.3	68
106	Non-BCS superfluidity in trapped ultracold Fermi gases. Physical Review A, 2007, 76, .	1.0	22
107	Coexistence and shell structures of several superfluids in trapped three-component Fermi mixtures. Physical Review A, 2007, 75, .	1.0	34
108	Pairing-based cooling of Fermi gases. Physical Review A, 2007, 76, .	1.0	О

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109	Finite-Temperature Phase Diagram of a Polarized Fermi Gas in an Optical Lattice. Physical Review Letters, 2007, 99, 120403.	2.9	86
110	A hybrid method for calorimetry with subnanoliter samples using Schottky junctions. Journal of Applied Physics, 2007, 101, 034512.	1.1	7
111	Molecular coupling of light with plasmonic waveguides. Optics Express, 2007, 15, 9908.	1.7	19
112	Fabrication of carbon nanotubeâ€based fieldâ€effect transistors for studies of their memory effects. Physica Status Solidi (B): Basic Research, 2007, 244, 4188-4192.	0.7	8
113	Carbon Nanotubes as Electrodes for Dielectrophoresis of DNA. Nano Letters, 2006, 6, 1339-1343.	4.5	78
114	Strongly Interacting Fermi Gases with Density Imbalance. Physical Review Letters, 2006, 96, 110403.	2.9	132
115	Fermion pairing with spin-density imbalance in an optical lattice. New Journal of Physics, 2006, 8, 179-179.	1.2	39
116	Beyond Linear Response Spectroscopy of Ultracold Fermi Gases. Physical Review Letters, 2006, 96, 070402.	2.9	7
117	Sound velocity and dimensional crossover in a superfluid Fermi gas in an optical lattice. Physical Review A, 2006, 73, .	1.0	25
118	Pairing in a three-component Fermi gas. Physical Review A, 2006, 73, .	1.0	56
119	Dielectrophoresis as a tool for nanoscale DNA manipulation. International Journal of Nanotechnology, 2005, 2, 280.	0.1	8
120	Guiding and reflecting light by boundary material. Optics Communications, 2005, 244, 147-152.	1.0	0
121	Dielectrophoresis of nanoscale double-stranded DNA and humidity effects on its electrical conductivity. Applied Physics Letters, 2005, 87, 183102.	1.5	67
122	Quasi-Two-Dimensional Superfluid Fermionic Gases. Physical Review Letters, 2005, 95, 170407.	2.9	27
123	Optimization of dual-core and microstructure fiber geometries for dispersion compensation and large mode area. Optics Express, 2005, 13, 627.	1.7	138
124	Effect of wavelength dependence of nonlinearity, gain, and dispersion in photonic crystal fiber amplifiers. Optics Express, 2005, 13, 4286.	1.7	14
125	Intervalley-Scattering-Induced Electron-Phonon Energy Relaxation in Many-Valley Semiconductors at Low Temperatures. Physical Review Letters, 2005, 95, 206602.	2.9	24
126	Signatures of Superfluidity for Feshbach-Resonant Fermi Gases. Physical Review Letters, 2004, 92, 230403.	2.9	30

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127	Bloch oscillations in Fermi gases. Physical Review A, 2004, 69, .	1.0	16
128	Scissors modes of two-component degenerate gases: Bose-Bose and Bose-Fermi mixtures. Physical Review A, 2004, 69, .	1.0	9
129	Conditions for waveguide decoupling in square-lattice photonic crystals. Journal of Applied Physics, 2004, 96, 4039-4041.	1.1	13
130	Electron-phonon heat transport in degenerate Si at low temperatures. Physica Status Solidi C: Current Topics in Solid State Physics, 2004, 1, 2848-2851.	0.8	7
131	Pairing Gap and In-Gap Excitations in Trapped Fermionic Superfluids. Science, 2004, 305, 1131-1133.	6.0	118
132	Characterization of used mineral oil condition by spectroscopic techniques. Applied Optics, 2004, 43, 4718.	2.1	9
133	Quantum transport of non-interacting Fermi gas in an optical lattice combined with harmonic trapping. New Journal of Physics, 2004, 6, 59-59.	1.2	15
134	Application of superconductor?semiconductor Schottky barrier for electron cooling. Physica B: Condensed Matter, 2003, 329-333, 1481-1484.	1.3	10
135	Electron–phonon heat transport and electronic thermal conductivity in heavily doped silicon-on-insulator film. Journal of Applied Physics, 2003, 94, 3201-3205.	1.1	26
136	Measuring charge-based quantum bits by a superconducting single-electron transistor. Physical Review B, 2003, 68, .	1.1	5
137	Laser-induced collective excitations in a two-component Fermi gas. Physical Review A, 2002, 66, .	1.0	10
138	Band structures for nonlinear photonic crystals. Journal of Applied Physics, 2002, 91, 3988-3991.	1.1	28
139	Localization and diffusion in Ising-type quantum networks. Physical Review A, 2002, 65, .	1.0	24
140	Josephson effect in superfluid atomic Fermi gases. Physical Review A, 2002, 66, .	1.0	20
141	Laser probing of Cooper-paired trapped atoms. Physical Review A, 2001, 64, .	1.0	35
142	Cooper pair coherence in a superfluid Fermi gas of atoms. Journal of Physics B: Atomic, Molecular and Optical Physics, 2001, 34, 4763-4773.	0.6	4
143	Vortices in Trapped Superfluid Fermi Gases. Physical Review Letters, 2001, 87, 100402.	2.9	19
144	Laser Probing of Atomic Cooper Pairs. Physical Review Letters, 2000, 85, 487-490.	2.9	102

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145	Properties of Ising-type linear networks. Journal of Optics B: Quantum and Semiclassical Optics, 1999, 1, 8-13.	1.4	10
146	Control of dynamical localization by an additional quantum degree of freedom. Physical Review A, 1999, 59, 797-802.	1.0	7
147	Entanglement engineering of one-photon wave packets using a single-atom source. Physical Review A, 1998, 58, R2627-R2630.	1.0	60
148	Transitions in Quantum Networks. Physical Review Letters, 1998, 81, 2185-2189.	2.9	24
149	Two-mode state reconstruction using photon chopping. Journal of Modern Optics, 1997, 44, 2395-2404.	0.6	3
150	Dynamical Localization in the Paul Trap. Physical Review Letters, 1997, 78, 4181-4184.	2.9	44
151	Multiple coincidences and the quantum state reconstruction problem. Physical Review A, 1997, 56, 4076-4085.	1.0	11
152	Two-mode entanglement in passive networks. Journal of Modern Optics, 1997, 44, 875-882.	0.6	1
153	Photon Chopping: New Way to Measure the Quantum State of Light. Physical Review Letters, 1996, 76, 2464-2467.	2.9	136
154	Beam splitter realizations of totally symmetric mode couplers. Journal of Modern Optics, 1996, 43, 245-251.	0.6	27
155	Quantum logic using polarized photons. Physical Review A, 1996, 54, 4701-4706.	1.0	12
156	Approximate quantum Fourier transform and decoherence. Physical Review A, 1996, 54, 139-146.	1.0	111
157	Plate beam splitters and symmetric multiports. Journal of Modern Optics, 1996, 43, 2403-2408.	0.6	9
158	Finite number of measurements in optical homodyne tomography. Journal of Modern Optics, 1996, 43, 2437-2447.	0.6	2
159	Measurement and preparation using two probe modes. Physical Review A, 1995, 52, 4812-4822.	1.0	19
160	Hamiltonian theory of symmetric optical network transforms. Physical Review A, 1995, 52, 4853-4860.	1.0	42
161	Multimode Coherent States. Journal of Modern Optics, 1995, 42, 1377-1386.	0.6	17
162	The Interferometer as an Optical Network. Journal of Modern Optics, 1995, 42, 1109-1121.	0.6	4