

Klaus-Jochen Boller

List of Publications by Year in descending order

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Version: 2024-02-01

102
papers

2,391
citations

304743

22
h-index

214800

47
g-index

102
all docs

102
docs citations

102
times ranked

2164
citing authors

#	ARTICLE	IF	CITATIONS
1	Programmable photonic signal processor chip for radiofrequency applications. <i>Optica</i> , 2015, 2, 854.	9.3	311
2	Silicon nitride microwave photonic circuits. <i>Optics Express</i> , 2013, 21, 22937.	3.4	268
3	Low-Loss Si ₃ N ₄ TriPlex Optical Waveguides: Technology and Applications Overview. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2018, 24, 1-21.	2.9	243
4	On-chip visible-to-infrared supercontinuum generation with more than 495 THz spectral bandwidth. <i>Optics Express</i> , 2015, 23, 19596.	3.4	101
5	Two-octave spanning supercontinuum generation in stoichiometric silicon nitride waveguides pumped at telecom wavelengths. <i>Optics Express</i> , 2017, 25, 1542.	3.4	96
6	Hybrid integrated InP-Si ₃ N ₄ diode laser with a 40-Hz intrinsic linewidth. <i>Optics Express</i> , 2020, 28, 21713.	3.4	87
7	On-chip microwave photonic beamformer circuits operating with phase modulation and direct detection. <i>Optics Express</i> , 2014, 22, 17079.	3.4	79
8	8 μ m reconfigurable quantum photonic processor based on silicon nitride waveguides. <i>Optics Express</i> , 2019, 27, 26842.	3.4	70
9	High confinement, high yield Si ₃ N ₄ waveguides for nonlinear optical applications. <i>Optics Express</i> , 2015, 23, 642.	3.4	66
10	A route to sub-diffraction-limited CARS Microscopy. <i>Optics Express</i> , 2009, 17, 22632.	3.4	63
11	Hybrid Integrated Semiconductor Lasers with Silicon Nitride Feedback Circuits. <i>Photonics</i> , 2020, 7, 4.	2.0	63
12	Programmable two-photon quantum interference in $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"} \rangle \langle \text{mml:msup} \rangle \langle \text{mml:mn} \rangle 10 \langle \text{mml:mn} \rangle 3 \langle \text{mml:mn} \rangle 25 \langle \text{mml:msup} \rangle \langle \text{mml:mn} \rangle$ in opaque scattering media. <i>Physical Review A</i> , 2016, 93, .	2.5	55
13	Optically Integrated InP-Si ₃ N ₄ Hybrid Laser. <i>IEEE Photonics Journal</i> , 2016, 8, 1-11.	2.0	51
14	Programmable optical processor chips: toward photonic RF filters with DSP-level flexibility and MHz-band selectivity. <i>Nanophotonics</i> , 2017, 7, 421-454.	6.0	48
15	Spatially dependent Rabi oscillations: An approach to sub-diffraction-limited coherent anti-Stokes Raman-scattering microscopy. <i>Physical Review A</i> , 2010, 81, .	2.5	40
16	290 Hz Intrinsic Linewidth from an Integrated Optical Chip-based Widely Tunable InP-Si ₃ N ₄ Hybrid Laser. , 2017, , .		38
17	Photo-induced second-order nonlinearity in stoichiometric silicon nitride waveguides. <i>Optics Express</i> , 2017, 25, 33143.	3.4	34
18	Ground-state depletion for subdiffraction-limited spatial resolution in coherent anti-Stokes Raman scattering microscopy. <i>Physical Review A</i> , 2012, 86, .	2.5	33

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19	Stimulated-emission pumping enabling sub-diffraction-limited spatial resolution in coherent anti-Stokes Raman scattering microscopy. <i>Physical Review A</i> , 2013, 87, .	2.5	26
20	Influence of the oxidation state of SrTiO ₃ plasmas for stoichiometric growth of pulsed laser deposition films identified by laser induced fluorescence. <i>APL Materials</i> , 2015, 3, 106103.	5.1	26
21	A theoretical investigation of super-resolution CARS imaging via coherent and incoherent saturation of transitions. <i>Journal of Raman Spectroscopy</i> , 2011, 42, 1854-1858.	2.5	25
22	Hybrid-integrated diode laser in the visible spectral range. <i>Optics Letters</i> , 2021, 46, 4904.	3.3	25
23	Fabrication and characterization of free-standing, high-line-density transmission gratings for the vacuum UV to soft X-ray range. <i>Optics Express</i> , 2015, 23, 4421.	3.4	23
24	Ring resonator enhanced mode-hop-free wavelength tuning of an integrated extended-cavity laser. <i>Optics Express</i> , 2020, 28, 5669.	3.4	22
25	The influence of the pulse length on the drilling of metals with an excimer laser. <i>Journal of Laser Applications</i> , 2004, 16, 85-91.	1.7	21
26	290 Hz intrinsic linewidth from an integrated optical chip-based widely tunable InP-Si ₃ N ₄ hybrid laser. , 2017, , .		21
27	Linewidth narrowing via low-loss dielectric waveguide feedback circuits in hybrid integrated frequency comb lasers. <i>Optics Express</i> , 2019, 27, 13307.	3.4	20
28	Analytic theory of soft x-ray diffraction by lamellar multilayer gratings. <i>Optics Express</i> , 2011, 19, 9172.	3.4	19
29	Rapid and sensitive trace gas detection with continuous wave Optical Parametric Oscillator-based Wavelength Modulation Spectroscopy. <i>Applied Physics B: Lasers and Optics</i> , 2011, 103, 223-228.	2.2	18
30	Integrated CARS source based on seeded four-wave mixing in silicon nitride. <i>Optics Express</i> , 2013, 21, 32123.	3.4	18
31	Subwavelength single layer absorption resonance antireflection coatings. <i>Optics Express</i> , 2014, 22, 490.	3.4	18
32	High-Selectivity On-Chip Optical Bandpass Filter With Sub-100-MHz Flat-Top and Under-2 Shape Factor. <i>IEEE Photonics Technology Letters</i> , 2019, 31, 455-458.	2.5	18
33	Wavelength-swept Yb-fiber master-oscillator-power-amplifier with 70nm rapid tuning range. <i>Optics Express</i> , 2011, 19, 10511.	3.4	16
34	8Å–8 Programmable Quantum Photonic Processor based on Silicon Nitride Waveguides. , 2018, , .		16
35	CRIT-Alternative Narrow-Passband Waveguide Filter for Microwave Photonic Signal Processors. <i>IEEE Photonics Technology Letters</i> , 2014, 26, 1034-1037.	2.5	14
36	Suppression of resonance Raman scattering via ground state depletion towards sub-diffraction-limited label-free microscopy. <i>Optics Express</i> , 2016, 24, 20745.	3.4	14

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37	Revisiting argon cluster formation in a planar gas jet for high-intensity laser matter interaction. Journal of Applied Physics, 2016, 119, .	2.5	14
38	Surface acoustic waves for acousto-optic modulation in buried silicon nitride waveguides. Optics Express, 2019, 27, 1433.	3.4	13
39	Lossless microwave photonic delay line using a ring resonator with an integrated semiconductor optical amplifier. Journal of Optics (United Kingdom), 2017, 19, 065802.	2.2	12
40	Supercontinuum Generation in Media with Signâ€ Alternated Dispersion. Laser and Photonics Reviews, 2020, 14, 2000031.	8.7	12
41	Incoherently pumped continuous wave optical parametric oscillator broadened by non-collinear phasematching. Optics Express, 2011, 19, 21786.	3.4	11
42	Extended theory of soft x-ray reflection for realistic lamellar multilayer gratings. Optics Express, 2013, 21, 13105.	3.4	11
43	A hybrid semiconductor-glass waveguide laser. Proceedings of SPIE, 2014, , .	0.8	11
44	Temporal model for quasi-phase matching in high-order harmonic generation. Optics Express, 2017, 25, 3621.	3.4	11
45	Spectral linewidth analysis of semiconductor hybrid lasers with feedback from an external waveguide resonator circuit. Optics Express, 2017, 25, 32767.	3.4	11
46	Spontaneous four-wave mixing in silicon nitride waveguides for broadband coherent anti-Stokes Raman scattering spectroscopy. Optics Letters, 2020, 45, 3873.	3.3	11
47	Spatial and temporal mapping of Al and AlO during oxidation in pulsed laser ablation of LaAlO ₃ . Journal of Instrumentation, 2013, 8, C10021-C10021.	1.2	10
48	Integrated microwave photonic splitter with reconfigurable amplitude, phase, and delay offsets. Optics Letters, 2015, 40, 5618.	3.3	10
49	Ultrafast, low-power, all-optical switching via birefringent phase-matched transverse mode conversion in integrated waveguides. Optics Express, 2015, 23, 19189.	3.4	10
50	Toward integrated synchronously pumped optical parametric oscillators in silicon nitride. Optics Express, 2021, 29, 39895.	3.4	10
51	Wavefront correction in the extreme ultraviolet wavelength range using piezoelectric thin films. Optics Express, 2014, 22, 30623.	3.4	9
52	Spectral purification and infrared light recycling in extreme ultraviolet lithography sources. Optics Express, 2014, 22, 8633.	3.4	8
53	Laser-induced fluorescence analysis of plasmas for epitaxial growth of YBiO ₃ films with pulsed laser deposition. APL Materials, 2016, 4, .	5.1	8
54	Spectral control of high-harmonic generation via drive laser pulse shaping in a wide-diameter capillary. Optics Express, 2016, 24, 1604.	3.4	8

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55	Optical parametric amplification in silicon nitride waveguides for coherent Raman imaging. Optics Express, 2021, 29, 10424.	3.4	8
56	Numerical and Experimental Demonstration of Intermodal Dispersive Wave Generation. Laser and Photonics Reviews, 2021, 15, 2100125.	8.7	8
57	One-Watt level mid-IR output, singly resonant, continuous-wave optical parametric oscillator pumped by a monolithic diode laser. Optics Express, 2010, 18, 11123.	3.4	7
58	Low-power broadband all-optical switching via intermodal cross-phase modulation in integrated optical waveguides. Optics Letters, 2018, 43, 1631.	3.3	7
59	Using ultra-short pulses to determine particle size and density distributions. Optics Express, 2007, 15, 12483.	3.4	6
60	Narrowband and tunable anomalous transmission filters for spectral monitoring in the extreme ultraviolet wavelength region. Optics Express, 2017, 25, 1993.	3.4	6
61	Density matrix study of ground state depletion towards sub-diffraction-limited spontaneous Raman scattering spectroscopy. Journal of Chemical Physics, 2018, 148, 204110.	3.0	6
62	High precision wavelength estimation method for integrated optics. Optics Express, 2013, 21, 17042.	3.4	5
63	Q-factor measurements through injection locking of a semiconductor-glass hybrid laser with unknown intracavity losses. Optics Letters, 2014, 39, 1748.	3.3	5
64	Single-shot fluctuations in waveguided high-harmonic generation. Optics Express, 2015, 23, 24888.	3.4	5
65	Polarisation-dependent interference of two-photon absorption in a broad-band laser. Optics Communications, 1988, 66, 225-230.	2.1	4
66	Ellipsometry with randomly varying polarization states. Optics Express, 2012, 20, 870.	3.4	4
67	High spectral purity microwave generation using a dual-frequency hybrid integrated semiconductor-dielectric waveguide laser. OSA Continuum, 2021, 4, 2133.	1.8	4
68	The noise-limited-resolution for stimulated emission depletion microscopy of diffusing particles. Optics Express, 2012, 20, 12793.	3.4	3
69	A gain-coefficient switched Alexandrite laser. Journal Physics D: Applied Physics, 2013, 46, 015103.	2.8	3
70	Widely and Rapidly Tunable Semiconductor Master-Oscillator Fiber Amplifier Around 1080 nm. IEEE Photonics Technology Letters, 2006, 18, 2683-2685.	2.5	2
71	Method to map individual electromagnetic field components inside a photonic crystal. Optics Express, 2012, 20, 22902.	3.4	2
72	Temperature-drift-immune wavelength meter based on an integrated micro-ring resonator. Proceedings of SPIE, 2017, , .	0.8	2

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73	Nonlinear Optics Approaches Towards Subdiffraction Resolution in CARS Imaging. Neuromethods, 2014, , 291-324.	0.3	2
74	First realization of a hybrid integrated diode laser in the visible spectral range (Conference) Tj ETQq0 0 0 rgBT /Overlock 10 Tf,50 702 Td		2
75	Single-mode power scaling in a multi-beam photonic free-electron laser. , 2012, , .		1
76	Study of beam focusing techniques for a power- and frequency scalable photonic free-electron laser. , 2012, , .		1
77	Optically integrated InP-Si3N4 hybrid laser. , 2016, , .		1
78	Photoinduced $\ddot{\ddagger}(2)$ for second harmonic generation in stoichiometric silicon nitride waveguides. , 2017, , .		1
79	Reflective aperiodic multilayer filters for metrology at XUV sources. Optics Express, 2020, 28, 3331.	3.4	1
80	Narrow Intrinsic Linewidth Frequency Combs from a Chip-Based Hybrid Integrated InP-Si3N4 Diode Laser. , 2019, , .		1
81	P3-30: Slow - wave structure for a photonic free - electron laser. , 2010, , .		0
82	Correction to article "Ellipsometry with randomly varying polarization states" Optics Express, 2012, 20, 29308.	3.4	0
83	Power scalability of a low-current multi-beam photonic free-electron laser. , 2012, , .		0
84	Single Si<inf>3</inf>N<inf>4</inf> micro ring resonator as integrated wavelength meter with long-term reproducibility. , 2017, , .		0
85	All-optical switching using transverse modes in integrated waveguides. , 2017, , .		0
86	Controlling quantum correlations in massively multichannel optical networks. , 2017, , .		0
87	Second-harmonic generation in stoichiometric silicon nitride glass waveguides. , 2017, , .		0
88	8Å—8 Programmable Si3N4 Photonic Processor for Linear Quantum Processing. , 2019, , .		0
89	Mode-Hop-Free Tuning of a Chip-Based Hybrid Integrated InP-Si3N4 Laser. , 2019, , .		0
90	Dispersive Wave Generation via Intermodal Cross-phase Modulation. , 2021, , .		0

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91	Generation of Dispersive Waves via Intermodal Cross-phase Modulation. , 2021, , .		0
92	Optical parametric oscillator based on silicon nitride waveguides. , 2021, , .		0
93	Waveguide-based optical parametric amplification for coherent Raman imaging. , 2021, , .		0
94	Stimulated Emission Pumping Enabling Sub-Diffraction-Limited Spatial Resolution in CARS Microscopy. , 2012, , .		0
95	Experimental verification of Raman scattering suppression via ground state depletion for spatial resolution enhancement in label-free microscopy. , 2016, , .		0
96	Ultra-broadband Supercontinuum Generation at Telecommunication Wavelengths in Dispersion Engineered Stoichiometric Si ₃ N ₄ Waveguides. , 2016, , .		0
97	Si ₃ N ₄ Reconfigurable Linear Optical Network for Quantum Information Processing. , 2019, , .		0
98	Stimulated Four-Wave Mixing in Silicon Nitride Waveguides for Coherent Anti-Stokes Raman Scattering. , 2020, , .		0
99	Light Source for Coherent Raman Scattering Based on Spontaneous Four-Wave Mixing in Silicon Nitride Waveguides. , 2020, , .		0
100	Synchronously Pumped Waveguide-Based Optical Parametric Oscillator in Silicon Nitride. , 2021, , .		0
101	Intermodal Dispersive Wave Generation in Silicon Nitride Waveguides. , 2020, , .		0
102	Frequency Conversion by Intermodal Dispersive Wave Generation. , 2021, , .		0