Pascale Senellart

List of Publications by Year
in descending order

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177 papers	9,562 citations	43973 48 h-index	37111 96 g-index
180 all docs	180 docs citations	180 times ranked	6062 citing authors

#	Article	IF	Citations
1	Near-optimal single-photon sources in the solid state. Nature Photonics, 2016, 10, 340-345.	15.6	858
2	High-performance semiconductor quantum-dot single-photon sources. Nature Nanotechnology, 2017, 12, 1026-1039.	15.6	741
3	Exciton-Photon Strong-Coupling Regime for a Single Quantum Dot Embedded in a Microcavity. Physical Review Letters, 2005, 95, 067401.	2.9	665
4	Ultrabright source of entangled photon pairs. Nature, 2010, 466, 217-220.	13.7	501
5	Spontaneous formation and optical manipulation of extended polariton condensates. Nature Physics, 2010, 6, 860-864.	6.5	431
6	Polariton Laser Using Single Micropillar<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>GaAs</mml:mi><mml:mtext mathvariant="normal">â^'</mml:mtext><mml:mi>GaAlAs</mml:mi></mml:math>Semiconductor Cavities. Physical Review Letters, 2008, 100, 047401.	2.9	394
7	Bright solid-state sources of indistinguishable single photons. Nature Communications, 2013, 4, 1425.	5.8	309
8	Controlled Light-Matter Coupling for a Single Quantum Dot Embedded in a Pillar Microcavity Using Far-Field Optical Lithography. Physical Review Letters, 2008, 101, 267404.	2.9	264
9	Controlling Spontaneous Emission with Plasmonic Optical Patch Antennas. Nano Letters, 2013, 13, 1516-1521.	4.5	209
10	Confined Tamm Plasmon Lasers. Nano Letters, 2013, 13, 3179-3184.	4.5	207
11	Nonlinear Emission of Microcavity Polaritons in the Low Density Regime. Physical Review Letters, 1999, 82, 1233-1236.	2.9	169
12	High Frequency GaAs Nano-Optomechanical Disk Resonator. Physical Review Letters, 2010, 105, 263903.	2.9	155
13	Polariton condensation in solitonic gap states in a one-dimensional periodic potential. Nature Communications, 2013, 4, 1749.	5.8	155
14	Boson Sampling with Single-Photon Fock States from a Bright Solid-State Source. Physical Review Letters, 2017, 118, 130503.	2.9	155
15	Interactions in Confined Polariton Condensates. Physical Review Letters, 2011, 106, 126401.	2.9	144
16	Evidence for Confined Tamm Plasmon Modes under Metallic Microdisks and Application to the Control of Spontaneous Optical Emission. Physical Review Letters, 2011, 107, 247402.	2.9	136
17	Influence of an in-plane electric field on exciton fine structure in InAs-GaAs self-assembled quantum dots. Applied Physics Letters, 2005, 86, 041907.	1.5	134
18	Polariton Condensation in Photonic Molecules. Physical Review Letters, 2012, 108, 126403.	2.9	124

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19	Microcavity polariton spin quantum beats without a magnetic field: A manifestation of Coulomb exchange in dense and polarized polariton systems. Physical Review B, 2005, 72, .	1.1	116
20	Deterministic and electrically tunable bright single-photon source. Nature Communications, 2014, 5, 3240.	5.8	110
21	Propagation and Amplification Dynamics of 1D Polariton Condensates. Physical Review Letters, 2012, 109, 216404.	2.9	106
22	Scalable performance in solid-state single-photon sources. Optica, 2016, 3, 433.	4.8	106
23	Optical Bistability in a GaAs-Based Polariton Diode. Physical Review Letters, 2008, 101, 266402.	2.9	102
24	Spontaneous formation of a polariton condensate in a planar GaAs microcavity. Applied Physics Letters, 2009, 95, .	1.5	97
25	Polariton light-emitting diode in a GaAs-based microcavity. Physical Review B, 2008, 77, .	1.1	92
26	Wavelength-sized GaAs optomechanical resonators with gigahertz frequency. Applied Physics Letters, 2011, 98, .	1.5	87
27	Microcavity polariton depopulation as evidence for stimulated scattering. Physical Review B, 2000, 62, R16263-R16266.	1.1	86
28	Photon lasing in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>GaAs</mml:mi></mml:mrow></mml:math>microcavity: Similarities with a polariton condensate. Physical Review B, 2007, 76, .	1.1	86
29	Exciton radiative lifetime controlled by the lateral confinement energy in a single quantum dot. Physical Review B, 2005, 71, .	1.1	83
30	Optical Nonlinearity for Few-Photon Pulses on a Quantum Dot-Pillar Cavity Device. Physical Review Letters, 2012, 109, 166806.	2.9	77
31	Single photon source using confined Tamm plasmon modes. Applied Physics Letters, 2012, 100, .	1.5	77
32	Reducing Phonon-Induced Decoherence in Solid-State Single-Photon Sources with Cavity Quantum Electrodynamics. Physical Review Letters, 2017, 118, 253602.	2.9	74
33	Macroscopic rotation of photon polarization induced by a single spin. Nature Communications, 2015, 6, 6236.	5.8	73
34	Element-sensitive measurement of the holeâ€“nuclear spin interaction in quantum dots. Nature Physics, 2013, 9, 74-78.	6.5	70
35	Lasing in a hybrid GaAs/silver Tamm structure. Applied Physics Letters, 2012, 100, .	1.5	69
36	Origin of the Optical Emission within the Cavity Mode of Coupled Quantum Dot-Cavity Systems. Physical Review Letters, 2009, 103, 027401.	2.9	68

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37	Cavity-Funneled Generation of Indistinguishable Single Photons from Strongly Dissipative Quantum Emitters. Physical Review Letters, 2015, 114, 193601.	2.9	68
38	A solid-state single-photon filter. Nature Nanotechnology, 2017, 12, 663-667.	15.6	66
39	Phonon sidebands in exciton and biexciton emission from single GaAs quantum dots. Physical Review B, 2004, 69, .	1.1	65
40	Quantum dot-cavity strong-coupling regime measured through coherent reflection spectroscopy in a very high-Q micropillar. Applied Physics Letters, 2010, 97, .	1.5	65
41	Bright Polarized Single-Photon Source Based on a Linear Dipole. Physical Review Letters, 2021, 126, 233601.	2.9	65
42	Micropillar Resonators for Optomechanics in the Extremely High 19â€“95-GHz Frequency Range. Physical Review Letters, 2017, 118, 263901.	2.9	63
43	Cavity-enhanced two-photon interference using remote quantum dot sources. Physical Review B, 2015, 92, .	1.1	60
44	Polarization-Controlled Confined Tamm Plasmon Lasers. ACS Photonics, 2015, 2, 842-848.	3.2	60
45	Coherent manipulation of a solid-state artificial atom with few photons. Nature Communications, 2016, 7, 11986.	5.8	55
46	Sequential generation of linear cluster states from a single photon emitter. Nature Communications, 2020, 11, 5501.	5.8	53
47	Active demultiplexing of single photons from a solidâ€state source. Laser and Photonics Reviews, 2017, 11, 1600297.	4.4	51
48	Enhancement of spontaneous emission in Tamm plasmon structures. Scientific Reports, 2017, 7, 9014.	1.6	51
49	Scalable implementation of strongly coupled cavity-quantum dot devices. Applied Physics Letters, 2009, 94, .	1.5	44
50	Entangling Quantum-Logic Gate Operated with an Ultrabright Semiconductor Single-Photon Source. Physical Review Letters, 2013, 110, 250501.	2.9	44
51	Reproducibility of High-Performance Quantum Dot Single-Photon Sources. ACS Photonics, 2020, 7, 1050-1059.	3.2	44
52	Linear polarisation inversion: A signature of Coulomb scattering of cavity polaritons with opposite spins. Physica Status Solidi C: Current Topics in Solid State Physics, 2005, 2, 763-767.	0.8	41
53	Topological nanophononic states by band inversion. Physical Review B, 2018, 97, .	1.1	41
54	Continuous-wave versus time-resolved measurements of Purcell factors for quantum dots in semiconductor microcavities. Physical Review B, 2009, 80, .	1.1	39

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55	Spatial, spectral, and polarization properties of coupled micropillar cavities. Applied Physics Letters, 2011, 99, 101103.	1.5	39
56	Generation of non-classical light in a photon-number superposition. Nature Photonics, 2019, 13, 803-808.	15.6	39
57	Optical bistability in a quantum dots/micropillar device with a quality factor exceeding 200 000. Applied Physics Letters, 2012, 100, 111111.	1.5	38
58	Spontaneous nonground state polariton condensation in pillar microcavities. Physical Review B, 2010, 81, .	1.1	36
59	Generation and Spatial Control of Hybrid Tamm Plasmon/Surface Plasmon Modes. ACS Photonics, 2016, 3, 1776-1781.	3.2	36
60	Polariton parametric luminescence in a single micropillar. Applied Physics Letters, 2007, 90, 051107.	1.5	34
61	Ultrahigh Q-frequency product for optomechanical disk resonators with a mechanical shield. Applied Physics Letters, 2013, 103, .	1.5	34
62	Bright Phonon-Tuned Single-Photon Source. Nano Letters, 2015, 15, 6290-6294.	4.5	34
63	Critical optical coupling between a GaAs disk and a nanowaveguide suspended on the chip. Applied Physics Letters, 2011, 99, .	1.5	33
64	High quality factor confined Tamm modes. Scientific Reports, 2017, 7, 3859.	1.6	33
65	Hong-Ou-Mandel Interference with Imperfect Single Photon Sources. Physical Review Letters, 2021, 126, 063602.	2.9	32
66	Dynamics of microcavity polaritons in the presence of an electron gas. Physical Review B, 2006, 73, .	1.1	31
67	Fast control of nuclear spin polarization in an optically pumped single quantum dot. Nature Materials, 2011, 10, 844-848.	13.3	31
68	Origin of optical losses in gallium arsenide disk whispering gallery resonators. Optics Express, 2015, 23, 19656.	1.7	31
69	Optomechanical properties of GaAs/AlAs micropillar resonators operating in the 18 GHz range. Optics Express, 2017, 25, 24437.	1.7	31
70	The race for the ideal single-photon source is on. Nature Nanotechnology, 2021, 16, 367-368.	15.6	31
71	Interfacing scalable photonic platforms: solid-state based multi-photon interference in a reconfigurable glass chip. Optica, 2019, 6, 1471.	4.8	30
72	Monitoring the dynamics of a coherent cavity polariton population. Physical Review B, 2005, 71, .	1.1	29

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73	Polariton relaxation in semiconductor microcavities: Efficiency of electron-polariton scattering. Physical Review B, 2005, 72, .	1.1	28
74	Suppression of nuclear spin diffusion at a<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mtext>GaAs</mml:mtext><mml:mo>/</mml:mo><mml:msub><mml:mrow><mml:mtext>Al</mml:mtext></mml:mrow></mml:msub></mml:mrow></mml:math> measured with a single quantum-dot nanoprobe. Physical Review B, 2009, 79, .	1.1	27
75	Fast radiative quantum dots: From single to multiple photon emission. Applied Physics Letters, 2007, 90, 223118.	1.5	26
76	Frequency cavity pulling induced by a single semiconductor quantum dot. Physical Review B, 2014, 89, .	1.1	25
77	Polariton parametric oscillation in a single micropillar cavity. Applied Physics Letters, 2010, 97, .	1.5	23
78	Extreme multiexciton emission from deterministically assembled single-emitter subwavelength plasmonic patch antennas. Light: Science and Applications, 2020, 9, 33.	7.7	23
79	Single-shot initialization of electron spin in a quantum dot using a short optical pulse. Physical Review B, 2011, 83, .	1.1	22
80	A quantum dot based bright source of entangled photon pairs operating at 53 K. Applied Physics Letters, 2010, 97, .	1.5	21
81	Optically tunable nuclear magnetic resonance in a single quantum dot. Physical Review B, 2010, 82, .	1.1	21
82	High-Q whispering-gallery modes in GaAsâˆ•AlOx microdisks. Applied Physics Letters, 2005, 86, 021103.	1.5	19
83	Backscattering Suppression in Supersonic 1D Polariton Condensates. Physical Review Letters, 2012, 108, 036405.	2.9	18
84	InP1âˆ’xAsx quantum dots in InP nanowires: A route for single photon emitters. Journal of Crystal Growth, 2013, 378, 519-523.	0.7	17
85	Improved optomechanical disk resonator sitting on a pedestal mechanical shield. New Journal of Physics, 2015, 17, 023016.	1.2	17
86	Photon-number entanglement generated by sequential excitation of a two-level atom. Nature Photonics, 2022, 16, 374-379.	15.6	17
87	GaAs micro-nanodisks probed by a looped fiber taper for optomechanics applications. Proceedings of SPIE, 2010, , .	0.8	16
88	Influence of the Purcell effect on the purity of bright single photon sources. Applied Physics Letters, 2013, 103, .	1.5	16
89	Dynamic nuclear polarization in InGaAs/GaAs and GaAs/AlGaAs quantum dots under nonresonant ultralow-power optical excitation. Physical Review B, 2013, 88, .	1.1	16
90	Optical parametric oscillation in one-dimensional microcavities. Physical Review B, 2013, 87, .	1.1	16

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91	Cavity-Enhanced Real-Time Monitoring of Single-Charge Jumps at the Microsecond Time Scale. Physical Review X, 2014, 4, .	2.8	16
92	Brillouin scattering in hybrid optophononic Bragg micropillar resonators at 300â€‰â€‰GHz. Optica, 2019, 6, 854.	4.8	15
93	Few particle effects in the emission of short-radiative-lifetime single quantum dots. Physical Review B, 2005, 72, .	1.1	14
94	Highly directional radiation pattern of microdisk cavities. Applied Physics Letters, 2007, 91, 151103.	1.5	13
95	Tamm plasmon sub-wavelength structuration for loss reduction and resonance tuning. Applied Physics Letters, 2017, 111, .	1.5	13
96	Stark spectroscopy of Coulomb interactions in individual InAs/GaAs self-assembled quantum dots. Physica Status Solidi C: Current Topics in Solid State Physics, 2006, 3, 3890-3894.	0.8	12
97	One-dimensional microcavity-based optical parametric oscillator: Generation of balanced twin beams in strong and weak coupling regime. Physical Review B, 2011, 83, .	1.1	12
98	Bunching visibility of optical parametric emission in a semiconductor microcavity. Physical Review B, 2012, 86, .	1.1	12
99	Spectra of mechanical cavity modes in distributed Bragg reflector based vertical GaAs resonators. Physical Review B, 2014, 90, .	1.1	12
100	Tomography of the optical polarization rotation induced by a single quantum dot in a cavity. Optica, 2017, 4, 1326.	4.8	12
101	Fiber-integrated microcavities for efficient generation of coherent acoustic phonons. Applied Physics Letters, 2020, 117, 183102.	1.5	12
102	Damping of optomechanical disks resonators vibrating in air. Applied Physics Letters, 2012, 100, 242105.	1.5	10
103	Confinement of gigahertz sound and light in Tamm plasmon resonators. Physical Review B, 2015, 92, .	1.1	9
104	Center-of-mass quantized exciton polariton states in bulk-GaAs microcavities. Physical Review B, 2000, 62, 8199-8203.	1.1	8
105	Time-frequency encoded single-photon generation and broadband single-photon storage with a tunable subradiant state. Optica, 2021, 8, 95.	4.8	8
106	Nanomechanical resonators based on adiabatic periodicity-breaking in a superlattice. Applied Physics Letters, 2017, 111, 173107.	1.5	7
107	Accurate measurement of a 96% input coupling into a cavity using polarization tomography. Applied Physics Letters, 2018, 112, .	1.5	7
108	Deterministic assembly of a charged-quantum-dotâ€“micropillar cavity device. Physical Review B, 2020, 102, .	1.1	7

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109	Time-Resolved Measurement of Stimulated Polariton Relaxation. Physica Status Solidi A, 2002, 190, 827-831.	1.7	6
110	Enhanced polariton relaxation by electron-polariton scattering. Physica Status Solidi C: Current Topics in Solid State Physics, 2005, 2, 759-762.	0.8	6
111	Exciton dynamics in the presence of an electron gas in GaAs quantum wells. Physica Status Solidi (B): Basic Research, 2006, 243, 2384-2388.	0.7	6
112	Cavity QED with a single QD inside an optical microcavity. Physica Status Solidi (B): Basic Research, 2006, 243, 3879-3884.	0.7	5
113	Semiconductor heterostructures for spintronics and quantum information. Comptes Rendus Physique, 2007, 8, 243-252.	0.3	5
114	Optical properties of semiconductor in planar plasmonic structures: strong coupling and lasing. Semiconductor Science and Technology, 2013, 28, 124001.	1.0	5
115	Scaling rules in optomechanical semiconductor micropillars. Physical Review A, 2018, 98, .	1.0	5
116	Time resolved stimulated emission in excitonic semiconductor microcavities. Physica E: Low-Dimensional Systems and Nanostructures, 2002, 13, 390-393.	1.3	4
117	Tunable bandwidth and nonlinearities in an atom-photon interface with subradiant states. Physical Review A, 2018, 98, .	1.0	4
118	Fiber-based angular filtering for high-resolution Brillouin spectroscopy in the 20-300â€…GHz frequency range. Optics Express, 2021, 29, 2637.	1.7	4
119	Non-linear spin polarization dynamics in semiconductor microcavities. Springer Proceedings in Physics, 2001, , 653-654.	0.1	4
120	Optical parametric oscillaton in 1D semiconductor microcavities. Physica Status Solidi (B): Basic Research, 2012, 249, 896-899.	0.7	3
121	Spatial and Fourier-space distribution of confined optical Tamm modes. New Journal of Physics, 2016, 18, 083018.	1.2	3
122	Overcomplete quantum tomography of a path-entangled two-photon state. Physical Review A, 2019, 99, .	1.0	3
123	Influence of an Electric Field on Fine Properties of III-V and II-VI Quantum Dots Systems. Acta Physica Polonica A, 2004, 106, 177-184.	0.2	3
124	Excitonic Polaritons in Semiconductor Micropillars. Acta Physica Polonica A, 2008, 114, 933-943.	0.2	3
125	Deterministic lightâ€“matter coupling with single quantum dots. , 2012, , 137-152.		2
126	Confined Visible Optical Tamm States. Journal of Electronic Materials, 2016, 45, 2307-2310.	1.0	2

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127	A Highly Efficient Single Photon-Single Quantum Dot Interface. Nano-optics and Nanophotonics, 2015, , 39-71.	0.2	2
128	Evidence of Nonlinear Emission of Polaritons in a IIIâ€“V Microcavity. Physica Status Solidi A, 2000, 178, 167-171.	1.7	1
129	Modifying the polariton relaxation bottleneck by injecting an electron gas in a semiconductor microcavity. Physica Status Solidi C: Current Topics in Solid State Physics, 2005, 2, 3916-3919.	0.8	1
130	Short radiative lifetime of single GaAs quantum dots. AIP Conference Proceedings, 2005, , .	0.3	1
131	Parametric polariton scattering in single micropillar microcavities. AIP Conference Proceedings, 2007, , .	0.3	1
132	Influence of recapture on the emission statistics of short radiative lifetime quantum dots. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 2520-2523.	0.8	1
133	Hybrid metal/semiconductor lasers based on confined Tamm plasmons. Proceedings of SPIE, 2014, , .	0.8	1
134	Polarized metal/semiconductor sources based on confined Tamm plasmons. , 2014, , .		1
135	Generating multi-photon entangled states from a single deterministic single-photon source. , 2019, , .		1
136	Normal-incidence intersubband absorption in AlGaSb quantum wells: enhanced oscillator strength and new functionalities using asymmetry. IEE Proceedings: Optoelectronics, 2003, 150, 381.	0.8	0
137	Non perturbative exciton-phonon coupling for a single GaAs quantum dot. Physica Status Solidi C: Current Topics in Solid State Physics, 2004, 1, 438-441.	0.8	0
138	Accelerating polariton relaxation in a two beam experiment. Physica Status Solidi C: Current Topics in Solid State Physics, 2005, 2, 755-758.	0.8	0
139	Strong coupling for a single quantum dot in a microdisk. Physica Status Solidi C: Current Topics in Solid State Physics, 2005, 2, 3825-3828.	0.8	0
140	Spectral feature of short radiative lifetime quantum dot. AIP Conference Proceedings, 2005, , .	0.3	0
141	Control Of The Anisotropic Exchange Splitting Of Individual InAs/GaAs Quantum Dots With An In-Plane Electric Field. AIP Conference Proceedings, 2005, , .	0.3	0
142	Optical probing of spin-dependent interactions in IIâ€“VI semiconductor structures. Physica Status Solidi (B): Basic Research, 2006, 243, 906-913.	0.7	0
143	Quantum degeneracy of polaritons in a GaAs based Microcavity. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 2429-2432.	0.8	0
144	Cavity Quantum Electrodynamics with Semiconductor Quantum Dots. , 2008, , 132-164.		0

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145	A solid state ultrabright source of entangled photon pairs. Proceedings of SPIE, 2011, , .	0.8	0
146	COHERENT INJECTION OF MICROCAVITIES POLARITON THROUGH TWO PHOTON EXCITATION. , 2012, , .		0
147	Tamm surface plasmon laser. , 2013, , .		0
148	High purcell effect and directional emission for semi-conductor nanocrystals deterministically positionned in a plasmonic patch antenna. , 2013, , .		0
149	Optical nonlinearity with few-photon pulses using a quantum dot-pillar cavity device. , 2013, , .		0
150	Toward a quantum network based on semiconductor quantum dots. , 2014, , .		0
151	Bright phonon-tuned single-photon source. , 2015, , .		0
152	Coupling colloidal nanocrystals to Optical Tamm plasmons. , 2015, , .		0
153	Surface plasmon generation through hybridization with Tamm modes. , 2016, , .		0
154	Quantum-dot-based quantum devices (Conference Presentation). , 2017, , .		0
155	Emission in a patch nanoantenna with single emitter (Conference Presentation). , 2017, , .		0
156	Stimulated Scattering of Microcavity Polaritons. Acta Physica Polonica A, 2000, 98, 295-302.	0.2	0
157	GaAs disks optomechanics. , 2011, , .		0
158	Macroscopic Self-trapping and Non-linear Oscillations in Coupled Polariton Condensates. , 2012, , .		0
159	GaAs nano-optomechanical systems. , 2012, , .		0
160	Non-linear Optomechanical Resonators based on Gallium Arsenide. , 2013, , .		0
161	Cavity quantum electrodynamics with semiconductor quantum dots. , 2013, , .		0
162	Frequency cavity pulling induced by a single semiconducting artificial atom. , 2013, , .		0

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163	Quantum dot based quantum optics. , 2015, , .		0
164	Giant Polarization Rotation Induced by a Single Spin: a Cavity-Based Spin-Photon Interface. , 2015, , .		0
165	High performances integrated single-photon sources. , 2016, , .		0
166	Light-matter interfacing with quantum dots: a polarization tomography approach. , 2017, , .		0
167	Single photon Fock state filtering with an artificial atom. , 2017, , .		0
168	Overcoming phonon-induced decoherence in single-photon sources with cavity quantum electrodynamics. , 2017, , .		0
169	Reducing phonon-induced decoherence of solid-state artificial atoms with cavity quantum electrodynamics. , 2018, , .		0
170	A solid-state single photon filter. , 2018, , .		0
171	Interfacing solid-state single-photon sources and integrated photonics circuits: high rate three-photon coalescence. , 2019, , .		0
172	Generation of quantum light in a photon-number superposition. , 2019, , .		0
173	A Compact and scalable source for entangled photonic linear cluster states. , 2019, , .		0
174	Scaling-up quantum technologies with solid-state single-photon sources. , 2020, , .		0
175	Sequential Generation of Linear Cluster States from a Single Photon Emitter. , 2020, , .		0
176	Two-Photon Interference with Bright Remote Quantum Dot Sources. , 2021, , .		0
177	Efficient telecom-band quantum frequency conversion. , 2021, , .		0