

Julio Gea-Banacloche

List of Publications by Year in descending order

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105
papers

5,119
citations

196777

29
h-index

97045

71
g-index

105
all docs

105
docs citations

105
times ranked

2684
citing authors

#	ARTICLE	IF	CITATIONS
1	Atomic population transfer for single- and N-photon wavepackets. Journal of the Optical Society of America B: Optical Physics, 2021, 38, 226.	0.9	2
2	Passive, deterministic photonic conditional-phase gate via two-level systems. Physical Review A, 2019, 99, .	1.0	5
3	Analytical results for a conditional phase shift between single-photon pulses in a nonlocal nonlinear medium. Physical Review A, 2018, 97, .	1.0	12
4	Two-level-atom excitation probability for single- and N -photon wave packets. Physical Review A, 2017, 96, .	1.0	12
5	Two photons co- and counterpropagating through N cross-Kerr sites. Physical Review A, 2016, 94, .	1.0	26
6	Quantum multimode treatment of light scattering by an atom in a waveguide. Physical Review A, 2016, 93, .	1.0	17
7	Multimode analysis of a conditional phase gate based on second-order nonlinearity. Physical Review A, 2015, 92, .	1.0	10
8	Wavefunction exchange and entanglement in one-dimensional collisions. American Journal of Physics, 2015, 83, 305-312.	0.3	4
9	Conditional phase gate using an optomechanical resonator. Physical Review A, 2014, 89, .	1.0	8
10	Photon subtraction and addition by a three-level atom in an optical cavity. Physical Review A, 2013, 88, .	1.0	10
11	Space-time descriptions of quantum fields interacting with optical cavities. Physical Review A, 2013, 87, .	1.0	14
12	Single-photon, cavity-mediated gates: Detuning, losses, and nonadiabatic effects. Physical Review A, 2012, 86, .	1.0	9
13	Simple model to estimate the contribution of atmospheric CO ₂ to the Earth's greenhouse effect. American Journal of Physics, 2012, 80, 306-315.	0.3	13
14	Comparative model study of two-photon deterministic passive quantum logical gates. Physical Review A, 2011, 83, .	1.0	11
15	Quantum computers: A status update [Point of View]. Proceedings of the IEEE, 2010, 98, 1983-1985.	16.4	2
16	Energy constraints for quantum logic via nonlinear optical processes. Optics Communications, 2010, 283, 719-723.	1.0	2
17	Impossibility of large phase shifts via the giant Kerr effect with single-photon wave packets. Physical Review A, 2010, 81, .	1.0	166
18	Gate fidelity of arbitrary single-qubit gates constrained by conservation laws. Journal of Physics A: Mathematical and Theoretical, 2009, 42, 225303.	0.7	16

#	ARTICLE	IF	CITATIONS
19	Nonlinear Optics of Three-Level, Inhomogeneously-Broadened Atoms in an Optical Cavity. , 2009, , .		0
20	Observation of Intracavity Electromagnetically Induced Transparency and Polariton Resonances in a Doppler-Broadened Medium. Physical Review Letters, 2008, 100, 173602.	2.9	122
21	PLENARY DEBATE: QUANTUM EFFECTS IN BIOLOGY: TRIVIAL OR NOT?. Fluctuation and Noise Letters, 2008, 08, C5-C26.	1.0	18
22	DREAMS VERSUS REALITY: PLENARY DEBATE SESSION ON QUANTUM COMPUTING. Fluctuation and Noise Letters, 2008, 08, C27-C51.	1.0	0
23	QUANTUM PRECISION LIMITS FOR ANY IMPLEMENTATION OF SINGLE QUBIT GATES UNDER CONSERVATION LAWS. International Journal of Quantum Information, 2008, 06, 701-706.	0.6	0
24	Quantum logic with quantized control fields beyond the $\frac{1}{n}$ limit: Mathematically possible, physically unlikely. Physical Review A, 2008, 78, .	1.0	5
25	Minimum energy pulses for quantum logic cannot be shared. , 2007, , .		0
26	Quantum Logic With Quantized Fields: Beyond the $\frac{1}{n}$ Limit?. , 2007, , .		0
27	Two-reservoir model of quantum error correction. Physical Review A, 2006, 73, .	1.0	1
28	Steady State Entanglement in Cavity QED. Optics Express, 2006, 14, 4514.	1.7	20
29	Effects of random localizing events on matter waves: formalism and examples. Journal of Physics B: Atomic, Molecular and Optical Physics, 2006, 39, 69-84.	0.6	1
30	Adiabatic geometric phase gate with a quantized control field. Physical Review A, 2006, 74, .	1.0	9
31	Mean-field treatment of the damping of the oscillations of a one-dimensional Bose gas in an optical lattice. Physical Review A, 2006, 73, .	1.0	16
32	Entanglement and fluctuations in cavity quantum electrodynamics (Invited Paper). , 2005, 5842, 44.		0
33	Constraints for quantum logic arising from conservation laws and field fluctuations. Journal of Optics B: Quantum and Semiclassical Optics, 2005, 7, S326-S332.	1.4	22
34	Publisher's Note: Entangled and Disentangled Evolution for a Single Atom in a Driven Cavity [Phys. Rev. Lett.94, 053603 (2005)]. Physical Review Letters, 2005, 94, .	2.9	0
35	QUANTUM VERSION OF THE SZILARD ONE-ATOM ENGINE AND THE COST OF RAISING ENERGY BARRIERS. Fluctuation and Noise Letters, 2005, 05, C39-C47.	1.0	4
36	Entangled and Disentangled Evolution for a Single Atom in a Driven Cavity. Physical Review Letters, 2005, 94, 053603.	2.9	30

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37	Dynamics of a two-level system strongly coupled to a high-frequency quantum oscillator. Physical Review B, 2005, 72, .	1.1	194
38	Quantum error correction against correlated noise. Physical Review A, 2004, 69, .	1.0	43
39	Optical realizations of quantum teleportation. Progress in Optics, 2004, 46, 311-353.	0.4	3
40	Dreams Versus Reality: Plenary Debate Session on Quantum Computing. Quantum Information Processing, 2003, 2, 449-472.	1.0	4
41	Reply II to "Comment on "Some implications of the quantum nature of laser fields for quantum computations" Physical Review A, 2003, 68, .	1.0	16
42	Addendum: Extracting an entangled state of n qubits from an n -qubit entangled state after errors at sites. Physical Review A, 2003, 67, .	1.0	0
43	Comparison of Energy Requirements for Classical and Quantum Information Processing. Fluctuation and Noise Letters, 2003, 03, C3-C7.	1.0	17
44	Energy requirements for quantum computation. , 2003, , .		1
45	Minimum Energy Requirements for Quantum Computation. Physical Review Letters, 2002, 89, 217901.	2.9	51
46	Hiding messages in quantum data. Journal of Mathematical Physics, 2002, 43, 4531-4536.	0.5	54
47	Some implications of the quantum nature of laser fields for quantum computations. Physical Review A, 2002, 65, .	1.0	49
48	CEL gyroscope with injected squeezed vacuum. Journal of Modern Optics, 2002, 49, 453-463.	0.6	0
49	Splitting the wave function of a particle in a box. American Journal of Physics, 2002, 70, 307-312.	0.3	20
50	Three-qubit quantum error-correction scheme for collective decoherence. Physical Review A, 2001, 63, .	1.0	24
51	Two-state system driven by imperfect π pulses: An estimate of the error accumulation in bang-bang control methods. Journal of Modern Optics, 2001, 48, 927-934.	0.6	2
52	Two-state system driven by imperfect π pulses: an estimate of the error accumulation in bang-bang control methods. Journal of Modern Optics, 2001, 48, 927-934.	0.6	4
53	Teleportation of rotations and receiver-encoded secret sharing. Journal of Optics B: Quantum and Semiclassical Optics, 2001, 3, 407-411.	1.4	25
54	A method to protect quantum entanglement against certain kinds of phase and exchange errors. Journal of Optics B: Quantum and Semiclassical Optics, 2001, 3, S30-S33.	1.4	0

#	ARTICLE	IF	CITATIONS
55	Extracting an entangled state of n qubits from an n -qubit entangled state after errors at sites. Physical Review A, 2001, 64, .	1.0	4
56	A bouncing wavepacket: finite-wall and resonance effects. Optics Communications, 2000, 179, 117-121.	1.0	6
57	Comment on "A quantum bouncing ball," by Julio Gea-Banacloche [Am. J. Phys. 67 (9), 776-782 (1999)]. American Journal of Physics, 2000, 68, 672-673.	0.3	23
58	Quantum codes and macroscopic superpositions. Physical Review A, 2000, 61, .	1.0	3
59	Error correction for mutually interacting qubits. Physical Review A, 2000, 62, .	1.0	5
60	Qubit-qubit interaction in quantum computers. Adder algorithm with diagonal and off-diagonal interactions. Physical Review A, 1999, 60, 185-193.	1.0	7
61	A quantum bouncing ball. American Journal of Physics, 1999, 67, 776-782.	0.3	105
62	Emergence of Classical Radiation Fields through Decoherence in the Scully-Lamb Laser Model. Foundations of Physics, 1998, 28, 531-548.	0.6	12
63	Comment on "Optical coherence: A convenient fiction." Physical Review A, 1998, 58, 4244-4246.	1.0	24
64	Qubit-qubit interaction in quantum computers. Physical Review A, 1998, 57, R1-R4.	1.0	21
65	Reply to "Comment on "Quantum suppression of chaos in the spin-boson model" Physical Review E, 1997, 56, 2329-2330.	0.8	0
66	Evanescent Light-Wave Atom Mirrors, Resonators, Waveguides, and Traps. Advances in Atomic, Molecular and Optical Physics, 1996, , 1-94.	2.3	134
67	Quantum suppression of chaos in the spin-boson model. Physical Review E, 1996, 54, 1449-1456.	0.8	15
68	Conditioned Density Matrix Treatment of Fluorescent Atom in Quasiclassical Field. , 1996, , 575-576.		0
69	Schrödinger modal structure of cubical, pyramidal, and conical, evanescent light-wave gravitational atom traps. Physical Review A, 1995, 52, 3997-4003.	1.0	10
70	Measurement of Dispersive Properties of Electromagnetically Induced Transparency in Rubidium Atoms. Physical Review Letters, 1995, 74, 666-669.	2.9	649
71	Electromagnetically induced transparency in ladder-type inhomogeneously broadened media: Theory and experiment. Physical Review A, 1995, 51, 576-584.	1.0	605
72	Quasiclassical approximation for the spin-boson Hamiltonian with counterrotating terms. Physical Review A, 1994, 50, 2040-2052.	1.0	21

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73	Laser with injected squeezed vacuum: Phase diffusion and intensity fluctuations. <i>Physical Review A</i> , 1994, 50, 4176-4187.	1.0	8
74	Squeezing in the Jaynes-Cummings model for Large Coherent Fields. <i>Journal of Modern Optics</i> , 1993, 40, 2361-2379.	0.6	14
75	Jaynes-Cummings model with quasiclassical fields: The effect of dissipation. <i>Physical Review A</i> , 1993, 47, 2221-2234.	1.0	54
76	Loss of state purity and regularity in the Jaynes-Cummings model. <i>Physical Review A</i> , 1992, 46, 7307-7310.	1.0	15
77	The specular reflection of light off light. <i>American Journal of Physics</i> , 1992, 60, 28-34.	0.3	2
78	A new look at the Jaynes-Cummings model for large fields: Bloch sphere evolution and detuning effects. <i>Optics Communications</i> , 1992, 88, 531-550.	1.0	54
79	Atom- and field-state evolution in the Jaynes-Cummings model for large initial fields. <i>Physical Review A</i> , 1991, 44, 5913-5931.	1.0	290
80	Linewidth of a laser with a squeezed reservoir. <i>Physical Review A</i> , 1990, 42, 4164-4168.	1.0	11
81	Theory of the two-photon micromaser: Photon statistics. <i>Physical Review A</i> , 1990, 42, 6704-6712.	1.0	42
82	Influence of pump-phase fluctuations on the squeezing in a degenerate parametric oscillator. <i>Physical Review A</i> , 1990, 42, 1742-1751.	1.0	19
83	Phase-sensitive amplification in a three-level atomic system. <i>Physical Review A</i> , 1990, 41, 5179-5186.	1.0	115
84	Treatment of the spectrum of squeezing based on the modes of the universe. II. Applications. <i>Physical Review A</i> , 1990, 41, 381-387.	1.0	20
85	Collapse and revival of the state vector in the Jaynes-Cummings model: An example of state preparation by a quantum apparatus. <i>Physical Review Letters</i> , 1990, 65, 3385-3388.	2.9	322
86	Treatment of the spectrum of squeezing based on the modes of the universe. I. Theory and a physical picture. <i>Physical Review A</i> , 1990, 41, 369-380.	1.0	86
87	Two-photon absorption of nonclassical light. <i>Physical Review Letters</i> , 1989, 62, 1603-1606.	2.9	179
88	Squeezed States in Non-ideal Interferometers: The Effect of Aberrations. <i>Journal of Modern Optics</i> , 1989, 36, 1277-1284.	0.6	18
89	Emission spectra of an atom in a cavity in the presence of a squeezed vacuum. <i>Physical Review A</i> , 1988, 38, 3514-3521.	1.0	79
90	Passive versus active interferometers: Why cavity losses make them equivalent. <i>Physical Review A</i> , 1987, 35, 2518-2522.	1.0	18

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91	Soft X-Ray free-electron laser with a laser undulator. IEEE Journal of Quantum Electronics, 1987, 23, 1558-1570.	1.0	81
92	Squeezed States for Interferometric Gravitational-wave Detectors. Journal of Modern Optics, 1987, 34, 793-811.	0.6	90
93	Squeezing of spontaneous emission in a laser. Physical Review Letters, 1987, 59, 543-546.	2.9	65
94	Steady-state photon statistics of a free-electron laser. Physical Review A, 1986, 33, 1448-1450.	1.0	12
95	Influence of phase fluctuations on the measurement of the frequency of a laser. Optics Communications, 1986, 57, 67-70.	1.0	5
96	Intrinsic linewidth of a free-electron laser. Physical Review A, 1986, 33, 2174-2176.	1.0	19
97	Gravity-wave detection via correlated-spontaneous-emission lasers. Physical Review A, 1986, 34, 4043-4054.	1.0	45
98	Quantum theory of the free-electron laser: Large gain, saturation, and photon statistics. Physical Review A, 1985, 31, 1607-1621.	1.0	30
99	The ring laser gyro. Reviews of Modern Physics, 1985, 57, 61-104.	16.4	599
100	Free electron lasers in the x-ray region. AIP Conference Proceedings, 1984, , .	0.3	0
101	Energy loss by slow magnetic monopoles. Lettere Al Nuovo Cimento Rivista Internazionale Della Societ� Italiana Di Fisica, 1983, 37, 145-148.	0.4	1
102	Laser cavity dumping using optical bistability. Optics Communications, 1983, 46, 43-46.	1.0	7
103	Bistable Limit Cycles in a Model for a Laser with a Saturable Absorber. Physical Review Letters, 1982, 49, 35-38.	2.9	31
104	Multiplicity of steady states in heterogeneous catalysis: The case of Langmuir's nth order kinetics. Journal of Chemical Physics, 1981, 75, 1538-1543.	1.2	3
105	Oscillatory Phenomena and QSwitching in a Model for a Laser with a Saturable Absorber. Physical Review Letters, 1981, 47, 1895-1898.	2.9	47