

Dario Ballarini

List of Publications by Year in descending order

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95
papers

3,593
citations

136740

32
h-index

133063

59
g-index

97
all docs

97
docs citations

97
times ranked

3030
citing authors

#	ARTICLE	IF	CITATIONS
1	Polariton Bose-Einstein condensate from a bound state in the continuum. <i>Nature</i> , 2022, 605, 447-452.	13.7	60
2	Full-Bloch beams and ultrafast Rabi-rotating vortices. <i>Physical Review Research</i> , 2021, 3, .	1.3	11
3	Neuromorphic Binarized Polariton Networks. <i>Nano Letters</i> , 2021, 21, 3715-3720.	4.5	28
4	Improved Photostability in Fluorinated 2D Perovskite Single Crystals. <i>Nanomaterials</i> , 2021, 11, 465.	1.9	8
5	Enhancement of Parametric Effects in Polariton Waveguides Induced by Dipolar Interactions. <i>Physical Review Letters</i> , 2021, 126, 137401.	2.9	9
6	Demonstration of Self-Starting Nonlinear Mode Locking in Random Lasers. <i>Physical Review Letters</i> , 2021, 126, 173901.	2.9	9
7	Experimental investigation of a non-Abelian gauge field in 2D perovskite photonic platform. <i>Optica</i> , 2021, 8, 1442.	4.8	14
8	Dynamics of a Vortex Lattice in an Expanding Polariton Quantum Fluid. <i>Physical Review Letters</i> , 2021, 127, 047401.	2.9	5
9	Energy-Efficient Neural Network Inference with Microcavity Exciton Polaritons. <i>Physical Review Applied</i> , 2021, 16, .	1.5	10
10	Shaping the topology of light with a moving Rabi-oscillating vortex. <i>Optics Express</i> , 2021, 29, 37262.	1.7	4
11	Tuning of the Berry curvature in 2D perovskite polaritons. <i>Nature Nanotechnology</i> , 2021, 16, 1349-1354.	15.6	38
12	Observation of Two Thresholds Leading to Polariton Condensation in 2D Hybrid Perovskites. <i>Advanced Optical Materials</i> , 2020, 8, 2000176.	3.6	32
13	Quantum hydrodynamics of a single particle. <i>Light: Science and Applications</i> , 2020, 9, 85.	7.7	11
14	Polaritonic Neuromorphic Computing Outperforms Linear Classifiers. <i>Nano Letters</i> , 2020, 20, 3506-3512.	4.5	54
15	Transverse localization of light in laser written designed disorder. <i>Applied Physics Letters</i> , 2020, 116, 071101.	1.5	3
16	Measurement of the quantum geometric tensor and of the anomalous Hall drift. <i>Nature</i> , 2020, 578, 381-385.	13.7	130
17	One-step synthesis at room temperature of low dimensional perovskite single crystals with high optical quality. <i>Journal of Luminescence</i> , 2020, 221, 117079.	1.5	10
18	Directional Goldstone waves in polariton condensates close to equilibrium. <i>Nature Communications</i> , 2020, 11, 217.	5.8	17

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19	Electrically controlled waveguide polariton laser. <i>Optica</i> , 2020, 7, 1579.	4.8	19
20	Emerging 2D materials for room-temperature polaritonics. <i>Nanophotonics</i> , 2019, 8, 1547-1558.	2.9	30
21	Self-Trapping of Exciton-Polariton Condensates in GaAs Microcavities. <i>Physical Review Letters</i> , 2019, 123, 047401.	2.9	12
22	Quantum Nature of Light in Nonstoichiometric Bulk Perovskites. <i>ACS Nano</i> , 2019, 13, 10711-10716.	7.3	2
23	Two-dimensional hybrid perovskites sustaining strong polariton interactions at room temperature. <i>Science Advances</i> , 2019, 5, eaav9967.	4.7	114
24	Josephson vortices induced by phase twisting a polariton superfluid. <i>Nature Photonics</i> , 2019, 13, 488-493.	15.6	22
25	Polaritonics: from microcavities to sub-wavelength confinement. <i>Nanophotonics</i> , 2019, 8, 641-654.	2.9	47
26	Magnetic control of polariton spin transport. <i>Communications Physics</i> , 2019, 2, .	2.0	15
27	First observation of the quantized exciton-polariton field and effect of interactions on a single polariton. <i>Science Advances</i> , 2018, 4, eaao6814.	4.7	57
28	Interactions and scattering of quantum vortices in a polariton fluid. <i>Nature Communications</i> , 2018, 9, 1467.	5.8	46
29	Superluminal X-waves in a polariton quantum fluid. <i>Light: Science and Applications</i> , 2018, 7, 17119-17119.	7.7	17
30	Ultrastrong Plasmon-Exciton Coupling by Dynamic Molecular Aggregation. <i>ACS Photonics</i> , 2018, 5, 143-150.	3.2	48
31	Topological order and thermal equilibrium in polariton condensates. <i>Nature Materials</i> , 2018, 17, 145-151.	13.3	79
32	Tunable Out-of-Plane Excitons in 2D Single-Crystal Perovskites. <i>ACS Photonics</i> , 2018, 5, 4179-4185.	3.2	67
33	Strong Coupling of Bloch Surface Wave and Excitons in Nanostructured Semiconductors. , 2018, , .		0
34	Interacting polariton fluids in a monolayer of tungsten disulfide. <i>Nature Nanotechnology</i> , 2018, 13, 906-909.	15.6	96
35	Interacting Polariton Fluids in a Monolayer of Tungsten Disulfide. , 2018, , .		0
36	Pulse, polarization and topology shaping of polariton fluids. , 2017, , .		0

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37	High-speed flow of interacting organic polaritons. <i>Light: Science and Applications</i> , 2017, 6, e16212-e16212.	7.7	101
38	Macroscopic Two-Dimensional Polariton Condensates. <i>Physical Review Letters</i> , 2017, 118, 215301.	2.9	43
39	Room-temperature superfluidity in a polariton condensate. <i>Nature Physics</i> , 2017, 13, 837-841.	6.5	250
40	Bloch Surface Waves for MoS ₂ Emission Coupling and Polariton Systems. <i>Applied Sciences (Switzerland)</i> , 2017, 7, 1217.	1.3	8
41	The colored Hanbury Brown-Twiss effect. <i>Scientific Reports</i> , 2016, 6, 37980.	1.6	19
42	Twist of generalized skyrmions and spin vortices in a polariton superfluid. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 14926-14931.	3.3	56
43	Toward Cavity Quantum Electrodynamics with Hybrid Photon Gap-Plasmon States. <i>ACS Nano</i> , 2016, 10, 11360-11368.	7.3	53
44	Entanglement properties of quantum polaritons. <i>Physical Review B</i> , 2016, 93, .	1.1	5
45	Multicomponent polariton superfluidity in the optical parametric oscillator regime. <i>Physical Review B</i> , 2015, 92, .	1.1	9
46	Vortex and half-vortex dynamics in a nonlinear spinor quantum fluid. <i>Science Advances</i> , 2015, 1, e1500807.	4.7	57
47	Polarization shaping of Poincaré beams by polariton oscillations. <i>Light: Science and Applications</i> , 2015, 4, e350-e350.	7.7	47
48	Real-space collapse of a polariton condensate. <i>Nature Communications</i> , 2015, 6, 8993.	5.8	54
49	Role of Polymer in Hybrid Polymer/PbS Quantum Dot Solar Cells. <i>Journal of Physical Chemistry C</i> , 2015, 119, 14972-14979.	1.5	43
50	Exciton-Plasmon Coupling Enhancement via Metal Oxidation. <i>ACS Nano</i> , 2015, 9, 9691-9699.	7.3	39
51	Merging of vortices and antivortices in polariton superfluids. <i>Physical Review B</i> , 2014, 90, .	1.1	12
52	Relaxation Oscillations in the Formation of a Polariton Condensate. <i>Physical Review Letters</i> , 2014, 112, 113602.	2.9	36
53	Interaction-shaped vortex-antivortex lattices in polariton fluids. <i>Physical Review B</i> , 2014, 89, .	1.1	32
54	Publisher's Note: Interaction-shaped vortex-antivortex lattices in polariton fluids [<i>Phys. Rev. B</i> 89, 134501 (2014)]. <i>Physical Review B</i> , 2014, 90, .	1.1	0

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55	Ultrafast Control and Rabi Oscillations of Polaritons. <i>Physical Review Letters</i> , 2014, 113, 226401.	2.9	66
56	Ultrastrong light-matter coupling in electrically doped microcavity organic light emitting diodes. <i>Applied Physics Letters</i> , 2014, 104, 233303.	1.5	67
57	Polariton devices and quantum fluids. <i>Proceedings of SPIE</i> , 2014, , .	0.8	0
58	Room temperature Bloch surface wave polaritons. <i>Optics Letters</i> , 2014, 39, 2068.	1.7	32
59	Polariton-Induced Enhanced Emission from an Organic Dye under the Strong Coupling Regime. <i>Advanced Optical Materials</i> , 2014, 2, 1076-1081.	3.6	46
60	Exploring Light-Matter Interaction Phenomena under Ultrastrong Coupling Regime. <i>ACS Photonics</i> , 2014, 1, 1042-1048.	3.2	153
61	All-optical polariton transistor. <i>Nature Communications</i> , 2013, 4, 1778.	5.8	409
62	All-optical polariton transistor. , 2013, , .		2
63	Soliton and shock waves in an exciton polariton quantum pond. , 2013, , .		0
64	All-Optical Polariton Transistor. , 2013, , .		2
65	Quantum coherence in polariton fluids. , 2013, , .		0
66	Bright soliton and shock waves in an exciton polariton condensate. , 2013, , .		2
67	Polariton Quantum Fluids and Devices. <i>Springer Series in Solid-state Sciences</i> , 2013, , 127-155.	0.3	0
68	Quantum coherence in polariton fluids. , 2013, , .		0
69	Control and Ultrafast Dynamics of a Two-Fluid Polariton Switch. <i>Physical Review Letters</i> , 2012, 109, 266407.	2.9	69
70	All-optical control of the quantum flow of a polariton condensate. <i>Nature Photonics</i> , 2011, 5, 610-614.	15.6	143
71	Hydrodynamical phenomena in polariton condensates. , 2011, , .		0
72	Superfluidity in polariton condensates. <i>Journal of Physics: Conference Series</i> , 2010, 210, 012060.	0.3	2

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73	Effects of disorder on the polariton condensates in CdTe microcavities. , 2010, , .		0
74	Observation of a Long-Lived Polariton State in Semiconductor Microcavities. , 2010, , .		0
75	Observation of Quantum Hydrodynamic Effects in Microcavity Polaritons. , 2010, , .		0
76	Collective fluid dynamics of a polariton condensate in a semiconductor microcavity. Nature, 2009, 457, 291-295.	13.7	494
77	Observation of the zero-magnetic-field exciton spin splitting in high quality bulk GaAs and AlGaAs. Applied Physics Letters, 2009, 95, 182107.	1.5	7
78	Observation of Long-Lived Polariton States in Semiconductor Microcavities across the Parametric Threshold. Physical Review Letters, 2009, 102, 056402.	2.9	32
79	Exciton warming in III-V semiconductors and microcavities. Superlattices and Microstructures, 2008, 43, 449-453.	1.4	0
80	Polariton relaxation after resonant pumping at the upper polariton branch under doubly-resonant Raman scattering conditions. Physica Status Solidi (B): Basic Research, 2008, 245, 1081-1084.	0.7	0
81	Ultrafast tailoring of the exciton distribution in quantum wells. Physica Status Solidi (B): Basic Research, 2008, 245, 1064-1066.	0.7	1
82	Spatial distribution of strong and weak coupled exciton-polaritons in semiconductor microcavities. Physica E: Low-Dimensional Systems and Nanostructures, 2008, 40, 2049-2052.	1.3	1
83	Optically induced ultrafast quenching of the semiconductor quantum well luminescence. Applied Physics Letters, 2008, 92, 061912.	1.5	3
84	Polariton and spin dynamics in semiconductor microcavities under non-resonant excitation. Journal of Physics Condensed Matter, 2007, 19, 295204.	0.7	12
85	Transition from the strong- to the weak-coupling regime in semiconductor microcavities: Polarization dependence. Applied Physics Letters, 2007, 90, 201905.	1.5	20
86	Using Phonons to Populate the Bottom of the Polariton Dispersion Relation. AIP Conference Proceedings, 2007, , .	0.3	0
87	Spin-Dependent Strong- to Weak-Coupling Transition in Semiconductor Microcavities. AIP Conference Proceedings, 2007, , .	0.3	0
88	Spin-dependent coexistence of weakly coupled and strongly coupled modes in semiconductor microcavities. Superlattices and Microstructures, 2007, 41, 321-327.	1.4	0
89	Dynamics of polaritons resonantly created at the upper polariton branch. Superlattices and Microstructures, 2007, 41, 328-332.	1.4	7
90	Structural and optical defects in LiNbO3 crystals induced by femtosecond laser irradiation. Physica Status Solidi C: Current Topics in Solid State Physics, 2007, 4, 1329-1332.	0.8	3

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91	Photoluminescence of dark excitons in CdMnTe quantum well, embedded in a microcavity. Superlattices and Microstructures, 2007, 41, 386-391.	1.4	2
92	Microstructural modification of LiNbO3 crystals induced by femtosecond laser irradiation. Applied Surface Science, 2005, 248, 291-294.	3.1	18
93	Angular switching of the linear polarization of the emission in InGaAs microcavities. Physica Status Solidi C: Current Topics in Solid State Physics, 2005, 2, 3868-3871.	0.8	5
94	Striking dynamics of II-VI microcavity polaritons after linearly polarized excitation. Physica Status Solidi C: Current Topics in Solid State Physics, 2005, 2, 3880-3883.	0.8	6
95	Femtosecond laser writing of surface microstructures in Lithium Niobate. , 2005, , .		1