

Hyunchul Nha

List of Publications by Year in descending order

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106
papers

2,502
citations

185998

28
h-index

233125

45
g-index

107
all docs

107
docs citations

107
times ranked

1389
citing authors

#	ARTICLE	IF	CITATIONS
1	Proposed Test of Quantum Nonlocality for Continuous Variables. <i>Physical Review Letters</i> , 2004, 93, 020401.	2.9	196
2	Quantum state engineering by a coherent superposition of photon subtraction and addition. <i>Physical Review A</i> , 2010, 82, .	1.0	146
3	Enhancing quantum entanglement for continuous variables by a coherent superposition of photon subtraction and addition. <i>Physical Review A</i> , 2011, 84, .	1.0	136
4	Optimal estimation of joint parameters in phase space. <i>Physical Review A</i> , 2013, 87, .	1.0	98
5	Photon transport in a one-dimensional nanophotonic waveguide QED system. <i>Physica Scripta</i> , 2016, 91, 063004.	1.2	68
6	Cavity quantum electrodynamics for a cylinder: Inside a hollow dielectric and near a solid dielectric cylinder. <i>Physical Review A</i> , 1997, 56, 2213-2220.	1.0	64
7	Entanglement criteria via the uncertainty relations in $su(2)$ and $su(1,1)$ algebras: Detection of non-Gaussian entangled states. <i>Physical Review A</i> , 2006, 74, .	1.0	63
8	Cavity quantum electrodynamics between parallel dielectric surfaces. <i>Physical Review A</i> , 1996, 54, 3505-3513.	1.0	56
9	Uncertainty Inequalities as Entanglement Criteria for Negative Partial-Transpose States. <i>Physical Review Letters</i> , 2008, 101, 130402.	2.9	54
10	Entanglement of Gaussian states using a beam splitter. <i>Physical Review A</i> , 2009, 79, .	1.0	53
11	Demonstrating higher-order nonclassical effects by photon-added classical states: realistic schemes. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2009, 26, 1363.	0.9	53
12	Entanglement within the Quantum Trajectory Description of Open Quantum Systems. <i>Physical Review Letters</i> , 2004, 93, 120408.	2.9	52
13	Fate of photon blockade in the deep strong-coupling regime. <i>Physical Review A</i> , 2016, 94, .	1.0	52
14	Phonon arithmetic in a trapped ion system. <i>Nature Communications</i> , 2016, 7, 11410.	5.8	50
15	Optimal Gaussian measurements for phase estimation in single-mode Gaussian metrology. <i>Npj Quantum Information</i> , 2019, 5, .	2.8	50
16	Dynamical theory of single-photon transport in a one-dimensional waveguide coupled to identical and nonidentical emitters. <i>Physical Review A</i> , 2016, 94, .	1.0	48
17	Entanglement of movable mirrors in a correlated-emission laser. <i>Physical Review A</i> , 2013, 88, .	1.0	41
18	Atomic-position localization via dual measurement. <i>Physical Review A</i> , 2002, 65, .	1.0	40

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19	Quantum steering of multimode Gaussian states by Gaussian measurements: monogamy relations and the Peres conjecture. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2015, 48, 135301.	0.7	39
20	Second-order superposition operations via Hong-Ou-Mandel interference. <i>Physical Review A</i> , 2012, 85, .	1.0	37
21	Quantum linear amplifier enhanced by photon subtraction and addition. <i>Physical Review A</i> , 2012, 85, .	1.0	34
22	Efficient Entanglement Criteria beyond Gaussian Limits Using Gaussian Measurements. <i>Physical Review Letters</i> , 2012, 108, 030503.	2.9	32
23	Revealing nonclassicality beyond Gaussian states via a single marginal distribution. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 891-896.	3.3	32
24	Entanglement condition via $su(2)$ and $su(1,1)$ algebra using Schrödinger-Robertson uncertainty relation. <i>Physical Review A</i> , 2007, 76, .	1.0	31
25	Generating a Schrödinger-cat-like state via a coherent superposition of photonic operations. <i>Physical Review A</i> , 2012, 85, .	1.0	30
26	Testing Nonclassicality and Non-Gaussianity in Phase Space. <i>Physical Review Letters</i> , 2015, 114, 190402.	2.9	30
27	Distinguishing two single-mode Gaussian states by homodyne detection: An information-theoretic approach. <i>Physical Review A</i> , 2005, 71, .	1.0	29
28	Single-photon frequency-comb generation in a one-dimensional waveguide coupled to two atomic arrays. <i>Physical Review A</i> , 2016, 93, .	1.0	29
29	Enhanced Bell violation by a coherent superposition of photon subtraction and addition. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2012, 29, 906.	0.9	27
30	Quantum phase estimation using a multi-headed cat state. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2015, 32, 1186.	0.9	27
31	Entanglement criteria and nonlocality for multimode continuous-variable systems. <i>Physical Review A</i> , 2009, 80, .	1.0	25
32	Quantum walk as a simulator of nonlinear dynamics: Nonlinear Dirac equation and solitons. <i>Physical Review A</i> , 2015, 92, .	1.0	25
33	Sufficient condition for a quantum state to be genuinely quantum non-Gaussian. <i>New Journal of Physics</i> , 2018, 20, 023046.	1.2	25
34	Quantum steering of Gaussian states via non-Gaussian measurements. <i>Scientific Reports</i> , 2016, 6, 29729.	1.6	24
35	Entanglement distillation for continuous variables in a thermal environment: Effectiveness of a non-Gaussian operation. <i>Physical Review A</i> , 2013, 87, .	1.0	23
36	Demonstrating multipartite entanglement of single-particle states: Linear optical schemes. <i>Physical Review A</i> , 2007, 75, .	1.0	22

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37	Linear amplification and quantum cloning for non-Gaussian continuous variables. <i>New Journal of Physics</i> , 2010, 12, 103010.	1.2	22
38	Practical resources and measurements for lossy optical quantum metrology. <i>Physical Review A</i> , 2017, 96, .	1.0	22
39	Entanglement detection via tighter local uncertainty relations. <i>Physical Review A</i> , 2010, 81, .	1.0	21
40	Entanglement of movable mirrors in a correlated emission laser via cascade-driven coherence. <i>Physical Review A</i> , 2013, 88, .	1.0	21
41	Coherent-state optical qudit cluster state generation and teleportation via homodyne detection. <i>Optics Communications</i> , 2015, 337, 79-82.	1.0	21
42	Steering criteria via covariance matrices of local observables in arbitrary-dimensional quantum systems. <i>Physical Review A</i> , 2015, 92, .	1.0	20
43	Quantum non-Gaussianity and secure quantum communication. <i>Npj Quantum Information</i> , 2019, 5, .	2.8	20
44	Generating arbitrary photon-number entangled states for continuous-variable quantum informatics. <i>Optics Express</i> , 2012, 20, 14221.	1.7	19
45	Quantum phase estimation using path-symmetric entangled states. <i>Scientific Reports</i> , 2016, 6, 30306.	1.6	19
46	Quantifying non-Gaussianity of quantum-state correlation. <i>Physical Review A</i> , 2017, 96, .	1.0	19
47	Optimal teleportation via noisy quantum channels without additional qubit resources. <i>Npj Quantum Information</i> , 2021, 7, .	2.8	19
48	Sisyphus cooling on the surface of a hollow-mirror atom trap. <i>Physical Review A</i> , 1997, 56, 729-736.	1.0	18
49	Gaussian-state entanglement in a quantum beat laser. <i>Physical Review A</i> , 2011, 83, .	1.0	18
50	Enhanced multipartite quantum correlation by non-Gaussian operations. <i>Physical Review A</i> , 2013, 88, .	1.0	18
51	Loophole-Free Bell Test for Continuous Variables via Wave and Particle Correlations. <i>Physical Review Letters</i> , 2010, 105, 170404.	2.9	17
52	Quantum and classical nonlinear dynamics in a microwave cavity. <i>EPJ Quantum Technology</i> , 2014, 1, .	2.9	17
53	Single-photon state in a driven Jaynes-Cummings system. <i>Physical Review A</i> , 2000, 63, .	1.0	16
54	Decoherence of a two-state atom driven by coherent light. <i>Physical Review A</i> , 2005, 71, .	1.0	16

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55	Demonstrating nonclassicality and non-Gaussianity of single-mode fields: Bell-type tests using generalized phase-space distributions. <i>Physical Review A</i> , 2015, 92, .	1.0	16
56	Quantifying coherence of quantum measurements. <i>New Journal of Physics</i> , 2020, 22, 093019.	1.2	15
57	Comment on "Role of Initial Entanglement and Non-Gaussianity in the Decoherence of Photon-Number Entangled States Evolving in a Noisy Channel": <i>Physical Review Letters</i> , 2011, 107, 238901; discussion 238902.	2.9	14
58	Decoherence of highly mixed macroscopic quantum superpositions. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2008, 25, 1025.	0.9	13
59	Gaussian benchmark for optical communication aiming towards ultimate capacity. <i>Physical Review A</i> , 2016, 93, .	1.0	13
60	Quantum Teleportation of the Temporal Fluctuations of Light. <i>Physical Review Letters</i> , 2009, 102, 230501.	2.9	12
61	Gaussian states under coarse-grained continuous variable measurements. <i>Physical Review A</i> , 2014, 89, .	1.0	12
62	Linear optical scheme to demonstrate genuine multipartite entanglement for single-particle W states. <i>Physical Review A</i> , 2008, 77, .	1.0	11
63	Quantum steering for continuous-variable states. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2013, 30, 2483.	0.9	11
64	Non-Gaussianity and entropy-bounded uncertainty relations: Application to detection of non-Gaussian entangled states. <i>Physical Review A</i> , 2018, 98, .	1.0	11
65	Single-atom laser based on multiphoton resonances at far-off resonance in the Jaynes-Cummings ladder. <i>Physical Review A</i> , 2000, 63, .	1.0	10
66	Faithful measure of quantum non-Gaussianity via quantum relative entropy. <i>Physical Review A</i> , 2019, 100, .	1.0	10
67	Squeezing effect in a driven coupled-oscillator system: A dual role of damping. <i>Physical Review A</i> , 2003, 67, .	1.0	9
68	Information fluctuation theorem for an open quantum bipartite system. <i>Physical Review E</i> , 2020, 101, 052128.	0.8	9
69	Quantifying non-Gaussianity of a quantum state by the negative entropy of quadrature distributions. <i>Physical Review A</i> , 2021, 104, .	1.0	9
70	Dynamically induced atomic resonance fluorescence and cavity transmission spectra in a driven Jaynes-Cummings system. <i>Physical Review A</i> , 2001, 63, .	1.0	8
71	Cavity-damping-induced transitions in a driven atom-cavity system. <i>Optics Letters</i> , 2001, 26, 923.	1.7	8
72	Detection of bound entanglement in continuous-variable systems. <i>Physical Review A</i> , 2010, 82, .	1.0	8

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73	Trade-off between information gain and fidelity under weak measurements. <i>Physical Review A</i> , 2015, 92, .	1.0	8
74	Complete Information Balance in Quantum Measurement. <i>Quantum - the Open Journal for Quantum Science</i> , 0, 5, 414.	0.0	8
75	Resonance fluorescence of a two-level atom in a colored vacuum. <i>Physical Review A</i> , 2000, 62, .	1.0	7
76	Unitary equivalence between ordinary intelligent states and generalized intelligent states. <i>Physical Review A</i> , 2007, 76, .	1.0	7
77	Classical capacity of Gaussian communication under a single noisy channel. <i>Physical Review A</i> , 2015, 91, .	1.0	7
78	Entropic nonclassicality and quantum non-Gaussianity tests via beam splitting. <i>Scientific Reports</i> , 2019, 9, 17835.	1.6	7
79	Verifying single-mode nonclassicality beyond negativity in phase space. <i>Physical Review Research</i> , 2021, 3, .	1.3	7
80	Complete conditions for legitimate Wigner distributions. <i>Physical Review A</i> , 2008, 78, .	1.0	6
81	Continuous-variable dense coding via a general Gaussian state: Monogamy relation. <i>Physical Review A</i> , 2014, 90, .	1.0	6
82	Dynamics of an atomic wave packet in a standing-wave cavity field: A cavity-assisted single-atom detection. <i>Physical Review A</i> , 2002, 65, .	1.0	5
83	Linear optical scheme for producing polarization-entangled NOON states. <i>Optics Communications</i> , 2012, 285, 307-310.	1.0	5
84	Monogamy relation in multipartite continuous-variable quantum teleportation. <i>Physical Review A</i> , 2016, 94, .	1.0	5
85	Entropic Uncertainty Relations via Direct-Sum Majorization Relation for Generalized Measurements. <i>Entropy</i> , 2019, 21, 270.	1.1	5
86	Inseparability criterion using higher-order Schrödinger–Robertson uncertainty relation. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2014, 31, 656.	0.9	4
87	Optimal continuous-variable teleportation under energy constraint. <i>Physical Review A</i> , 2017, 95, .	1.0	4
88	Output field squeezing in a weakly-driven dissipative quantum Rabi model. <i>Optics Communications</i> , 2019, 435, 350-354.	1.0	4
89	Quantum teleportation is a reversal of quantum measurement. <i>Physical Review Research</i> , 2021, 3, .	1.3	4
90	Squeezing Enhancement by Damping in a Driven Atom-Cavity System. <i>Journal of the Physical Society of Japan</i> , 2002, 71, 1615-1617.	0.7	3

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91	Vacuum fluctuations and the conditional homodyne detection of squeezed light. Journal of Optics B: Quantum and Semiclassical Optics, 2004, 6, S645-S651.	1.4	3
92	Rigorous criterion for characterizing correlated multiphoton emissions. Optics Express, 2010, 18, 7092.	1.7	3
93	Stochastic initiation of superradiance in a cavity: Decoherence through pseudospin exchange. Physical Review A, 2002, 66, .	1.0	2
94	New Features of the Fluorescence Spectra in the Driven Jaynes-Cummings System. Journal of the Korean Physical Society, 2000, 37, 693-696.	0.3	2
95	Entropy, Free Energy, and Work of Restricted Boltzmann Machines. Entropy, 2020, 22, 538.	1.1	2
96	Multiphoton Spectroscopy of a Driven Jaynes-Cummings System. Journal of the Physical Society of Japan, 2000, 69, 4060-4065.	0.7	1
97	Qudit communication network. , 2012, , .		1
98	Quantum Photovoltaic Cells Driven by Photon Pulses. Entropy, 2020, 22, 693.	1.1	1
99	Cold Atoms in a Hollow Mirror Trap. International Journal of Modern Physics B, 1997, 11, 3311-3317.	1.0	0
100	Atomic wave packet dynamics in a standing wave quantum field. , 0, , .		0
101	Squeezing by damping in a driven coupled-oscillator system. , 0, , .		0
102	Publisher's Note: Demonstrating multipartite entanglement of single-particle W states: Linear optical schemes [Phys. Rev. A 75, 012326 (2007)]. Physical Review A, 2007, 75, .	1.0	0
103	$ i\rangle$ et al. Reply. Physical Review Letters, 2011, 106, .	2.9	0
104	Quantum state engineering by a coherent superposition of photon subtraction and addition. , 2011, , .		0
105	CONTINUOUS VARIABLE TELEPORTATION WITHIN STOCHASTIC ELECTRODYNAMICS. , 2004, , .		0
106	Nonclassicality and entanglement for continuous-variable quantum information. , 2018, , .		0