

Marcus Huber

List of Publications by Year in descending order

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125
papers

6,952
citations

66234

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78
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128
all docs

128
docs citations

128
times ranked

3813
citing authors

#	ARTICLE	IF	CITATIONS
1	Entanglement Detection with Imprecise Measurements. Physical Review Letters, 2022, 128, .	2.9	8
2	Autonomous Temporal Probability Concentration: Clockworks and the Second Law of Thermodynamics. Physical Review X, 2021, 11, .	2.8	12
3	Quantum Key Distribution Overcoming Extreme Noise: Simultaneous Subspace Coding Using High-Dimensional Entanglement. Physical Review Applied, 2021, 15, .	1.5	30
4	A generalized multipath delayed-choice experiment on a large-scale quantum nanophotonic chip. Nature Communications, 2021, 12, 2712.	5.8	19
5	Measuring the Thermodynamic Cost of Timekeeping. Physical Review X, 2021, 11, .	2.8	26
6	Entanglement Quantification in Atomic Ensembles. Physical Review Letters, 2021, 127, 010401.	2.9	14
7	Quantum entanglement in the triangle network. Physical Review A, 2021, 103, .	1.0	25
8	Demonstration of Generalized Multi-path Wave-particle Duality on a Quantum Nanophotonic Chip. , 2021, , .		0
9	Quantum Field Thermal Machines. PRX Quantum, 2021, 2, .	3.5	29
10	Experimental Single-Copy Entanglement Distillation. Physical Review Letters, 2021, 127, 040506.	2.9	44
11	Pathways for Entanglement-Based Quantum Communication in the Face of High Noise. Physical Review Letters, 2021, 127, 110505.	2.9	27
12	Simplifying the design of multilevel thermal machines using virtual qubits. Physical Review A, 2021, 104, .	1.0	3
13	Proposal for practical multidimensional quantum networks. Physical Review A, 2021, 104, .	1.0	14
14	Temporal distinguishability in Hong-Ou-Mandel interference for harnessing high-dimensional frequency entanglement. Npj Quantum Information, 2021, 7, .	2.8	18
15	Dimensionally sharp inequalities for the linear entropy. Linear Algebra and Its Applications, 2020, 584, 294-325.	0.4	3
16	Chip-to-chip quantum teleportation and multi-photon entanglement in silicon. Nature Physics, 2020, 16, 148-153.	6.5	163
17	Experimental creation of multi-photon high-dimensional layered quantum states. Npj Quantum Information, 2020, 6, .	2.8	16
18	Efficient Generation of High-Dimensional Entanglement through Multipath Down-Conversion. Physical Review Letters, 2020, 125, 090503.	2.9	49

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19	Exponential Improvement for Quantum Cooling through Finite-Memory Effects. <i>Physical Review Applied</i> , 2020, 14, .	1.5	12
20	Verification of high-dimensional entanglement generated in quantum interference. <i>Physical Review A</i> , 2020, 101, .	1.0	24
21	Monogamy of correlations and entropy inequalities in the Bloch picture. <i>Journal of Physics Communications</i> , 2020, 4, 025009.	0.5	3
22	High-dimensional quantum gates using full-field spatial modes of photons. <i>Optica</i> , 2020, 7, 98.	4.8	90
23	Thermodynamically optimal creation of correlations. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2019, 52, 465303.	0.7	9
24	Work estimation and work fluctuations in the presence of non-ideal measurements. <i>New Journal of Physics</i> , 2019, 21, 113002.	1.2	23
25	Unifying paradigms of quantum refrigeration: Fundamental limits of cooling and associated work costs. <i>Physical Review E</i> , 2019, 100, 042130.	0.8	19
26	Unifying Paradigms of Quantum Refrigeration: A Universal and Attainable Bound on Cooling. <i>Physical Review Letters</i> , 2019, 123, 170605.	2.9	38
27	Overcoming Noise in Entanglement Distribution. <i>Physical Review X</i> , 2019, 9, .	2.8	114
28	Entanglement certification from theory to experiment. <i>Nature Reviews Physics</i> , 2019, 1, 72-87.	11.9	186
29	Demonstration of chip-to-chip quantum teleportation. , 2019, , .		2
30	Near-Perfect Measurement of Photonic Spatial Modes. , 2019, , .		0
31	Quantifying High-Dimensional Entanglement with only Two Measurement Settings. , 2019, , .		0
32	Observation of Entangled States of a Fully Controlled 20-Qubit System. <i>Physical Review X</i> , 2018, 8, .	2.8	183
33	Eigenstate Thermalization for Degenerate Observables. <i>Physical Review Letters</i> , 2018, 120, 150603.	2.9	25
34	Characterizing Genuine Multilevel Entanglement. <i>Physical Review Letters</i> , 2018, 120, 060502.	2.9	40
35	Layered quantum key distribution. <i>Physical Review A</i> , 2018, 97, .	1.0	37
36	Trade-Off Between Work and Correlations in Quantum Thermodynamics. <i>Fundamental Theories of Physics</i> , 2018, , 731-750.	0.1	7

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37	High-Dimensional Entanglement in States with Positive Partial Transposition. Physical Review Letters, 2018, 121, 200503.	2.9	21
38	Measurements in two bases are sufficient for certifying high-dimensional entanglement. Nature Physics, 2018, 14, 1032-1037.	6.5	129
39	Measuring azimuthal and radial modes of photons. Optics Express, 2018, 26, 31925.	1.7	78
40	No-Go Theorem for the Characterization of Work Fluctuations in Coherent Quantum Systems. Physical Review Letters, 2017, 118, 070601.	2.9	126
41	Quantifying Photonic High-Dimensional Entanglement. Physical Review Letters, 2017, 118, 110501.	2.9	90
42	Quantification of multidimensional entanglement stored in a crystal. Physical Review A, 2017, 96, .	1.0	32
43	Genuine-multipartite entanglement criteria based on positive maps. Journal of Mathematical Physics, 2017, 58, 082201.	0.5	18
44	Distribution of high-dimensional entanglement via an intra-city free-space link. Nature Communications, 2017, 8, 15971.	5.8	123
45	Autonomous Quantum Clocks: Does Thermodynamics Limit Our Ability to Measure Time?. Physical Review X, 2017, 7, .	2.8	78
46	Certification and quantification of the entanglement stored in a quantum memory using incomplete data. , 2017, , .		0
47	Witnessing entanglement by proxy. New Journal of Physics, 2016, 18, 015002.	1.2	5
48	Realising a quantum absorption refrigerator with an atom-cavity system. Quantum Science and Technology, 2016, 1, 015001.	2.6	63
49	Superactivation of quantum steering. Physical Review A, 2016, 94, .	1.0	25
50	Temporal Multimode Storage of Entangled Photon Pairs. Physical Review Letters, 2016, 117, 240506.	2.9	30
51	Bipartite depolarizing maps. Journal of Mathematical Physics, 2016, 57, .	0.5	21
52	Steering Maps and Their Application to Dimension-Bounded Steering. Physical Review Letters, 2016, 116, 090403.	2.9	35
53	Should Entanglement Measures be Monogamous or Faithful?. Physical Review Letters, 2016, 117, 060501.	2.9	62
54	Unraveling multipartite entanglement for an important family of mixed states. Annalen Der Physik, 2016, 528, 238-240.	0.9	0

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55	Heisenberg-Weyl Observables: Bloch vectors in phase space. <i>Physical Review A</i> , 2016, 94, .	1.0	32
56	Energetics of correlations in interacting systems. <i>Physical Review E</i> , 2016, 93, 042135.	0.8	26
57	Quantifying Entanglement of Maximal Dimension in Bipartite Mixed States. <i>Physical Review Letters</i> , 2016, 117, 190502.	2.9	19
58	Passivity and practical work extraction using Gaussian operations. <i>New Journal of Physics</i> , 2016, 18, 113028.	1.2	40
59	Autonomous quantum refrigerator in a circuit QED architecture based on a Josephson junction. <i>Physical Review B</i> , 2016, 94, .	1.1	95
60	The role of quantum information in thermodynamics—a topical review. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2016, 49, 143001.	0.7	640
61	Multi-photon entanglement in high dimensions. <i>Nature Photonics</i> , 2016, 10, 248-252.	15.6	253
62	Multi-Photon Entanglement in High Dimensions. , 2016, , .		3
63	Most energetic passive states. <i>Physical Review E</i> , 2015, 92, 042147.	0.8	38
64	New Entry in the Thermodynamic Rulebook for Quantum Systems. <i>Physics Magazine</i> , 2015, 8, .	0.1	0
65	Autonomous quantum thermal machine for generating steady-state entanglement. <i>New Journal of Physics</i> , 2015, 17, 113029.	1.2	88
66	Coherence-assisted single-shot cooling by quantum absorption refrigerators. <i>New Journal of Physics</i> , 2015, 17, 115013.	1.2	122
67	Relaxations of separability in multipartite systems: Semidefinite programs, witnesses and volumes. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2015, 48, 505302.	0.7	28
68	Extractable Work from Correlations. <i>Physical Review X</i> , 2015, 5, .	2.8	143
69	Thermodynamics of creating correlations: Limitations and optimal protocols. <i>Physical Review E</i> , 2015, 91, 032118.	0.8	48
70	Characterizing multipartite entanglement without shared reference frames. <i>Physical Review A</i> , 2015, 91, .	1.0	38
71	Experimental access to higher-dimensional entangled quantum systems using integrated optics. <i>Optica</i> , 2015, 2, 523.	4.8	63
72	Thermodynamic cost of creating correlations. <i>New Journal of Physics</i> , 2015, 17, 065008.	1.2	68

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73	Increasing the Quantum Number, Dimensionality and Complexity of Entanglement. , 2015, , .		0
74	Tripartite entanglement in single-neutron interferometer experiments. , 2014, , .		0
75	Entanglement enhances cooling in microscopic quantum refrigerators. <i>Physical Review E</i> , 2014, 89, 032115.	0.8	160
76	Fifty years of Bell's theorem. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2014, 47, 420301.	0.7	14
77	Generation and confirmation of a (100 Å– 100)-dimensional entangled quantum system. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 6243-6247.	3.3	252
78	Interface between path and orbital angular momentum entanglement for high-dimensional photonic quantum information. <i>Nature Communications</i> , 2014, 5, 4502.	5.8	148
79	Unified approach to entanglement criteria using the Cauchy-Schwarz and Hölder inequalities. <i>Physical Review A</i> , 2014, 90, .	1.0	11
80	Steering Bound Entangled States: A Counterexample to the Stronger Peres Conjecture. <i>Physical Review Letters</i> , 2014, 113, 050404.	2.9	68
81	Witnessing Genuine Multipartite Entanglement with Positive Maps. <i>Physical Review Letters</i> , 2014, 113, 100501.	2.9	55
82	Inequalities for the ranks of multipartite quantum states. <i>Linear Algebra and Its Applications</i> , 2014, 452, 153-171.	0.4	23
83	Entangled singularity patterns of photons in Ince-Gauss modes. <i>Physical Review A</i> , 2013, 87, .	1.0	70
84	Weak randomness in device-independent quantum key distribution and the advantage of using high-dimensional entanglement. <i>Physical Review A</i> , 2013, 88, .	1.0	74
85	Entanglement Generation is Not Necessary for Optimal Work Extraction. <i>Physical Review Letters</i> , 2013, 111, 240401.	2.9	191
86	Proving the generation of genuine multipartite entanglement in a single-neutron interferometer experiment. <i>New Journal of Physics</i> , 2013, 15, 023033.	1.2	17
87	Structure of Multidimensional Entanglement in Multipartite Systems. <i>Physical Review Letters</i> , 2013, 110, 030501.	2.9	113
88	Examining the dimensionality of genuine multipartite entanglement. <i>Quantum Information Processing</i> , 2013, 12, 269-278.	1.0	15
89	Quantum hypergraph states. <i>New Journal of Physics</i> , 2013, 15, 113022.	1.2	118
90	Entropy vector formalism and the structure of multidimensional entanglement in multipartite systems. <i>Physical Review A</i> , 2013, 88, .	1.0	52

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91	Quantum gates and multipartite entanglement resonances realized by nonuniform cavity motion. Physical Review D, 2012, 86, .	1.6	31
92	Genuinely multipartite concurrence of N -qubit X matrices. Physical Review A, 2012, 86, .	1.0	111
93	Entanglement detection via mutually unbiased bases. Physical Review A, 2012, 86, .	1.0	143
94	Determining lower bounds on a measure of multipartite entanglement from few local observables. Physical Review A, 2012, 86, .	1.0	41
95	Composite parameterization and Haar measure for all unitary and special unitary groups. Journal of Mathematical Physics, 2012, 53, .	0.5	34
96	Revealing Bell's nonlocality for unstable systems in high energy physics. European Physical Journal C, 2012, 72, 1.	1.4	39
97	Heisenberg's Uncertainty Relation and Bell Inequalities in High Energy Physics. Foundations of Physics, 2012, 42, 778-802.	0.6	22
98	Measure of genuine multipartite entanglement with computable lower bounds. Physical Review A, 2011, 83, .	1.0	170
99	A geometric comparison of entanglement and quantum nonlocality in discrete systems. Journal of Physics A: Mathematical and Theoretical, 2011, 44, 065304.	0.7	14
100	Lorentz invariance of entanglement classes in multipartite systems. Europhysics Letters, 2011, 95, 20002.	0.7	19
101	Multipartite entanglement detection from correlation tensors. Physical Review A, 2011, 84, .	1.0	86
102	Purification of genuine multipartite entanglement. Physical Review A, 2011, 83, .	1.0	15
103	Computable criterion for partial entanglement in continuous-variable quantum systems. Physical Review A, 2011, 83, .	1.0	5
104	Experimentally feasible set of criteria detecting genuine multipartite entanglement in n -qubit Dicke states and in higher-dimensional systems. Physical Review A, 2011, 83, .	1.0	40
105	Experimentally implementable criteria revealing substructures of genuine multipartite entanglement. Physical Review A, 2011, 83, .	1.0	22
106	MIXED STATE ENTANGLEMENT MEASURES FOR INTERMEDIATE SEPARABILITY. International Journal of Quantum Information, 2010, 08, 677-685.	0.6	1
107	Experimentally feasible security check for n -qubit quantum secret sharing. Physical Review A, 2010, 82, .	1.0	43
108	A composite parameterization of unitary groups, density matrices and subspaces. Journal of Physics A: Mathematical and Theoretical, 2010, 43, 385306.	0.7	37

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109	Detection of High-Dimensional Genuine Multipartite Entanglement of Mixed States. <i>Physical Review Letters</i> , 2010, 104, 210501.	2.9	184
110	Relativistic entanglement of two massive particles. <i>Physical Review A</i> , 2010, 81, .	1.0	93
111	Criterion for k-separability in mixed multipartite states. <i>Quantum Information and Computation</i> , 2010, 10, 829-836.	0.1	43
112	Two computable sets of multipartite entanglement measures. <i>Physical Review A</i> , 2009, 79, .	1.0	25
113	Bohr's complementarity relation and the violation of CP symmetry in the neutral kaon system. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2008, 372, 3608-3615.	0.9	15
114	Simplex of bound entangled multipartite qubit states. <i>Physical Review A</i> , 2008, 78, .	1.0	9
115	Multipartite entanglement measure for all discrete systems. <i>Physical Review A</i> , 2008, 78, .	1.0	35
116	The shape of higher-dimensional state space: Bloch-ball analog for a qutrit. <i>Quantum - the Open Journal for Quantum Science</i> , 0, 5, 485.	0.0	7
117	Quantifying high dimensional entanglement with two mutually unbiased bases. <i>Quantum - the Open Journal for Quantum Science</i> , 0, 1, 22.	0.0	34
118	Precision and Work Fluctuations in Gaussian Battery Charging. <i>Quantum - the Open Journal for Quantum Science</i> , 0, 2, 61.	0.0	66
119	Heralded generation of maximal entanglement in any dimension via incoherent coupling to thermal baths. <i>Quantum - the Open Journal for Quantum Science</i> , 0, 2, 73.	0.0	27
120	Concepts of work in autonomous quantum heat engines. <i>Quantum - the Open Journal for Quantum Science</i> , 0, 3, 195.	0.0	47
121	Ideal Projective Measurements Have Infinite Resource Costs. <i>Quantum - the Open Journal for Quantum Science</i> , 0, 4, 222.	0.0	54
122	High-Dimensional Pixel Entanglement: Efficient Generation and Certification. <i>Quantum - the Open Journal for Quantum Science</i> , 0, 4, 376.	0.0	46
123	Activation of genuine multipartite entanglement: Beyond the single-copy paradigm of entanglement characterisation. <i>Quantum - the Open Journal for Quantum Science</i> , 0, 6, 695.	0.0	6
124	Finite-Function-Encoding Quantum States. <i>Quantum - the Open Journal for Quantum Science</i> , 0, 6, 708.	0.0	0
125	One-Shot Hybrid State Redistribution. <i>Quantum - the Open Journal for Quantum Science</i> , 0, 6, 724.	0.0	4