

Simone De Liberato

List of Publications by Year in descending order

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88
papers

5,513
citations

126858

33
h-index

76872

74
g-index

90
all docs

90
docs citations

90
times ranked

3687
citing authors

#	ARTICLE	IF	CITATIONS
1	Ultrastrong coupling between light and matter. Nature Reviews Physics, 2019, 1, 19-40.	11.9	916
2	Sub-cycle switch-on of ultrastrong light-matter interaction. Nature, 2009, 458, 178-181.	13.7	498
3	Ultrastrong Coupling of the Cyclotron Transition of a 2D Electron Gas to a THz Metamaterial. Science, 2012, 335, 1323-1326.	6.0	452
4	Ultrastrong Light-Matter Coupling Regime with Polariton Dots. Physical Review Letters, 2010, 105, 196402.	2.9	358
5	Signatures of the ultrastrong light-matter coupling regime. Physical Review B, 2009, 79, .	1.1	268
6	Fermionized Photons in an Array of Driven Dissipative Nonlinear Cavities. Physical Review Letters, 2009, 103, 033601.	2.9	216
7	Quantum Vacuum Radiation Spectra from a Semiconductor Microcavity with a Time-Modulated Vacuum Rabi Frequency. Physical Review Letters, 2007, 98, 103602.	2.9	205
8	Light-Matter Decoupling in the Deep Strong Coupling Regime: The Breakdown of the Purcell Effect. Physical Review Letters, 2014, 112, 016401.	2.9	181
9	Quantum Szilard Engine. Physical Review Letters, 2011, 106, 070401.	2.9	176
10	Extracavity quantum vacuum radiation from a single qubit. Physical Review A, 2009, 80, .	1.0	174
11	Open quantum systems with local and collective incoherent processes: Efficient numerical simulations using permutational invariance. Physical Review A, 2018, 98, .	1.0	143
12	Breakdown of gauge invariance in ultrastrong-coupling cavity QED. Physical Review A, 2018, 98, .	1.0	122
13	Ultrastrong coupling between a cavity resonator and the cyclotron transition of a two-dimensional electron gas in the case of an integer filling factor. Physical Review B, 2010, 81, .	1.1	113
14	Stimulated Scattering and Lasing of Intersubband Cavity Polaritons. Physical Review Letters, 2009, 102, 136403.	2.9	83
15	Excitonic spectral features in strongly coupled organic polaritons. Physical Review A, 2016, 93, .	1.0	80
16	Virtual photons in the ground state of a dissipative system. Nature Communications, 2017, 8, 1465.	5.8	75
17	Ground State Electroluminescence. Physical Review Letters, 2016, 116, 113601.	2.9	71
18	Strong Coupling of Epsilon-Near-Zero Phonon Polaritons in Polar Dielectric Heterostructures. Nano Letters, 2018, 18, 4285-4292.	4.5	71

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19	Strong and Coherent Coupling between Localized and Propagating Phonon Polaritons. <i>Physical Review Letters</i> , 2016, 116, 246402.	2.9	62
20	Sub-nanometer Thin Oxide Film Sensing with Localized Surface Phonon Polaritons. <i>ACS Photonics</i> , 2018, 5, 2807-2815.	3.2	52
21	Quantum noise in photothermal cooling. <i>Physical Review A</i> , 2011, 83, .	1.0	48
22	Terahertz lasing from intersubband polariton-polariton scattering in asymmetric quantum wells. <i>Physical Review B</i> , 2013, 87, .	1.1	47
23	Polaritonics: from microcavities to sub-wavelength confinement. <i>Nanophotonics</i> , 2019, 8, 641-654.	2.9	47
24	Resolution of superluminal signalling in non-perturbative cavity quantum electrodynamics. <i>Nature Communications</i> , 2018, 9, 1924.	5.8	46
25	Hybrid longitudinal-transverse phonon polaritons. <i>Nature Communications</i> , 2019, 10, 1682.	5.8	46
26	Superradiance with local phase-breaking effects. <i>Physical Review A</i> , 2017, 96, .	1.0	45
27	Engineering the Spectral and Spatial Dispersion of Thermal Emission via Polariton-Phonon Strong Coupling. <i>Nano Letters</i> , 2021, 21, 1831-1838.	4.5	44
28	Theoretical investigation of phonon polaritons in SiC micropillar resonators. <i>Physical Review B</i> , 2017, 95, .	1.1	42
29	Back-reaction effects of quantum vacuum in cavity quantum electrodynamics. <i>Physical Review A</i> , 2012, 85, .	1.0	40
30	Optical properties of atomic Mott insulators: From slow light to dynamical Casimir effects. <i>Physical Review A</i> , 2008, 77, .	1.0	36
31	Polaritonic nonlocality in light-matter interaction. <i>Nature Photonics</i> , 2021, 15, 690-695.	15.6	36
32	Quantum theory of electron tunneling into intersubband cavity polariton states. <i>Physical Review B</i> , 2009, 79, .	1.1	35
33	Quantum control and long-range quantum correlations in dynamical Casimir arrays. <i>Physical Review A</i> , 2015, 92, .	1.0	35
34	Cavity QED in the Ultrastrong Coupling Regime: Photon Bunching from the Emission of Individual Dressed Qubits. <i>ACS Photonics</i> , 2017, 4, 2345-2351.	3.2	32
35	Quantum model of microcavity intersubband electroluminescent devices. <i>Physical Review B</i> , 2008, 77, .	1.1	31
36	Optical Nonlocality in Polar Dielectrics. <i>Physical Review X</i> , 2020, 10, .	2.8	31

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37	Ultrastrong light-matter coupling at terahertz frequencies with split ring resonators and inter-Landau level transitions. <i>Journal of Applied Physics</i> , 2013, 113, 136510.	1.1	29
38	Carnot's theorem for nonthermal stationary reservoirs. <i>Physical Review E</i> , 2011, 84, 051122.	0.8	27
39	Real-space Hopfield diagonalization of inhomogeneous dispersive media. <i>Physical Review B</i> , 2016, 94, .	1.1	27
40	Cavity polaritons from excited-subband transitions. <i>Applied Physics Letters</i> , 2007, 91, 231118.	1.5	25
41	Excitons bound by photon exchange. <i>Nature Physics</i> , 2021, 17, 31-35.	6.5	25
42	Quantum theory of intersubband polarons. <i>Physical Review B</i> , 2012, 85, .	1.1	23
43	Collective Optomechanical Effects in Cavity Quantum Electrodynamics. <i>Physical Review Letters</i> , 2017, 119, 043604.	2.9	23
44	Strong coupling of ionizing transitions. <i>Optica</i> , 2019, 6, 354.	4.8	21
45	Second harmonic generation from strongly coupled localized and propagating phonon-polariton modes. <i>Physical Review B</i> , 2018, 98, .	1.1	20
46	Radical-pair model of magnetoreception with spin-orbit coupling. <i>New Journal of Physics</i> , 2013, 15, 083024.	1.2	18
47	Generation of Rabi-frequency radiation using exciton-polaritons. <i>Physical Review A</i> , 2015, 92, .	1.0	18
48	Theory of Nonlinear Polaritonics: \hbar^2 Scattering on a $\hat{\Gamma}^2$ -SiC Surface. <i>ACS Photonics</i> , 2017, 4, 1381-1388.	3.2	18
49	Surface phonon polaritons for infrared optoelectronics. <i>Journal of Applied Physics</i> , 2022, 131, .	1.1	18
50	Anisotropy and Modal Hybridization in Infrared Nanophotonics Using Low-Symmetry Materials. <i>ACS Photonics</i> , 2022, 9, 1078-1095.	3.2	18
51	Tunnelling dynamics of a Bose-Einstein condensate in a four-well loop-shaped system. <i>Physical Review A</i> , 2006, 73, .	1.0	16
52	Terahertz emission from ac Stark-split asymmetric intersubband transitions. <i>Physical Review B</i> , 2014, 89, .	1.1	15
53	Quantum Phases of a Multimode Bosonic Field Coupled to Flat Electronic Bands. <i>Physical Review Letters</i> , 2013, 110, 133603.	2.9	14
54	Impact of phonon nonlocality on nanogap and nanolayer polar resonators. <i>Physical Review B</i> , 2020, 102, .	1.1	14

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55	Theory of Four-Wave-Mixing in Phonon Polaritons. ACS Photonics, 2018, 5, 284-288.	3.2	12
56	Multielectron Ground State Electroluminescence. Physical Review Letters, 2019, 122, 190403.	2.9	12
57	Comment on "System-environment coupling derived by Maxwell's boundary conditions from the weak to the ultrastrong light-matter-coupling regime" Physical Review A, 2014, 89, .	1.0	11
58	Near-Field Spectroscopy of Cylindrical Phonon-Polariton Antennas. ACS Nano, 2020, 14, 8508-8517.	7.3	11
59	Effective polariton-polariton interactions of cavity-embedded two-dimensional electron gases. Physical Review B, 2013, 87, .	1.1	10
60	Strong coupling in a microcavity containing β -carotene. Optics Express, 2018, 26, 3320.	1.7	10
61	Electro-optical sampling of quantum vacuum fluctuations in dispersive dielectrics. Physical Review A, 2019, 100, .	1.0	10
62	Switching ultrastrong light-matter coupling on a subcycle scale. Journal of Applied Physics, 2011, 109, 102418.	1.1	9
63	Polariton spectrum of the Dicke-Ising model. Physical Review A, 2017, 96, .	1.0	9
64	Kimet's Reply. Physical Review Letters, 2013, 111, 188902.	2.9	8
65	Perspectives for gapped bilayer graphene polaritonics. Physical Review B, 2015, 92, .	1.1	8
66	Nonlocal scattering matrix description of anisotropic polar heterostructures. Physical Review B, 2020, 102, .	1.1	8
67	Strong light-matter coupling in microcavities characterised by Rabi-splittings comparable to the Bragg stop-band widths. New Journal of Physics, 2021, 23, 113015.	1.2	6
68	Exact solution of polaritonic systems with arbitrary light and matter frequency-dependent losses. Journal of Chemical Physics, 2022, 156, 084106.	1.2	6
69	Collective Phonon-Polaritonic Modes in Silicon Carbide Subarrays. ACS Nano, 2022, 16, 963-973.	7.3	6
70	Lasing from dressed dots. Nature Photonics, 2018, 12, 4-6.	15.6	5
71	Quantum Theory of Longitudinal-Transverse Polaritons in Nonlocal Thin Films. Physical Review Applied, 2022, 17, .	1.5	5
72	Observing the evolution of a quantum system that does not evolve. Physical Review A, 2007, 76, .	1.0	4

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73	Polaritonic quantization in nonlocal polar materials. <i>Journal of Chemical Physics</i> , 2022, 156, 024111.	1.2	4
74	Near-field nano-spectroscopy of strong mode coupling in phonon-polaritonic crystals. <i>Applied Physics Reviews</i> , 2022, 9, .	5.5	4
75	Theory of intersubband resonance fluorescence. <i>Physical Review B</i> , 2015, 92, .	1.1	3
76	How fast electrons and photons mix: Sub-cycle switching of intersubband cavity polaritons. <i>Journal of Physics: Conference Series</i> , 2009, 193, 012060.	0.3	2
77	Influence of resonator design on ultrastrong coupling between a two-dimensional electron gas and a THz metamaterial. <i>Proceedings of SPIE</i> , 2013, , .	0.8	2
78	Theoretical proposals to measure resonator-induced modifications of the electronic ground state in doped quantum wells. <i>Physical Review A</i> , 2021, 104, .	1.0	2
79	Publisher's Note: Quantum theory of electron tunneling into intersubband cavity polariton states [Phys. Rev. B79, 075317 (2009)]. <i>Physical Review B</i> , 2009, 79, .	1.1	1
80	Terahertz emission from asymmetric, doped quantum wells under resonant pumping. <i>Journal of Physics: Conference Series</i> , 2015, 619, 012021.	0.3	1
81	Terahertz quantum optics with solid-state systems. , 2010, , .		0
82	Ultrastrong coupling of integer Landau Level Polaritons. , 2011, , .		0
83	Inter-branch terahertz lasing in asymmetric intersubband polariton systems. , 2013, , .		0
84	Impact of Nonlocality on Polar Nanophotonics. , 2021, , .		0
85	Bound-to-continuum Non-perturbative Regime for an Ultrastong Light-matter Coupling. , 2021, , .		0
86	Breakdown of polaritons in ultrastrongly coupled nanophotonic systems. , 2021, , .		0
87	Oservation of bound excitons stabilised by the interaction with a photonic resonator. , 2021, , .		0
88	Breakdown of Polaritons in Nanophotonic Systems. , 2021, , .		0