Alexander S Solntsev

List of Publications by Year
in descending order

151 papers	2,511 citations	236925 25 h-index	197818 49 g-index
153 all docs	153 docs citations	153 times ranked	2577 citing authors

#	Article	IF	Citations
1	Topologically protecting squeezed light on a photonic chip. Photonics Research, 2022, 10, 456.	7.0	9
2	Integrated room temperature single-photon source for quantum key distribution. Optics Letters, 2022, 47, 1673.	3.3	20
3	Complete conversion between one and two photons in nonlinear waveguides: theory of dispersion engineering. New Journal of Physics, 2022, 24, 065002.	2.9	1
4	Large few-layer hexagonal boron nitride flakes for nonlinear optics. Optics Letters, 2021, 46, 564.	3.3	7
5	Optical Third-Harmonic Generation in Hexagonal Boron Nitride Thin Films. ACS Photonics, 2021, 8, 824-831.	6.6	26
6	Directional emission of down-converted photons from a dielectric nanoresonator. Physical Review A, 2021, 103, .	2.5	13
7	Metasurfaces for quantum photonics. Nature Photonics, 2021, 15, 327-336.	31.4	198
8	Demonstration of Lossy Linear Transformations and Two-Photon Interference via Singular Value Decomposition. , 2021, , .		0
9	Phonon dephasing and spectral diffusion of quantum emitters in hexagonal boron nitride. Optica, 2021, 8, 1153.	9.3	21
10	Quantum random number generation using a hexagonal boron nitride single photon emitter. Journal of Optics (United Kingdom), 2021, 23, 01LT01.	2.2	22
11	Optical Repumping of Resonantly Excited Quantum Emitters in Hexagonal Boron Nitride. Physical Review Applied, 2020, 14, .	3.8	14
12	Multidimensional synthetic chiral-tube lattices via nonlinear frequency conversion. Light: Science and Applications, 2020, 9, 132.	16.6	30
13	Optical Thermometry with Quantum Emitters in Hexagonal Boron Nitride. ACS Applied Materials & Interfaces, 2020, 12, 25464-25470.	8.0	29
14	Quasi-BIC Resonant Enhancement of Second-Harmonic Generation in WS₂ Monolayers. Nano Letters, 2020, 20, 5309-5314.	9.1	156
15	Second harmonic generation in defective hexagonal boron nitride. Journal of Physics Condensed Matter, 2020, 32, 19LT01.	1.8	17
16	Synthetic photonic lattice for single-shot reconstruction of frequency combs. APL Photonics, 2020, 5, .	5.7	9
17	Reconfigurable cluster-state generation in specially poled nonlinear waveguide arrays. Physical Review A, 2020, 101, .	2.5	3
18	Second-Harmonic Generation from WS2 Monolayers Enhanced by BIC Resonances. , 2020, , .		0

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19	Quantum random number generation on a photonic chip using single photons from hexagonal boron nitride. , 2020, , .		0
20	Third Harmonic Generation in Hexagonal Boron Nitride Flakes. , 2020, , .		0
21	Observation of Extraordinary SHG from WS2 Monolayers Boosted by Optical Bound States in the Continuum. , 2020, , .		0
22	Tomography of Quantum Dots in a Non-Hermitian Photonic Chip. , 2019, , .		0
23	Integrated on Chip Platform with Quantum Emitters in Layered Materials. Advanced Optical Materials, 2019, 7, 1901132.	7.3	49
24	Suppression of spectral diffusion by anti-Stokes excitation of quantum emitters in hexagonal boron nitride. Applied Physics Letters, 2019, 115, .	3.3	19
25	Anti-Stokes excitation of solid-state quantum emitters for nanoscale thermometry. Science Advances, 2019, 5, eaav9180.	10.3	55
26	Generating Quantum States of Surface Plasmon-Polariton Pairs with a Nonlinear Nanoparticle. , 2019, , .		0
27	Anti-Stokes Excitation of Solid-State Quantum Emitters for Nanoscale Thermometry. , 2019, , .		1
28	Broadband on-chip polarization mode splitters in lithium niobate integrated adiabatic couplers. Optics Express, 2019, 27, 1632.	3.4	21
29	Second-harmonic generation in multilayer hexagonal boron nitride flakes. Optics Letters, 2019, 44, 5792.	3.3	41
30	Spontaneous photon-pair generation from a dielectric nanoantenna. Optica, 2019, 6, 1416.	9.3	98
31	Broadband On-Chip Adiabatic-Coupling Polarization Mode Splitters in Lithium Niobate Waveguides. , 2019, , .		0
32	Tomography of quantum dots in a non-hermitian photonic chip. , 2019, , .		0
33	Second harmonic generation from multilayer hexagonal boron nitride. , 2019, , .		0
34	Quantum random number generation using a solid state single photon source. , 2019, , .		0
35	Scalable on-chip quantum state tomography. Npj Quantum Information, 2018, 4, .	6.7	50
36	Direct characterization of a nonlinear photonic circuitâ€™s wave function with laser light. Light: Science and Applications, 2018, 7, 17143-17143.	16.6	27

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37	LiNbO3 waveguides for integrated SPDC spectroscopy. APL Photonics, 2018, 3, .	5.7	32
38	Quantum metasurface for multiphoton interference and state reconstruction. Science, 2018, 361, 1104-1108.	12.6	227
39	Enhanced Emission from WSe₂ Monolayers Coupled to Circular Bragg Gratings. ACS Photonics, 2018, 5, 3950-3955.	6.6	31
40	Photon-pair generation in a quadratically nonlinear parity-time symmetric coupler. Photonics Research, 2018, 6, A6.	7.0	10
41	On-Chip Adiabatic Couplers for Broadband Quantum-Polarization State Preparation. , 2018, , .		0
42	Scalable multi-dimensional synthetic space and full state reconstruction in spectral lattices. , 2018, , .		0
43	Multi-dimensional synthetic space and state measurement with spectral photonic lattices. , 2018, , .		0
44	Sum-Frequency- and Photon-Pair-Generation in AlGaAs Nano-Disks. , 2018, , .		1
45	Towards SPDC Spectroscopy on a LiNbO3 Chip. , 2018, , .		0
46	Quantum emitters in 2D materials. , 2018, , .		0
47	Realization of multi-dimensional synthetic space and state measurement on a spectral lattice (Conference Presentation). , 2018, , .		0
48	All-dielectric metasurfaces for measuring multi-photon quantum-polarization states (Conference) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 3		0
49	Shaping the third-harmonic radiation from silicon nanodimers. Nanoscale, 2017, 9, 2201-2206.	5.6	50
50	Observation of Bloch oscillations with a threshold. APL Photonics, 2017, 2, .	5.7	4
51	Path-entangled photon sources on nonlinear chips. Reviews in Physics, 2017, 2, 19-31.	8.9	49
52	Optical emulation of photon-pair generation in nonlinear lossy waveguides. Europhysics Letters, 2017, 118, 54001.	2.0	2
53	Asymmetric adiabatic couplers for fully-integrated broadband quantum-polarization state preparation. Scientific Reports, 2017, 7, 16841.	3.3	5
54	Enhanced second-harmonic generation from two-dimensional MoSe2 on a silicon waveguide. Light: Science and Applications, 2017, 6, e17060-e17060.	16.6	130

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55	Giant enhancement and control of second-harmonic radiation from AlGaAs nanoantennas. , 2017, , .		0
56	Towards on-chip photon-pair bell tests: Spatial pump filtering in a LiNbO3 adiabatic coupler. Applied Physics Letters, 2017, 111, .	3.3	6
57	Quantum tomography of a nonlinear photonic circuit by classical sum-frequency generation measurements. , 2017, , .		0
58	Non-reciprocal geometric phase in nonlinear frequency conversion. Optics Letters, 2017, 42, 1990.	3.3	18
59	Sum-frequency generation and photon-pair creation in AlGaAs nano-disks. , 2017, , .		1
60	Quantum spectroscopy on a nonlinear photonic chip. , 2017, , .		0
61	Scalable on-chip quantum state tomography. , 2017, , .		0
62	Quantum polarization tomography with all-dielectric metasurfaces. , 2017, , .		0
63	Hybrid integration of two-dimensional MoSe<inf>2</inf> on a silicon waveguide for second-order nonlinear optics. , 2017, , .		0
64	Sum-Frequency Generation and Photon-Pair Creation in AlGaAs Nano-Scale Resonators. , 2017, , .		5
65	Quantum imaging with dielectric metasurfaces for multi-photon polarization tomography. , 2017, , .		2
66	Quantum tomography with all-dielectric metasurfaces. , 2017, , .		1
67	Spectral photonic lattices with complex long-range coupling. Optica, 2017, 4, 1433.	9.3	87
68	Measuring the complex weak value of photon wavefunctions beyond weak interaction regime. , 2017, , .		0
69	Enhanced second-harmonic generation from two-dimensional MoSe2 by waveguide integration. , 2017, , .		0
70	Nonlinearity-induced spectral lattice with optically tunable long-range complex hopping. , 2017, , .		0
71	Integrated Quantum Spectroscopy on a Nonlinear Chip. , 2017, , .		0
72	Scalable quantum tomography in a photonic chip. , 2017, , .		0

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73	Directional second harmonic generation from AlGaAs nanoantennas (Conference Presentation). , 2017, , .		0
74	Nonlinear frequency conversion with all-dielectric nanoantennas (Conference Presentation). , 2017, , .		0
75	Controllable non-reciprocity induced by in-band photonic transitions in ï‡(2) nonlinear optics. , 2016, , .		0
76	Experimental demonstration of bidirectional light transfer in adiabatic waveguide structures. Optics Letters, 2016, 41, 5278.	3.3	10
77	Tunable generation of entangled photons in a nonlinear directional coupler. Laser and Photonics Reviews, 2016, 10, 131-136.	8.7	38
78	Two-photon tomography using on-chip quantum walks. Optics Letters, 2016, 41, 4079.	3.3	21
79	Nonlinear Generation of Vector Beams From AlGaAs Nanoantennas. Nano Letters, 2016, 16, 7191-7197.	9.1	237
80	Fabrication of free-standing lithium niobate nanowaveguides down to 50 nm in width. Nanotechnology, 2016, 27, 065301.	2.6	11
81	Nonlocal splitting of photons on a nonlinear chip. Optics Letters, 2016, 41, 5604.	3.3	3
82	Observation of Bloch oscillations with a threshold. , 2016, , .		0
83	Scalable on-chip quantum state tomography. , 2016, , .		0
84	Photon-pair generation and sum-frequency conversion in nonlinear dielectric nanoresonators. , 2016, , .		0
85	Photon-pair generation in nonlinear lossy waveguides: An optical emulation. , 2016, , .		0
86	Measurement of photon-pair generation in waveguide arrays with specialized poling. , 2016, , .		0
87	A nonlinear waveguide array with inhomogeneous poling pattern for the generation of photon pairs. , 2016, , .		0
88	Photonic cluster state generation in nonlinear waveguide arrays. , 2016, , .		0
89	A nonlinear waveguide array with inhomogeneous poling pattern for the generation of photon pairs and its characterization in the quantum and classical regimes. , 2016, , .		0
90	Quantum-classical correspondence for photon-pair generation in nonlinear dielectric nano-resonators. , 2016, , .		0

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91	Shaping the radiation pattern of second-harmonic generation from AlGaAs nonlinear nanoantennas. , 2016, , .		0
92	Lattice topology and spontaneous parametric down-conversion in quadratic nonlinear waveguide arrays. Physical Review A, 2015, 92, .	2.5	13
93	Generation of photons with all-optically-reconfigurable entanglement in integrated nonlinear waveguides. Physical Review A, 2015, 92, .	2.5	18
94	Cascaded third-harmonic generation in hybrid graphene-semiconductor waveguides. Physical Review B, 2015, 92, .	3.2	15
95	Characterization of aperiodic domain structure in lithium niobate by spontaneous parametric down-conversion spectroscopy. Laser Physics Letters, 2015, 12, 095702.	1.4	6
96	Enhancing Guided Second-Harmonic Light in Lithium Niobate Nanowires. ACS Photonics, 2015, 2, 687-691.	6.6	51
97	Parity-time anti-symmetric parametric amplifier. Optics Letters, 2015, 40, 4575.	3.3	60
98	Parity-Time Anti-Symmetric Parametric Amplifier. , 2015, , .		1
99	Parity-time anti-symmetric parametric amplification. Proceedings of SPIE, 2015, , .	0.8	0
100	Modulated coupled nanowires for ultrashort pulses. Optics Letters, 2015, 40, 4078.	3.3	1
101	Bell State Generation and Pump Filtering Using Inhomogeneously Poled Nonlinear Waveguides. , 2015, , .		0
102	Complete conversion of one to two photons in dispersion-engineered nonlinear waveguides. , 2015, , .		1
103	Cubic and Quadratic Nonlinear Susceptibilities in Waveguides. , 2015, , .		0
104	Parity-Time Anti-Symmetric Parametric Amplifier with Ultrafast All-Optical Switching. , 2015, , .		1
105	Optically tunable entangled photon state generation in a nonlinear directional coupler. , 2015, , .		0
106	Generation of reconfigurable photon-pair states in aperiodically poled quadratic waveguide arrays. , 2014, , .		0
107	Photon pair generation and pump filtering in nonlinear adiabatic waveguiding structures. Optics Letters, 2014, 39, 953.	3.3	20
108	Local fluorescent dye excitation with guided second-harmonic in lithium niobate nanowires. , 2014, , .		0

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109	Temporal dynamics of spatially localized waves in quadratic nonlinear waveguide arrays. Physical Review A, 2014, 89, .	2.5	3
110	Generation of Nonclassical Biphoton States through Cascaded Quantum Walks on a Nonlinear Chip. Physical Review X, 2014, 4, .	8.9	52
111	Nonlinear coupled-mode theory for periodic plasmonic waveguides and metamaterials with loss and gain. Optics Letters, 2014, 39, 462.	3.3	37
112	Effect of loss on photon-pair generation in nonlinear waveguide arrays. Physical Review A, 2014, 90, .	2.5	23
113	Biphoton generation and pump filtering in nonlinear adiabatic waveguiding structures. , 2014, , .		0
114	Single-photon spontaneous parametric down-conversion in quadratic nonlinear waveguide arrays. Optics Communications, 2014, 327, 22-26.	2.1	16
115	Simulation of two-mode squeezing in photonic waveguide lattices. , 2014, , .		0
116	Generation of orbital-angular-momentum-entangled biphotons in triangular quadratic waveguide arrays. Physical Review A, 2013, 87, .	2.5	13
117	Coupled-mode theory for nonlinear plasmonic structures and metamaterials. , 2013, , .		0
118	Classical simulation of squeezed light in optical waveguide arrays. Physical Review A, 2013, 87, .	2.5	16
119	Second-harmonic generation in lithium niobate nanowires for local fluorescence excitation. Optics Express, 2013, 21, 19012.	3.4	36
120	Photon pair generation in quadratic waveguide arrays: A classical optical simulation. , 2013, , .		0
121	Photon pair generation in nonlinear adiabatic waveguiding structures. , 2013, , .		0
122	Nonlinear Quantum Walks at the Edge of Quadratic Waveguide Arrays. , 2013, , .		0
123	Loss-Tolerant Photon-Pair Generation and Quantum Walks in Nonlinear Waveguide Arrays. , 2013, , .		0
124	Observation of spontaneous parametric down conversion in LiNbO3 waveguide arrays. , 2012, , .		0
125	Nonlinear coupled-mode theory for periodic waveguides and metamaterials with loss and gain. , 2012, , .		1
126	Combined frequency conversion and pulse compression in nonlinear tapered waveguides. Optics Letters, 2012, 37, 446.	3.3	3

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127	Photon-pair generation in arrays of cubic nonlinear waveguides. Optics Express, 2012, 20, 27441.	3.4	24
128	Temporal dynamics of all-optical switching in quadratic nonlinear directional couplers. Applied Physics Letters, 2012, 100, .	3.3	19
129	Spontaneous Parametric Down-Conversion and Quantum Walks in Arrays of Quadratic Nonlinear Waveguides. Physical Review Letters, 2012, 108, 023601.	7.8	71
130	Biphoton generation in quadratic waveguide arrays: A classical optical simulation. Scientific Reports, 2012, 2, 562.	3.3	35
131	Classical Optical Simulation of Bi-Photon Generation in Quadratic Waveguide Arrays. , 2012, , .		0
132	Generation of Photon Pairs in Cubic Nonlinear Waveguide Arrays. , 2012, , .		0
133	Generation of Photon Pairs in Cubic Nonlinear Waveguide Arrays. , 2012, , .		0
134	Simultaneous Photon-Pair Generation and Quantum Walks in a Waveguide Array. , 2012, , .		0
135	Observation of spontaneous parametric down-conversion in quadratic nonlinear waveguide arrays. , 2012, , .		0
136	Cascaded third harmonic generation in lithium niobate nanowaveguides. Applied Physics Letters, 2011, 98, .	3.3	26
137	Spectral pulse transformations and phase transitions in quadratic nonlinear waveguide arrays. Optics Express, 2011, 19, 23188.	3.4	18
138	Modulated nanowire couplers for ultrashort pulses. , 2011, , .		0
139	Photon pair generation and quantum walks in arrays of quadratic nonlinear waveguides. , 2011, , .		0
140	Spatio-temporal dynamics of laser pulses in lithium niobate waveguide arrays. , 2011, , .		0
141	Time-resolved ultrafast all-optical switching in directional couplers with second-order nonlinearity. , 2011, , .		0
142	Nonlinear pulse transformation and phase transitions in LiNbO<inf>3</inf> waveguide arrays. , 2011, , .		0
143	Photon pair generation and quantum walks in quadratic nonlinear waveguide arrays. , 2011, , .		0
144	Combined Photon Pair Generation and Quantum Walks in Quadratic Nonlinear Waveguide Arrays. , 2011, , .		0

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145	Photon Pair Generation and Quantum Walks in Arrays of Quadratic Nonlinear Waveguides. , 2011, , .		0
146	Nonlinear evolution of laser pulses in lithium niobate waveguide arrays. , 2011, , .		0
147	Measurement of the extraordinary refractive index dispersion inÂtheÂMIR for Mg:Nd:LiNbO3 crystals by the use ofÂquasi-phase-matching inÂaÂrandom 1D domain structure. Applied Physics B: Lasers and Optics, 2010, 99, 197-201.	2.2	9
148	High efficiency harmonic generation in LiNbO3 membranes. , 2010, , .		0
149	Combined frequency conversion and pulse compression in nonlinear tapered waveguides. , 2010, , .		0
150	Generation of fs laser pulses from a ps pulse-pumped optical parametric amplifier with a beat-wave seed signal. Optics Communications, 2009, 282, 2250-2254.	2.1	4
151	Manipulating second-harmonic light from semiconductor nanocrystals. SPIE Newsroom, 0, , .	0.1	1