

Frank Setzpfandt

List of Publications by Year in descending order

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138
papers

2,064
citations

279798

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243625

44
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140
all docs

140
docs citations

140
times ranked

2322
citing authors

#	ARTICLE	IF	CITATIONS
1	Resonantly Enhanced Second-Harmonic Generation Using III-V Semiconductor All-Dielectric Metasurfaces. Nano Letters, 2016, 16, 5426-5432.	9.1	341
2	Spatial and Spectral Light Shaping with Metamaterials. Advanced Materials, 2012, 24, 6300-6304.	21.0	167
3	Fabrication of nanoscale lithium niobate waveguides for second-harmonic generation. Optics Letters, 2015, 40, 2715.	3.3	103
4	Second-Harmonic Generation in Resonant Nonlinear Metasurfaces Based on Lithium Niobate. Nano Letters, 2020, 20, 8608-8614.	9.1	99
5	Photon Pairs from Resonant Metasurfaces. Nano Letters, 2021, 21, 4423-4429.	9.1	91
6	Perspectives for Applications of Quantum Imaging. Laser and Photonics Reviews, 2019, 13, 1900097.	8.7	86
7	Tailoring Photoluminescence from MoS ₂ Monolayers by Mie-Resonant Metasurfaces. ACS Photonics, 2019, 6, 1002-1009.	6.6	82
8	Polarization-Dependent Second Harmonic Diffraction from Resonant GaAs Metasurfaces. ACS Photonics, 2018, 5, 1786-1793.	6.6	74
9	Plasmonic Fano Nanoantennas for On-Chip Separation of Wavelength-Encoded Optical Signals. Nano Letters, 2015, 15, 3324-3328.	9.1	64
10	High-bit rate ultra-compact light routing with mode-selective on-chip nanoantennas. Science Advances, 2017, 3, e1700007.	10.3	64
11	Lithium Niobate on Insulator: An Emerging Platform for Integrated Quantum Photonics. Advanced Optical Materials, 2021, 9, 2100789.	7.3	62
12	Generation of Nonclassical Biphoton States through Cascaded Quantum Walks on a Nonlinear Chip. Physical Review X, 2014, 4, .	8.9	52
13	Submicrometer Nanostructure-Based RGB Filters for CMOS Image Sensors. ACS Photonics, 2019, 6, 1018-1025.	6.6	51
14	Resonant dielectric metasurfaces: active tuning and nonlinear effects. Journal Physics D: Applied Physics, 2019, 52, 373002.	2.8	42
15	Hybrid Dielectric Metasurfaces for Enhancing Second-Harmonic Generation in Chemical Vapor Deposition Grown MoS ₂ Monolayers. ACS Photonics, 2021, 8, 218-227.	6.6	41
16	Dielectric metasurfaces for distance measurements and three-dimensional imaging. Advanced Photonics, 2019, 1, 1.	11.8	41
17	Tunable generation of entangled photons in a nonlinear directional coupler. Laser and Photonics Reviews, 2016, 10, 131-136.	8.7	38
18	Direct and High-Throughput Fabrication of Mie-Resonant Metasurfaces <i>via</i> Single-Pulse Laser Interference. ACS Nano, 2020, 14, 6138-6149.	14.6	34

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19	Evaluation of gold nanowire pairs as a potential negative index material. Applied Physics B: Lasers and Optics, 2006, 84, 139-148.	2.2	32
20	LiNbO3 waveguides for integrated SPDC spectroscopy. APL Photonics, 2018, 3, .	5.7	32
21	Adiabatic light transfer in titanium diffused lithium niobate waveguides. Optics Express, 2015, 23, 30641.	3.4	29
22	Experimental determination of the dispersion relation of light in metamaterials by white-light interferometry. Journal of the Optical Society of America B: Optical Physics, 2010, 27, 660.	2.1	28
23	Generation of Counterpropagating Path-Entangled Photon Pairs in a Single Periodic Waveguide. Physical Review Letters, 2017, 118, 183603.	7.8	26
24	Broadband on-chip polarization mode splitters in lithium niobate integrated adiabatic couplers. Optics Express, 2019, 27, 1632.	3.4	21
25	Competing nonlinearities in quadratic nonlinear waveguide arrays. Optics Letters, 2009, 34, 3589.	3.3	20
26	Multipolar Third-Harmonic Generation in Fishnet Metamaterials. ACS Photonics, 2016, 3, 1494-1499.	6.6	20
27	Controlling second-harmonic diffraction by nano-patterning MoS ₂ monolayers. Optics Express, 2019, 27, 35475.	3.4	20
28	Phase Transitions of Nonlinear Waves in Quadratic Waveguide Arrays. Physical Review Letters, 2010, 105, 233905.	7.8	19
29	Spectral pulse transformations and phase transitions in quadratic nonlinear waveguide arrays. Optics Express, 2011, 19, 23188.	3.4	18
30	Supercontinuum generation in quadratic nonlinear waveguides without quasi-phase matching. Optics Letters, 2015, 40, 629.	3.3	17
31	Atom-mediated spontaneous parametric down-conversion in periodic waveguides. Optics Letters, 2017, 42, 4724.	3.3	16
32	Phase-matched second-harmonic generation in slow-light photonic crystal waveguides. Physical Review A, 2015, 92, .	2.5	14
33	Laser-induced spatially-selective tailoring of high-index dielectric metasurfaces. Optics Express, 2020, 28, 1539.	3.4	14
34	Periodic poling with a micrometer-range period in thin-film lithium niobate on insulator. Journal of the Optical Society of America B: Optical Physics, 2021, 38, 685.	2.1	12
35	Negative Goos-Hänchen shift in periodic media. Optics Letters, 2011, 36, 4446.	3.3	11
36	Bandstructure measurement in nonlinear optical waveguide arrays. Applied Physics Letters, 2013, 102, .	3.3	11

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37	Surface domain engineering in lithium niobate. OSA Continuum, 2020, 3, 345.	1.8	11
38	Metasurface-Assisted Quantum Ghost Discrimination of Polarization Objects. Physical Review Applied, 2021, 16, .	3.8	11
39	Nanostructure-modulated planar high spectral resolution spectro-polarimeter. Optics Express, 2020, 28, 19818.	3.4	10
40	Seeding of picosecond and femtosecond optical parametric amplifiers by weak single mode continuous lasers. Optics Express, 2013, 21, 730.	3.4	9
41	Ultra-compact, broadband adiabatic passage optical couplers in thin-film lithium niobate on insulator waveguides. Optics Express, 2021, 29, 27362.	3.4	9
42	Dispersion properties of photonic crystal waveguides with a low in-plane index contrast. New Journal of Physics, 2006, 8, 210-210.	2.9	8
43	Photonic crystal waveguides as sources of counterpropagating factorizable biphoton states. Optics Letters, 2019, 44, 69.	3.3	8
44	Integrated induced-coherence spectroscopy in a single nonlinear waveguide. Physical Review A, 2020, 101, .	2.5	7
45	Mid-infrared photon pair generation in AgGaS ₂ . Applied Physics Letters, 2021, 119, .	3.3	7
46	Towards on-chip photon-pair bell tests: Spatial pump filtering in a LiNbO ₃ adiabatic coupler. Applied Physics Letters, 2017, 111, .	3.3	6
47	Subdiffraction Quantum Imaging with Undetected Photons. Physical Review Letters, 2022, 128, 173601.	7.8	6
48	Quantum Imaging: Perspectives for Applications of Quantum Imaging (Laser Photonics Rev. 13(10)/2019). Laser and Photonics Reviews, 2019, 13, 1970042.	8.7	5
49	Nonlinear dynamics with higher-order modes in lithium niobate waveguide arrays. Applied Physics B: Lasers and Optics, 2011, 104, 487-493.	2.2	4
50	Change of the refractive index in PPLN waveguides due to the photorefractive effect. Applied Physics B: Lasers and Optics, 2011, 104, 547-551.	2.2	4
51	Discrete quadratic solitons with competing second-harmonic components. Physical Review A, 2011, 84, .	2.5	4
52	Effect of loss on slow-light-enhanced second-harmonic generation in periodic nanostructures. Optics Letters, 2016, 41, 3110.	3.3	4
53	A fully automated dual-tip scanning near-field optical microscope for localized optical excitation and detection in the visible and near-infrared. Review of Scientific Instruments, 2019, 90, 053705.	1.3	4
54	Far-field polarization signatures of surface optical nonlinearity in noncentrosymmetric semiconductors. Scientific Reports, 2020, 10, 10545.	3.3	4

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55	Pinhole quantum ghost imaging. Applied Physics Letters, 2020, 117, 094003.	3.3	4
56	Classical Ghost Imaging: A Comparative Study of Algorithmic Performances for Image Reconstruction in Prospect of Plenoptic Imaging. IEEE Photonics Journal, 2021, 13, 1-14.	2.0	4
57	Generating path entangled states in waveguide systems with second-order nonlinearity. Optics Express, 2020, 28, 28792.	3.4	4
58	Temporal dynamics of spatially localized waves in quadratic nonlinear waveguide arrays. Physical Review A, 2014, 89, .	2.5	3
59	Color filter arrays based on dielectric metasurface elements. , 2018, , .		3
60	Photonic Crystal Waveguides As Integrated Sources of Counterpropagating Factorizable Photon Pairs. , 2018, , .		3
61	Nonlocal splitting of photons on a nonlinear chip. Optics Letters, 2016, 41, 5604.	3.3	3
62	Investigation of dipole emission near a dielectric metasurface using a dual-tip scanning near-field optical microscope. Nanophotonics, 2021, .	6.0	3
63	Nonlinear coupling in discrete optical waveguide arrays with quadratic nonlinearity. Physical Review A, 2015, 92, .	2.5	2
64	Periodic Poling with Short Period for Thin Film Lithium Niobate Waveguides. , 2019, , .		2
65	Modeling of surface-induced second-harmonic generation from multilayer structures by the transfer matrix method. Optics Express, 2021, 29, 9098.	3.4	2
66	Nonlinear quantum spectroscopy with parityâ€time-symmetric integrated circuits. Photonics Research, 2022, 10, 1763.	7.0	2
67	Second-Harmonic Generation in Lithium Niobate Metasurfaces. , 2019, , .		1
68	Mie Resonances in the Spectrum of Spontaneous Parametric Down-Conversion. , 2021, , .		1
69	Integrated Photonic Sources and Circuits in Lithium Niobate Platform. , 2021, , .		1
70	A Fully Automated Dual-Probe Scanning Near-Field Optical Microscopy Technique. , 2017, , .		1
71	Engineering resonances in nanorod left-handed metamaterials. , 2006, , .		0
72	Configurations of elongated gold nanostructures on silica as metamaterials: theory, technology, and optical properties. , 2006, , .		0

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73	Phase transitions of nonlinear waves in lithium niobate waveguide arrays. , 2010, , .		0
74	Phase Transition of Discrete Quadratic Solitons. , 2010, , .		0
75	Spatial nonlinear effects with higher order modes in LiNbO ₃ waveguide arrays. , 2011, , .		0
76	Magnetic properties of asymmetric double-wire structures. , 2011, , .		0
77	Bandstructure measurements of lithium niobate waveguide arrays. , 2011, , .		0
78	Spatio-temporal dynamics of laser pulses in lithium niobate waveguide arrays. , 2011, , .		0
79	Nonlinear pulse transformation and phase transitions in LiNbO ₃ waveguide arrays. , 2011, , .		0
80	Solitons in waveguide arrays with competing quadratic nonlinearities. , 2011, , .		0
81	Observation of spontaneous parametric down conversion in LiNbO ₃ waveguide arrays. , 2012, , .		0
82	Fano nanoantenna for on-chip separation of wavelength-encoded optical signals. , 2015, , .		0
83	Periodic Waveguides for Generation of Engineered Photon-pair States. , 2016, , .		0
84	Enhancement of light-matter interaction in MoS ₂ monolayers by resonant nanoparticles. , 2016, , .		0
85	Surface domain engineering in bulk and thin film lithium niobate: A systematic experimental study. , 2017, , .		0
86	Polarization dependence of second-harmonic generation in GaAs metasurfaces. , 2017, , .		0
87	Quantum spectroscopy on a nonlinear photonic chip. , 2017, , .		0
88	Dual-Probe SNOM for the Near-Field Study of Nanostructures. , 2018, , .		0
89	The Role of Detector Position in Quantum Ghost Diffraction. , 2019, , .		0
90	Nonlinear Quantum Spectroscopy Enhanced by Parity-Time Symmetry. , 2019, , .		0

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91	Towards Optimized Photon-Pair Sources for Two-Photon Transitions. , 2019, , .		0
92	Nanostructured MoS2 Monolayers for Spatial Control of Second-Harmonic Generation. , 2019, , .		0
93	Mapping the Near-Field Interaction of Silicon Nanodisc Arrays by Automated Dual-Tip Scanning Near-Field Optical Microscopy. , 2019, , .		0
94	Mid-Infrared Sensing by Induced Coherence in a Single Nonlinear Waveguide. , 2019, , .		0
95	Micrometer-range periodic poling of thin-film lithium niobate on insulator. , 2020, , .		0
96	Enhancement of Spontaneous Parametric Down-Conversion in Nonlinear Metasurfaces. , 2021, , .		0
97	Broadband Adiabatic Couplers in Thin-Film Lithium Niobate On Insulator. , 2021, , .		0
98	Spontaneous Parametric Down-Conversion in Nonlinear Metasurfaces. , 2021, , .		0
99	Dispersion engineered sum-frequency generation in a periodically poled thin-film LiNbO3 nanowaveguide. , 2021, , .		0
100	Sub-Diffraction Near-Field Imaging with Undetected Photons using Thin Sources of Photon Pairs. , 2021, , .		0
101	Describing SPDC at the Nanoscale: A Quasinormal Mode Approach. , 2021, , .		0
102	Discrete solitons with competing second harmonic components in lithium niobate waveguide arrays. , 2011, , .		0
103	Nonlinear evolution of laser pulses in lithium niobate waveguide arrays. , 2011, , .		0
104	Observation of spontaneous parametric down-conversion in quadratic nonlinear waveguide arrays. , 2012, , .		0
105	Nonlinear Nearest-Neighbor Coupling in Quadratic Waveguide Arrays. , 2015, , .		0
106	Cubic and Quadratic Nonlinear Susceptibilities in Waveguides. , 2015, , .		0
107	Optically Tunable Entangled Photon State Generation in a Nonlinear Directional Coupler. , 2015, , .		0
108	Optically tunable entangled photon state generation in a nonlinear directional coupler. , 2015, , .		0

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109	Multipolar Analysis of the Third Harmonic Radiation Pattern from Fishnet Metamaterials. , 2016, , .		0
110	Multipolar Origin of the Third Harmonic Generation from Fishnet Metamaterials. , 2016, , .		0
111	Ultra-compact Polarization Demultiplexing by a Plasmonic Nanoantenna on a Waveguide. , 2016, , .		0
112	Effect of Loss on Slow-light-enhanced Second Harmonic Generation in Periodic Nanostructures. , 2016, , .		0
113	Ultra-Broadband Adiabatic Light Transfer in Titanium Diffused Lithium Niobate Waveguides. , 2016, , .		0
114	Counter-propagating Spatially Entangled Bell-states Generation in Photonic Crystal Waveguides. , 2016, , .		0
115	How Useful Is Slow Light in Enhancing Nonlinear Interactions in Lossy Periodic Nanostructures?. , 2016, , .		0
116	Integrated Quantum Spectroscopy on a Nonlinear Chip. , 2017, , .		0
117	Atom-mediated Spontaneous Parametric Down-conversion Using Bandgap Modes in Nonlinear Periodic Waveguides. , 2018, , .		0
118	Atom-mediated Spontaneous Parametric Down-conversion Using Evanescent Modes in Nonlinear Periodic Waveguides. , 2018, , .		0
119	Spatial Rogue Waves in Quadratic Optical Slab Waveguides. , 2018, , .		0
120	Generation of Spectrally Factorizable Counterpropagating Photon Pairs in Photonic Crystal Waveguides. , 2018, , .		0
121	Towards SPDC Spectroscopy on a LiNbO3 Chip. , 2018, , .		0
122	Semiconducting 2D-Materials: nano-sandbox for fundamental physics and new platform for optical coatings, light emission and quantum light sources. , 2019, , .		0
123	Incoherence and Lens-less Imaging in Quantum Ghost Diffraction. , 2019, , .		0
124	Broadband On-Chip Adiabatic-Coupling Polarization Mode Splitters in Lithium Niobate Waveguides. , 2019, , .		0
125	Akhmediev Breathers and Modulation Instability's Growth-Decay Cycle in Slab Waveguides. , 2019, , .		0
126	Spectral mapping of an integrated type-II photon-pair source using quantum-classical correspondence. , 2019, , .		0

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127	Atom-mediated nonlinear photon-pair generation using photonic band-gap modes. , 2019, , .		0
128	Second-Harmonic Diffraction from Periodically Structured MoS2 Monolayer. , 2019, , .		0
129	Optical metagrating for one-shot polarization measurements. , 2019, , .		0
130	Nonperiodic optical superlattice lithium niobate waveguides for the generation of polarization entanglement. , 2020, , .		0
131	Non-Degenerate Nonlinear Frequency Mixing in (110)-Grown GaAs Nanoresonators. , 2020, , .		0
132	Discerning Polarization Objects using Non-local Measurements with Metasurfaces. , 2020, , .		0
133	Engineering Photon Pair Generation in Microstructured Liquid-Core Fibers. , 2020, , .		0
134	Non-Degenerate Sum-Frequency Generation in (110)-Grown GaAs Nanoresonators. , 2020, , .		0
135	MoS2 monolayer coupled to a multi-resonant dielectric metasurface exhibiting enhanced second-harmonic generation. , 2020, , .		0
136	Modelling Photon-pair Generation in Nanoresonators Using Quasinormal Mode Expansions. , 2021, , .		0
137	Resolution of two-color quantum imaging with undetected photons. , 2021, , .		0
138	Subwavelength-resolution Imaging with Undetected Photons using Thin Sources of Photon Pairs. , 2021, , .		0