List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	Hyperbolic metamaterials. Nature Photonics, 2013, 7, 948-957.	31.4	1,763
2	Fano resonances in photonics. Nature Photonics, 2017, 11, 543-554.	31.4	1,240
3	Photonic quadrupole topological phases. Nature Photonics, 2019, 13, 692-696.	31.4	373
4	Surface brightens up Si quantum dots: direct bandgap-like size-tunable emission. Light: Science and Applications, 2013, 2, e47-e47.	16.6	254
5	Photonic spin Hall effect in hyperbolic metamaterials for polarization-controlled routing of subwavelength modes. Nature Communications, 2014, 5, 3226.	12.8	229
6	Nonlinear light generation in topological nanostructures. Nature Nanotechnology, 2019, 14, 126-130.	31.5	187
7	An antenna model for the Purcell effect. Scientific Reports, 2015, 5, 12956.	3.3	160
8	Enhancement of Magnetic Resonance Imaging with Metasurfaces. Advanced Materials, 2016, 28, 1832-1838.	21.0	160
9	Subwavelength Topological Edge States in Optically Resonant Dielectric Structures. Physical Review Letters, 2015, 114, 123901.	7.8	144
10	Spontaneous radiation of a finite-size dipole emitter in hyperbolic media. Physical Review A, 2011, 84, .	2.5	143
11	Topological Majorana States in Zigzag Chains of Plasmonic Nanoparticles. ACS Photonics, 2014, 1, 101-105.	6.6	138
12	Revisiting the physics of Fano resonances for nanoparticle oligomers. Physical Review A, 2013, 88, .	2.5	119
13	Nonlinear Control of Electromagnetic Topological Edge States. Physical Review Letters, 2018, 121, 163901.	7.8	107
14	Microscopic model of Purcell enhancement in hyperbolic metamaterials. Physical Review B, 2012, 86, .	3.2	99
15	Spontaneous photon-pair generation from a dielectric nanoantenna. Optica, 2019, 6, 1416.	9.3	98
16	Spontaneous emission enhancement in metal–dielectric metamaterials. Physics Letters, Section A: General, Atomic and Solid State Physics, 2012, 376, 185-187.	2.1	97
17	Photonic quasicrystalline and aperiodic structures. Physica E: Low-Dimensional Systems and Nanostructures, 2010, 42, 1871-1895.	2.7	94
18	Fano interference governs wave transport in disordered systems. Nature Communications, 2012, 3, 914.	12.8	89

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19	Circular dichroism induced by Fano resonances in planar chiral oligomers. Laser and Photonics Reviews, 2016, 10, 137-146.	8.7	85
20	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi mathvariant="script"&gt;PT</mml:mi </mml:math> phase transitions of edge states at <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"&gt;<mml:mi mathvariant="script"&gt;PT symmetric interfaces in non-Hermitian topological insulators. Physical Review B. 2018, 98</mml:mi </mml:math 	3.2	83
21	Radiative Topological States in Resonant Photonic Crystals. Physical Review Letters, 2014, 112, 107403.	7.8	82
22	Mapping plasmonic topological states at the nanoscale. Nanoscale, 2015, 7, 11904-11908.	5.6	78
23	Edge States and Topological Phase Transitions in Chains of Dielectric Nanoparticles. Small, 2017, 13, 1603190.	10.0	77
24	Generation of Photon-Plasmon Quantum States in Nonlinear Hyperbolic Metamaterials. Physical Review Letters, 2016, 117, 123901.	7.8	72
25	Control of Förster energy transfer in the vicinity of metallic surfaces and hyperbolic metamaterials. Faraday Discussions, 2015, 178, 395-412.	3.2	69
26	Purcell effect in wire metamaterials. Physical Review B, 2013, 87, .	3.2	62
27	Enhanced generation of nondegenerate photon pairs in nonlinear metasurfaces. Advanced Photonics, 2021, 3, .	11.8	62
28	Green function for hyperbolic media. Physical Review A, 2012, 86, .	2.5	60
29	Topological edge states of bound photon pairs. Physical Review A, 2017, 95, .	2.5	57
30	Inelastic Scattering of Photon Pairs in Qubit Arrays with Subradiant States. Physical Review Letters, 2019, 123, 253601.	7.8	54
31	Nanoscale Generation of White Light for Ultrabroadband Nanospectroscopy. Nano Letters, 2018, 18, 535-539.	9.1	52
32	Weak lasing in one-dimensional polariton superlattices. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, E1516-9.	7.1	49
33	Self-Induced Torque in Hyperbolic Metamaterials. Physical Review Letters, 2013, 111, 036804.	7.8	48
34	Polariton Resonances for Ultrastrong Coupling Cavity Optomechanics in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"&gt;<mml:mrow><mml:mi>GaAs</mml:mi><mml:mo>/</mml:mo><mml:mi>AlAs</mml:mi>Quantum Wells. Physical Review Letters, 2015, 115, 267402.</mml:mrow></mml:math 	mro <sup>708</sup> ×/m	ml:math>Mul
35	Direct band gap silicon quantum dots achieved via electronegative capping. Physical Review B, 2014, 90,	3.2	45
36	Excitonic polaritons in Fibonacci quasicrystals. Optics Express, 2008, 16, 15382.	3.4	44

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37	Strong Purcell effect in anisotropic <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"&gt;<mml:mi>Îμ</mml:mi>-near-zero metamaterials. Physical Review B, 2015, 91, .</mml:math 	3.2	44
38	Enhanced photonic spin Hall effect with subwavelength topological edge states. Laser and Photonics Reviews, 2016, 10, 656-664.	8.7	44
39	Hyperbolic transmission-line metamaterials. Journal of Applied Physics, 2012, 112, .	2.5	42
40	Phase spectroscopy of topological invariants in photonic crystals. Physical Review A, 2015, 91, .	2.5	41
41	Light emission from silicon nanocrystals. Semiconductors, 2013, 47, 183-202.	0.5	40
42	Tailoring and enhancing spontaneous two-photon emission using resonant plasmonic nanostructures. Physical Review A, 2012, 86, .	2.5	34
43	Magnetic Purcell factor in wire metamaterials. Applied Physics Letters, 2014, 104, .	3.3	33
44	Resonant diffraction of electromagnetic waves from solids (a review). Physics of the Solid State, 2013, 55, 905-923.	0.6	31
45	One dimensional resonant Fibonacci quasicrystals: noncanonical linear and canonical nonlinear effects. Optics Express, 2009, 17, 6813.	3.4	30
46	Resonant optical reflection by a periodic system of the quantum well excitons at the second quantum state. Applied Physics Letters, 2011, 98, 073112.	3.3	30
47	Photon-Mediated Localization in Two-Level Qubit Arrays. Physical Review Letters, 2020, 124, 093604.	7.8	30
48	Resonant three-dimensional photonic crystals. Physics of the Solid State, 2006, 48, 581-588.	0.6	29
49	Optical transitions and energy relaxation of hot carriers in Si nanocrystals. Applied Physics Letters, 2010, 97, .	3.3	29
50	Collective modes of quantum dot ensembles in microcavities. Journal of Experimental and Theoretical Physics, 2009, 108, 836-844.	0.9	28
51	Quasiflat band enabling subradiant two-photon bound states. Physical Review A, 2020, 101, .	2.5	28
52	Waveguide bandgap engineering with an array of superconducting qubits. Npj Quantum Materials, 2021, 6, .	5.2	28
53	Polarization properties of optical metasurfaces of different symmetries. Physical Review B, 2015, 91, .	3.2	27
54	Resonant Energy Transfer in Si Nanocrystal Solids. Journal of Physical Chemistry C, 2015, 119, 19565-19570.	3.1	27

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55	Direct characterization of a nonlinear photonic circuit's wave function with laser light. Light: Science and Applications, 2018, 7, 17143-17143.	16.6	27
56	Routing the emission of a near-surface light source by a magnetic field. Nature Physics, 2018, 14, 1043-1048.	16.7	27
57	Anomalous suppression of valley splittings in lead salt nanocrystals without inversion center. Physical Review B, 2012, 86, .	3.2	26
58	Low-frequency spectroscopy of superconducting photonic crystals. Solid State Communications, 2008, 146, 143-147.	1.9	25
59	Nonlinear emission spectra of quantum dots strongly coupled to a photonic mode. Physical Review B, 2010, 82, .	3.2	25
60	Multiple Quantum Wells forPT-Symmetric Phononic Crystals. Physical Review Letters, 2016, 117, 224302.	7.8	25
61	Interaction-induced two-photon edge states in an extended Hubbard model realized in a cavity array. Physical Review A, 2017, 95, .	2.5	25
62	Quantum Hall phases emerging from atom–photon interactions. Npj Quantum Information, 2021, 7, .	6.7	25
63	Resonant Fibonacci quantum well structures in one dimension. Physical Review B, 2008, 77, .	3.2	24
64	Phonoritonic Crystals with a Synthetic Magnetic Field for an Acoustic Diode. Physical Review Letters, 2017, 118, 156801.	7.8	24
65	Tuning Optical Properties of Ge Nanocrystals by Si Shell. Journal of Physical Chemistry C, 2016, 120, 18901-18908.	3.1	23
66	Topological excitations and bound photon pairs in a superconducting quantum metamaterial. Physical Review B, 2021, 103, .	3.2	23
67	Self-trapped exciton state in Si nanocrystals revealed by induced absorption. Physical Review B, 2012, 85, .	3.2	22
68	Nonradiative and radiative Förster energy transfer between quantum dots. Journal of Experimental and Theoretical Physics, 2016, 122, 531-538.	0.9	22
69	Ring Dirac solitons in nonlinear topological systems. Physical Review A, 2018, 98, .	2.5	22
70	Purcell factor in small metallic cavities. Physics of the Solid State, 2011, 53, 1753-1760.	0.6	21
71	Transverse magneto-optical Kerr effect enhanced at the bound states in the continuum. Physical Review A, 2020, 101, .	2.5	21
72	Specific features in reflectance and absorbance spectra of one-dimensional resonant photonic crystals. Physics of the Solid State, 2007, 49, 1792-1802.	0.6	19

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73	Transverse magneto-optical Kerr effect at narrow optical resonances. Nanophotonics, 2019, 8, 287-296.	6.0	19
74	Optomechanical Kerker Effect. Physical Review X, 2019, 9, .	8.9	19
75	Exciton-polaritonic quasicrystalline and aperiodic structures. Physical Review B, 2009, 80, .	3.2	18
76	Multiphonon relaxation of moderately excited carriers in Si/SiO <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"&gt;<mml:msub><mml:mrow /&gt;<mml:mn>2</mml:mn></mml:mrow </mml:msub>nanocrystals. Physical Review B, 2012, 85, .</mml:math 	3.2	18
77	Compton-Like Polariton Scattering in Hyperbolic Metamaterials. Physical Review Letters, 2015, 114, 185501.	7.8	18
78	Biexciton-mediated superradiant photon blockade. Physical Review A, 2016, 93, .	2.5	18
79	Carrier dynamics in Si nanocrystals in an SiO2matrix investigated by transient light absorption. Physical Review B, 2013, 88, .	3.2	17
80	Collective Förster energy transfer modified by a planar metallic mirror. Physical Review B, 2015, 92, .	3.2	16
81	Atom-mediated spontaneous parametric down-conversion in periodic waveguides. Optics Letters, 2017, 42, 4724.	3.3	16
82	Topological Spin Phases of Trapped Rydberg Excitons in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"&gt;<mml:mrow><mml:msub><mml:mrow><mml:mi>Cu</mml:mi></mml:mrow><mml:mrow><m mathvariant="normal"&gt;O</m </mml:mrow>. Physical Review Letters, 2019, 123, 126801</mml:msub></mml:mrow></mml:math 	າml:n <b>ກສ</b> >2 </td <td>mm<b>16</b>mn&gt;</td>	mm <b>16</b> mn>
83	Thermally stimulated exciton emission in Si nanocrystals. Light: Science and Applications, 2018, 7, 17133-17133.	16.6	15
84	Wood anomalies in resonant photonic quasicrystals. Physical Review B, 2011, 83, .	3.2	14
85	Simulation of two-boson bound states using arrays of driven-dissipative coupled linear optical resonators. Physical Review A, 2018, 98, .	2.5	13
86	Radiative topological biphoton states in modulated qubit arrays. Physical Review Research, 2020, 2, .	3.6	13
87	Dimerization of Many-Body Subradiant States in Waveguide Quantum Electrodynamics. Physical Review Letters, 2021, 127, 173601.	7.8	13
88	Exciton-polariton absorption in periodic and disordered quantum-well chains. Physics of the Solid State, 2007, 49, 1977-1987.	0.6	12
89	Phonon decay in silicon nanocrystals: Fast phonon recycling. Physical Review B, 2014, 89, .	3.2	12
90	Resonant optical properties of AlGaAs/GaAs multiple-quantum-well based Bragg structure at the second quantum state. Journal of Applied Physics, 2017, 121, 103101.	2.5	12

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91	Waveguide Quantum Optomechanics: Parity-Time Phase Transitions in Ultrastrong Coupling Regime. Physical Review Letters, 2020, 125, 183601.	7.8	12
92	Quantum Chaos Driven by Long-Range Waveguide-Mediated Interactions. Physical Review Letters, 2021, 126, 203602.	7.8	12
93	Reflection of short polarized optical pulses from periodic and aperiodic multiple quantum well structures. Physical Review B, 2012, 86, .	3.2	11
94	Coherent defect-assisted multiphonon intraband carrier relaxation in semiconductor quantum dots. Physical Review B, 2008, 77, .	3.2	9
95	Switching of the photonic band gap in three-dimensional film photonic crystals based on opal-VO2 composites in the 1.3–1.6 μm spectral range. Semiconductors, 2010, 44, 1537-1542.	0.5	9
96	Electron-phonon interaction in non-polar quantum dots induced by the amorphous polar environment. JETP Letters, 2010, 90, 683-687.	1.4	9
97	Resonant Brillouin scattering of excitonic polaritons in multiple-quantum-well structures. Physical Review B, 2014, 89, .	3.2	9
98	Self-induced torque in discrete uniaxial metamaterials. Physical Review B, 2014, 90, .	3.2	9
99	Classification of three-photon states in waveguide quantum electrodynamics. Physical Review A, 2021, 103, .	2.5	9
100	Toroidal nonreciprocity of optical second harmonic generation. Physical Review B, 2021, 103, .	3.2	9
101	Special frequencies in the optical reflectance spectra of resonant Bragg structures. Physics of the Solid State, 2006, 48, 1814-1819.	0.6	8
102	Time-dependent photon correlations for incoherently pumped quantum dot strongly coupled to the cavity mode. Journal of Experimental and Theoretical Physics, 2014, 118, 205-216.	0.9	8
103	Anomalous polarization conversion in arrays of ultrathin ferromagnetic nanowires. Physical Review B, 2015, 92, .	3.2	8
104	Enhanced generation of angle correlated photon-pairs in nonlinear metasurfaces. New Journal of Physics, 2022, 24, 035006.	2.9	8
105	Fano Resonance Enhanced Nonreciprocal Absorption and Scattering of Light. Photonics, 2015, 2, 745-757.	2.0	7
106	Role of Valley Anisotropy in Optical Absorption of Monodisperse PbS Nanocrystals. Journal of Physical Chemistry C, 2017, 121, 27766-27773.	3.1	7
107	Thermally Activated Emission from Direct Bandgap-Like Silicon Quantum Dots. ECS Journal of Solid State Science and Technology, 2013, 2, R97-R99.	1.8	6
108	Exceptional points for photon pairs bound by nonlinear dissipation in cavity arrays. Optics Letters, 2018, 43, 5917.	3.3	6

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109	Effect of continuous and pulsed pumping on entangled photon pair generation in semiconductor microcavities. Physical Review B, 2012, 85, .	3.2	5
110	Collective effects in emission of localized excitons strongly coupled to a microcavity photon. New Journal of Physics, 2013, 15, 025016.	2.9	5
111	Light control in Ge2Sb2Te5-coated opaline photonic crystals mediated by interplay of Wood anomalies and 3D Bragg diffraction. Journal of Applied Physics, 2013, 113, 144311.	2.5	5
112	Sum-Frequency Generation and Photon-Pair Creation in AlGaAs Nano-Scale Resonators. , 2017, , .		5
113	Topological interface states mediated by spontaneous symmetry breaking. Physical Review B, 2018, 98, .	3.2	5
114	Quantum Borrmann effect for dissipation-immune photon-photon correlations. Physical Review A, 2021, 103, .	2.5	5
115	Local field corrections to the spontaneous emission in arrays of Si nanocrystals. Journal of Optics (United Kingdom), 2015, 17, 035102.	2.2	4
116	Valley and spin splittings in PbSe nanowires. Physical Review B, 2017, 96, .	3.2	4
117	Attempts to grow optically coupled Fibonacci-spaced InGaAs/GaAs quantum wells result in surface gratings. Optics Express, 2008, 16, 21512.	3.4	3
118	Carrier relaxation in quantum dots. Physica E: Low-Dimensional Systems and Nanostructures, 2009, 41, 969-971.	2.7	3
119	Fano resonances in all-dielectric metamaterials. , 2013, , .		3
120	Distinguishing trivial and topological quadrupolar insulators by Wannier-Stark ladders. Physical Review B, 2019, 100, .	3.2	3
121	Resonant Optomechanical Tension and Crumpling of 2D Crystals. ACS Photonics, 2020, 7, 2547-2554.	6.6	3
122	Optomechanical amplification driven by interference of phonon-exciton and phonon-photon couplings. Physical Review B, 2021, 104, .	3.2	3
123	Diffraction mechanism of specular reflection of light from photonic crystals. Physics of the Solid State, 2007, 49, 360-365.	0.6	2
124	Theory of nonradiative transitions of hot carriers in Si/SiO <sub>2</sub> nanocrystals. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 985-990.	0.8	2
125	Effects of discreteness in the Green's function of a hyperbolic medium. Physical Review A, 2014, 90, .	2.5	2
126	Splitting of emission-spectrum lines in an anisotropic medium due to self-induced torque. Physical Review A, 2014, 89, .	2.5	2

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127	Circular dichroism from Fano resonances in planar chiral oligomers. , 2015, , .		2
128	Polarized edge state emission from topological spin phases of trapped Rydberg excitons in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"&gt;<mml:mrow><mml:msub><mml:mi>Cu</mml:mi><mml:r mathvariant="normal"&gt;O</mml:r </mml:msub></mml:mrow>. Physical Review B, 2020, 102, .</mml:math 	nn <b>32</b> <td>ll:n⊉n&gt;</td>	ll:n⊉n>
129	Plasmon-to-exciton spin conversion in semiconductor-metal hybrid nanostructures. Physical Review B, 2021, 103, .	3.2	2
130	Third-Harmonic Generation from Photonic Topological States in Zigzag Arrays of Silicon Nanodisks. , 2017, , .		2
131	Ratchet effect in frequency-modulated waveguide-coupled emitter arrays. Physical Review B, 2021, 104, .	3.2	2
132	Optomechanical Lasing and Domain Walls Driven by Exciton-Phonon Interactions. Journal of Experimental and Theoretical Physics, 2022, 134, 171-182.	0.9	2
133	Analogue simulation of two-body quantum dynamics with classical setup. Journal of Physics: Conference Series, 2018, 1092, 012045.	0.4	1
134	Edge states of photon pairs in cavity arrays with spatially modulated nonlinearity. Physical Review A, 2019, 100, .	2.5	1
135	Optomechanical circulator with a polaritonic microcavity. Physical Review B, 2021, 104, .	3.2	1
136	Photon-pair generation via bound states in the continuum in nonlinear metasurfaces. , 2020, , .		1
137	Disorder-Robust Nonlinear Light Generation in Topological Nanostructures. , 2019, , .		1
138	Sum-Frequency- and Photon-Pair-Generation in AlGaAs Nano-Disks. , 2018, , .		1
139	Exciton-polaritonic effects in the optical absorption by regular and disordered arrays of quantum wells. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 2451-2455.	0.8	0
140	Resonant photonic crystals and quasicrystals. , 2012, , .		0
141	Modeling of hyperbolic metamaterials with two-dimensional transmission lines. , 2012, , .		0
142	Topological States of Photons in Nanostructures. , 2014, , .		0
143	Polarization phenomena in periodic metasurfaces at oblique incidence. , 2014, , .		0

144 Topological Edge States of Photons, Plasmons and Photon Pairs in Nanostructures. , 2015, , .

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#	Article	IF	CITATIONS
145	Generation of quantum entangled states in nonlinear plasmonic structures and metamaterials (Presentation Recording). , 2015, , .		Ο
146	Topological interface states due to spontaneous symmetry breaking in a chain of anharmonic oscillators. Journal of Physics: Conference Series, 2018, 1092, 012128.	0.4	0
147	Optical Properties of AlGaAs/GaAs Resonant Bragg Structure at the Second Quantum State. Semiconductors, 2018, 52, 447-451.	0.5	0
148	Doppler-Raman crossover in resonant scattering by a moving layer. Physical Review A, 2020, 102, .	2.5	0
149	Photon-pair Generation Via Multiple Bound States in the Continuum in Nonlinear Metasurfaces. , 2021, , ,		0
150	Topological and Localized States in Waveguide Quantum Electrodynamics. , 2021, , .		0
151	Quasicrystalline Photonic Structures. Series in Optics and Optoelectronics, 2012, , 131-150.	0.0	0
152	Generation of Photon-Plasmon Quantum Entanglement in Nonlinear Metamaterials. , 2016, , .		0
153	A nonlinear waveguide array with inhomogeneous poling pattern for the generation of photon pairs. , 2016, , .		0
154	Atom-mediated Spontaneous Parametric Down-conversion Using Bandgap Modes in Nonlinear Periodic Waveguides. , 2018, , .		0
155	Revelance of standardizing the process of conducting military (research) tests of exercises for physical training. Slobožansʹkij Naukovo-Sportivnij Vìsnik, 2018, 63, 53-60.	0.2	0
156	Atom-mediated nonlinear photon-pair generation using photonic band-gap modes. , 2019, , .		0
157	Interaction-induced topological phases of photons interacting with atoms. , 2020, , .		0
158	Transverse magnetic routing of light emission in hybrid plasmonic-semiconductor nanostructures: Towards operation at room temperature. Physical Review Research, 2022, 4, .	3.6	0
159	Topological Modes in Non-Hermitian Phononic Crystals Optically Induced in a Quantum-Well Array. Physics of the Solid State, 2021, 63, 621-627.	0.6	0
160	Localized multiphonon states in waveguide quantum optomechanics with spontaneously broken <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi mathvariant="script"&gt;PT</mml:mi </mml:math> symmetry. Physical Review A, 2021, 104, .	2.5	0