

Alexander S Solntsev

List of Publications by Year in descending order

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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	Nonlinear Generation of Vector Beams From AlGaAs Nanoantennas. Nano Letters, 2016, 16, 7191-7197.	9.1	237
2	Quantum metasurface for multiphoton interference and state reconstruction. Science, 2018, 361, 1104-1108.	12.6	227
3	Metasurfaces for quantum photonics. Nature Photonics, 2021, 15, 327-336.	31.4	198
4	Quasi-BIC Resonant Enhancement of Second-Harmonic Generation in WS ₂ Monolayers. Nano Letters, 2020, 20, 5309-5314.	9.1	156
5	Enhanced second-harmonic generation from two-dimensional MoSe ₂ on a silicon waveguide. Light: Science and Applications, 2017, 6, e17060-e17060.	16.6	130
6	Spontaneous photon-pair generation from a dielectric nanoantenna. Optica, 2019, 6, 1416.	9.3	98
7	Spectral photonic lattices with complex long-range coupling. Optica, 2017, 4, 1433.	9.3	87
8	Spontaneous Parametric Down-Conversion and Quantum Walks in Arrays of Quadratic Nonlinear Waveguides. Physical Review Letters, 2012, 108, 023601.	7.8	71
9	Parity-time anti-symmetric parametric amplifier. Optics Letters, 2015, 40, 4575.	3.3	60
10	Anti-Stokes excitation of solid-state quantum emitters for nanoscale thermometry. Science Advances, 2019, 5, eaav9180.	10.3	55
11	Generation of Nonclassical Biphoton States through Cascaded Quantum Walks on a Nonlinear Chip. Physical Review X, 2014, 4, .	8.9	52
12	Enhancing Guided Second-Harmonic Light in Lithium Niobate Nanowires. ACS Photonics, 2015, 2, 687-691.	6.6	51
13	Shaping the third-harmonic radiation from silicon nanodimers. Nanoscale, 2017, 9, 2201-2206.	5.6	50
14	Scalable on-chip quantum state tomography. Npj Quantum Information, 2018, 4, .	6.7	50
15	Path-entangled photon sources on nonlinear chips. Reviews in Physics, 2017, 2, 19-31.	8.9	49
16	Integrated on Chip Platform with Quantum Emitters in Layered Materials. Advanced Optical Materials, 2019, 7, 1901132.	7.3	49
17	Second-harmonic generation in multilayer hexagonal boron nitride flakes. Optics Letters, 2019, 44, 5792.	3.3	41
18	Tunable generation of entangled photons in a nonlinear directional coupler. Laser and Photonics Reviews, 2016, 10, 131-136.	8.7	38

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19	Nonlinear coupled-mode theory for periodic plasmonic waveguides and metamaterials with loss and gain. <i>Optics Letters</i> , 2014, 39, 462.	3.3	37
20	Second-harmonic generation in lithium niobate nanowires for local fluorescence excitation. <i>Optics Express</i> , 2013, 21, 19012.	3.4	36
21	Biphoton generation in quadratic waveguide arrays: A classical optical simulation. <i>Scientific Reports</i> , 2012, 2, 562.	3.3	35
22	LiNbO ₃ waveguides for integrated SPDC spectroscopy. <i>APL Photonics</i> , 2018, 3, .	5.7	32
23	Enhanced Emission from WSe ₂ Monolayers Coupled to Circular Bragg Gratings. <i>ACS Photonics</i> , 2018, 5, 3950-3955.	6.6	31
24	Multidimensional synthetic chiral-tube lattices via nonlinear frequency conversion. <i>Light: Science and Applications</i> , 2020, 9, 132.	16.6	30
25	Optical Thermometry with Quantum Emitters in Hexagonal Boron Nitride. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 25464-25470.	8.0	29
26	Direct characterization of a nonlinear photonic circuit's wave function with laser light. <i>Light: Science and Applications</i> , 2018, 7, 17143-17143.	16.6	27
27	Cascaded third harmonic generation in lithium niobate nanowaveguides. <i>Applied Physics Letters</i> , 2011, 98, .	3.3	26
28	Optical Third-Harmonic Generation in Hexagonal Boron Nitride Thin Films. <i>ACS Photonics</i> , 2021, 8, 824-831.	6.6	26
29	Photon-pair generation in arrays of cubic nonlinear waveguides. <i>Optics Express</i> , 2012, 20, 27441.	3.4	24
30	Effect of loss on photon-pair generation in nonlinear waveguide arrays. <i>Physical Review A</i> , 2014, 90, .	2.5	23
31	Quantum random number generation using a hexagonal boron nitride single photon emitter. <i>Journal of Optics (United Kingdom)</i> , 2021, 23, 01LT01.	2.2	22
32	Two-photon tomography using on-chip quantum walks. <i>Optics Letters</i> , 2016, 41, 4079.	3.3	21
33	Phonon dephasing and spectral diffusion of quantum emitters in hexagonal boron nitride. <i>Optica</i> , 2021, 8, 1153.	9.3	21
34	Broadband on-chip polarization mode splitters in lithium niobate integrated adiabatic couplers. <i>Optics Express</i> , 2019, 27, 1632.	3.4	21
35	Photon pair generation and pump filtering in nonlinear adiabatic waveguiding structures. <i>Optics Letters</i> , 2014, 39, 953.	3.3	20
36	Integrated room temperature single-photon source for quantum key distribution. <i>Optics Letters</i> , 2022, 47, 1673.	3.3	20

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37	Temporal dynamics of all-optical switching in quadratic nonlinear directional couplers. Applied Physics Letters, 2012, 100, .	3.3	19
38	Suppression of spectral diffusion by anti-Stokes excitation of quantum emitters in hexagonal boron nitride. Applied Physics Letters, 2019, 115, .	3.3	19
39	Spectral pulse transformations and phase transitions in quadratic nonlinear waveguide arrays. Optics Express, 2011, 19, 23188.	3.4	18
40	Generation of photons with all-optically-reconfigurable entanglement in integrated nonlinear waveguides. Physical Review A, 2015, 92, .	2.5	18
41	Non-reciprocal geometric phase in nonlinear frequency conversion. Optics Letters, 2017, 42, 1990.	3.3	18
42	Second harmonic generation in defective hexagonal boron nitride. Journal of Physics Condensed Matter, 2020, 32, 19LT01.	1.8	17
43	Classical simulation of squeezed light in optical waveguide arrays. Physical Review A, 2013, 87, .	2.5	16
44	Single-photon spontaneous parametric down-conversion in quadratic nonlinear waveguide arrays. Optics Communications, 2014, 327, 22-26.	2.1	16
45	Cascaded third-harmonic generation in hybrid graphene-semiconductor waveguides. Physical Review B, 2015, 92, .	3.2	15
46	Optical Repumping of Resonantly Excited Quantum Emitters in Hexagonal Boron Nitride. Physical Review Applied, 2020, 14, .	3.8	14
47	Generation of orbital-angular-momentum-entangled biphotons in triangular quadratic waveguide arrays. Physical Review A, 2013, 87, .	2.5	13
48	Lattice topology and spontaneous parametric down-conversion in quadratic nonlinear waveguide arrays. Physical Review A, 2015, 92, .	2.5	13
49	Directional emission of down-converted photons from a dielectric nanoresonator. Physical Review A, 2021, 103, .	2.5	13
50	Fabrication of free-standing lithium niobate nanowaveguides down to 50 nm in width. Nanotechnology, 2016, 27, 065301.	2.6	11
51	Experimental demonstration of bidirectional light transfer in adiabatic waveguide structures. Optics Letters, 2016, 41, 5278.	3.3	10
52	Photon-pair generation in a quadratically nonlinear parity-time symmetric coupler. Photonics Research, 2018, 6, A6.	7.0	10
53	Measurement of the extraordinary refractive index dispersion in the MIR for Mg:Nd:LiNbO3 crystals by the use of quasi-phase-matching in a random 1D domain structure. Applied Physics B: Lasers and Optics, 2010, 99, 197-201.	2.2	9
54	Synthetic photonic lattice for single-shot reconstruction of frequency combs. APL Photonics, 2020, 5, .	5.7	9

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55	Topologically protecting squeezed light on a photonic chip. <i>Photonics Research</i> , 2022, 10, 456.	7.0	9
56	Large few-layer hexagonal boron nitride flakes for nonlinear optics. <i>Optics Letters</i> , 2021, 46, 564.	3.3	7
57	Characterization of aperiodic domain structure in lithium niobate by spontaneous parametric down-conversion spectroscopy. <i>Laser Physics Letters</i> , 2015, 12, 095702.	1.4	6
58	Towards on-chip photon-pair bell tests: Spatial pump filtering in a LiNbO ₃ adiabatic coupler. <i>Applied Physics Letters</i> , 2017, 111, .	3.3	6
59	Asymmetric adiabatic couplers for fully-integrated broadband quantum-polarization state preparation. <i>Scientific Reports</i> , 2017, 7, 16841.	3.3	5
60	Sum-Frequency Generation and Photon-Pair Creation in AlGaAs Nano-Scale Resonators. , 2017, , .		5
61	Generation of fs laser pulses from a ps pulse-pumped optical parametric amplifier with a beat-wave seed signal. <i>Optics Communications</i> , 2009, 282, 2250-2254.	2.1	4
62	Observation of Bloch oscillations with a threshold. <i>APL Photonics</i> , 2017, 2, .	5.7	4
63	Combined frequency conversion and pulse compression in nonlinear tapered waveguides. <i>Optics Letters</i> , 2012, 37, 446.	3.3	3
64	Temporal dynamics of spatially localized waves in quadratic nonlinear waveguide arrays. <i>Physical Review A</i> , 2014, 89, .	2.5	3
65	Reconfigurable cluster-state generation in specially poled nonlinear waveguide arrays. <i>Physical Review A</i> , 2020, 101, .	2.5	3
66	Nonlocal splitting of photons on a nonlinear chip. <i>Optics Letters</i> , 2016, 41, 5604.	3.3	3
67	Optical emulation of photon-pair generation in nonlinear lossy waveguides. <i>Europhysics Letters</i> , 2017, 118, 54001.	2.0	2
68	Quantum imaging with dielectric metasurfaces for multi-photon polarization tomography. , 2017, , .		2
69	Nonlinear coupled-mode theory for periodic waveguides and metamaterials with loss and gain. , 2012, , .		1
70	Parity-Time Anti-Symmetric Parametric Amplifier. , 2015, , .		1
71	Modulated coupled nanowires for ultrashort pulses. <i>Optics Letters</i> , 2015, 40, 4078.	3.3	1
72	Sum-frequency generation and photon-pair creation in AlGaAs nano-disks. , 2017, , .		1

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73	Manipulating second-harmonic light from semiconductor nanocrystals. SPIE Newsroom, 0, , .	0.1	1
74	Anti-Stokes Excitation of Solid-State Quantum Emitters for Nanoscale Thermometry. , 2019, , .		1
75	Quantum tomography with all-dielectric metasurfaces. , 2017, , .		1
76	Complete conversion of one to two photons in dispersion-engineered nonlinear waveguides. , 2015, , .		1
77	Parity-Time Anti-Symmetric Parametric Amplifier with Ultrafast All-Optical Switching. , 2015, , .		1
78	Sum-Frequency- and Photon-Pair-Generation in AlGaAs Nano-Disks. , 2018, , .		1
79	Complete conversion between one and two photons in nonlinear waveguides: theory of dispersion engineering. New Journal of Physics, 2022, 24, 065002.	2.9	1
80	High efficiency harmonic generation in LiNbO3 membranes. , 2010, , .		0
81	Combined frequency conversion and pulse compression in nonlinear tapered waveguides. , 2010, , .		0
82	Modulated nanowire couplers for ultrashort pulses. , 2011, , .		0
83	Photon pair generation and quantum walks in arrays of quadratic nonlinear waveguides. , 2011, , .		0
84	Spatio-temporal dynamics of laser pulses in lithium niobate waveguide arrays. , 2011, , .		0
85	Time-resolved ultrafast all-optical switching in directional couplers with second-order nonlinearity. , 2011, , .		0
86	Nonlinear pulse transformation and phase transitions in LiNbO ₃ waveguide arrays. , 2011, , .		0
87	Photon pair generation and quantum walks in quadratic nonlinear waveguide arrays. , 2011, , .		0
88	Observation of spontaneous parametric down conversion in LiNbO3 waveguide arrays. , 2012, , .		0
89	Coupled-mode theory for nonlinear plasmonic structures and metamaterials. , 2013, , .		0
90	Photon pair generation in quadratic waveguide arrays: A classical optical simulation. , 2013, , .		0

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91	Generation of reconfigurable photon-pair states in aperiodically poled quadratic waveguide arrays. , 2014, , .		0
92	Local fluorescent dye excitation with guided second-harmonic in lithium niobate nanowires. , 2014, , .		0
93	Biphoton generation and pump filtering in nonlinear adiabatic waveguiding structures. , 2014, , .		0
94	Parity-time anti-symmetric parametric amplification. Proceedings of SPIE, 2015, , .	0.8	0
95	Controllable non-reciprocity induced by in-band photonic transitions in $\chi^{(2)}$ nonlinear optics. , 2016, , .		0
96	Giant enhancement and control of second-harmonic radiation from AlGaAs nanoantennas. , 2017, , .		0
97	Quantum tomography of a nonlinear photonic circuit by classical sum-frequency generation measurements. , 2017, , .		0
98	Quantum spectroscopy on a nonlinear photonic chip. , 2017, , .		0
99	Scalable on-chip quantum state tomography. , 2017, , .		0
100	Quantum polarization tomography with all-dielectric metasurfaces. , 2017, , .		0
101	Hybrid integration of two-dimensional MoSe_2 on a silicon waveguide for second-order nonlinear optics. , 2017, , .		0
102	Tomography of Quantum Dots in a Non-Hermitian Photonic Chip. , 2019, , .		0
103	Generating Quantum States of Surface Plasmon-Polariton Pairs with a Nonlinear Nanoparticle. , 2019, , .		0
104	Demonstration of Lossy Linear Transformations and Two-Photon Interference via Singular Value Decomposition. , 2021, , .		0
105	Combined Photon Pair Generation and Quantum Walks in Quadratic Nonlinear Waveguide Arrays. , 2011, , .		0
106	Photon Pair Generation and Quantum Walks in Arrays of Quadratic Nonlinear Waveguides. , 2011, , .		0
107	Nonlinear evolution of laser pulses in lithium niobate waveguide arrays. , 2011, , .		0
108	Classical Optical Simulation of Bi-Photon Generation in Quadratic Waveguide Arrays. , 2012, , .		0

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109	Generation of Photon Pairs in Cubic Nonlinear Waveguide Arrays. , 2012, , .		0
110	Generation of Photon Pairs in Cubic Nonlinear Waveguide Arrays. , 2012, , .		0
111	Simultaneous Photon-Pair Generation and Quantum Walks in a Waveguide Array. , 2012, , .		0
112	Observation of spontaneous parametric down-conversion in quadratic nonlinear waveguide arrays. , 2012, , .		0
113	Photon pair generation in nonlinear adiabatic waveguiding structures. , 2013, , .		0
114	Nonlinear Quantum Walks at the Edge of Quadratic Waveguide Arrays. , 2013, , .		0
115	Loss-Tolerant Photon-Pair Generation and Quantum Walks in Nonlinear Waveguide Arrays. , 2013, , .		0
116	Simulation of two-mode squeezing in photonic waveguide lattices. , 2014, , .		0
117	Bell State Generation and Pump Filtering Using Inhomogeneously Poled Nonlinear Waveguides. , 2015, , .		0
118	Cubic and Quadratic Nonlinear Susceptibilities in Waveguides. , 2015, , .		0
119	Optically tunable entangled photon state generation in a nonlinear directional coupler. , 2015, , .		0
120	Observation of Bloch oscillations with a threshold. , 2016, , .		0
121	Scalable on-chip quantum state tomography. , 2016, , .		0
122	Photon-pair generation and sum-frequency conversion in nonlinear dielectric nanoresonators. , 2016, , .		0
123	Photon-pair generation in nonlinear lossy waveguides: An optical emulation. , 2016, , .		0
124	Measurement of photon-pair generation in waveguide arrays with specialized poling. , 2016, , .		0
125	A nonlinear waveguide array with inhomogeneous poling pattern for the generation of photon pairs. , 2016, , .		0
126	Photonic cluster state generation in nonlinear waveguide arrays. , 2016, , .		0

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127	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
128	Quantum-classical correspondence for photon-pair generation in nonlinear dielectric nano-resonators. , 2016, , .		0
129	Shaping the radiation pattern of second-harmonic generation from AlGaAs nonlinear nanoantennas. , 2016, , .		0
130	Measuring the complex weak value of photon wavefunctions beyond weak interaction regime. , 2017, , .		0
131	Enhanced second-harmonic generation from two-dimensional MoSe2 by waveguide integration. , 2017, , .		0
132	Nonlinearity-induced spectral lattice with optically tunable long-range complex hopping. , 2017, , .		0
133	Integrated Quantum Spectroscopy on a Nonlinear Chip. , 2017, , .		0
134	Scalable quantum tomography in a photonic chip. , 2017, , .		0
135	Directional second harmonic generation from AlGaAs nanoantennas (Conference Presentation). , 2017, , .		0
136	Nonlinear frequency conversion with all-dielectric nanoantennas (Conference Presentation). , 2017, , .		0
137	On-Chip Adiabatic Couplers for Broadband Quantum-Polarization State Preparation. , 2018, , .		0
138	Scalable multi-dimensional synthetic space and full state reconstruction in spectral lattices. , 2018, , .		0
139	Multi-dimensional synthetic space and state measurement with spectral photonic lattices. , 2018, , .		0
140	Towards SPDC Spectroscopy on a LiNbO3 Chip. , 2018, , .		0
141	Quantum emitters in 2D materials. , 2018, , .		0
142	Realization of multi-dimensional synthetic space and state measurement on a spectral lattice (Conference Presentation). , 2018, , .		0
143	All-dielectric metasurfaces for measuring multi-photon quantum-polarization states (Conference) Tj ETQq1 1 0.784314 rgBT /Overlock 1		0
144	Broadband On-Chip Adiabatic-Coupling Polarization Mode Splitters in Lithium Niobate Waveguides. , 2019, , .		0

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145	Tomography of quantum dots in a non-hermitian photonic chip. , 2019, , .		0
146	Second harmonic generation from multilayer hexagonal boron nitride. , 2019, , .		0
147	Quantum random number generation using a solid state single photon source. , 2019, , .		0
148	Second-Harmonic Generation from WS ₂ Monolayers Enhanced by BIC Resonances. , 2020, , .		0
149	Quantum random number generation on a photonic chip using single photons from hexagonal boron nitride. , 2020, , .		0
150	Third Harmonic Generation in Hexagonal Boron Nitride Flakes. , 2020, , .		0
151	Observation of Extraordinary SHG from WS ₂ Monolayers Boosted by Optical Bound States in the Continuum. , 2020, , .		0