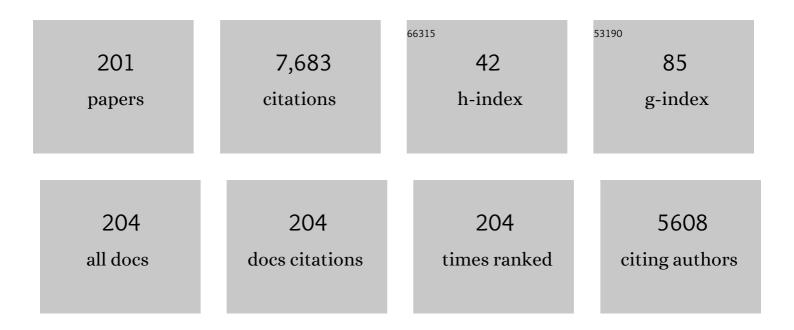
## Bahram Jalali

List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	Silicon Photonics. Journal of Lightwave Technology, 2006, 24, 4600-4615.	2.7	1,202
2	Demonstration of a silicon Raman laser. Optics Express, 2004, 12, 5269.	1.7	730
3	Deep Learning in Label-free Cell Classification. Scientific Reports, 2016, 6, 21471.	1.6	368
4	High-throughput single-microparticle imaging flow analyzer. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 11630-11635.	3.3	333
5	Time stretch and its applications. Nature Photonics, 2017, 11, 341-351.	15.6	333
6	All optical switching and continuum generation in silicon waveguides. Optics Express, 2004, 12, 4094.	1.7	223
7	Analog optical computing. Nature Photonics, 2015, 9, 704-706.	15.6	212
8	The third-order nonlinear optical coefficients of Si, Ge, and Si1â^' <i>x</i> Ge <i>x</i> in the midwave and longwave infrared. Journal of Applied Physics, 2011, 110, .	1.1	192
9	Theory of amplified dispersive Fourier transformation. Physical Review A, 2009, 80, .	1.0	179
10	Observation of Raman emission in silicon waveguides at 154 µm. Optics Express, 2002, 10, 1305.	1.7	168
11	Time-stretch LiDAR as a spectrally scanned time-of-flight ranging camera. Nature Photonics, 2020, 14, 14-18.	15.6	144
12	Self-phase-modulation induced spectral broadening in silicon waveguides. Optics Express, 2004, 12, 829.	1.7	138
13	Digitally synthesized beat frequency multiplexing for sub-millisecond fluorescence microscopy. Nature Photonics, 2013, 7, 806-810.	15.6	134
14	Performance of serial time-encoded amplified microscope. Optics Express, 2010, 18, 10016.	1.7	132
15	Demonstration of a Mid-infrared silicon Raman amplifier. Optics Express, 2007, 15, 14355.	1.7	128
16	Femtosecond real-time single-shot digitizer. Applied Physics Letters, 2007, 91, 161105.	1.5	121
17	Nonlinear optics in the mid-infrared. Nature Photonics, 2010, 4, 506-508.	15.6	103
18	Demonstration of directly modulated silicon Raman laser. Optics Express, 2005, 13, 796.	1.7	92

#	Article	IF	CITATIONS
19	Time–bandwidth engineering. Optica, 2014, 1, 23.	4.8	89
20	Label-free high-throughput cell screening in flow. Biomedical Optics Express, 2013, 4, 1618.	1.5	86
21	Prospects for Silicon Mid-IR Raman Lasers. IEEE Journal of Selected Topics in Quantum Electronics, 2006, 12, 1618-1627.	1.9	85
22	Amplified dispersive Fourier-transform imaging for ultrafast displacement sensing and barcode reading. Applied Physics Letters, 2008, 93, 131109.	1.5	78
23	High-speed nanometer-resolved imaging vibrometer and velocimeter. Applied Physics Letters, 2011, 98, .	1.5	72
24	Energy harvesting in silicon wavelength converters. Optics Express, 2006, 14, 12327.	1.7	64
25	Demonstration of 11dB fiber-to-fiber gain in a silicon Raman amplifier. IEICE Electronics Express, 2004, 1, 429-434.	0.3	63
26	Photonic timeâ€stretch digitizer and its extension to realâ€ŧime spectroscopy and imaging. Laser and Photonics Reviews, 2013, 7, 207-263.	4.4	61
27	Time-warp correction and calibration in photonic time-stretch analog-to-digital converter. Optics Letters, 2008, 33, 2674.	1.7	57
28	Digital broadband linearization of optical links. Optics Letters, 2013, 38, 446.	1.7	57
29	Deep Cytometry: Deep learning with Real-time Inference in Cell Sorting and Flow Cytometry. Scientific Reports, 2019, 9, 11088.	1.6	57
30	Real-time spectroscopy with subgigahertz resolution using amplified dispersive Fourier transformation. Applied Physics Letters, 2008, 92, .	1.5	54
31	Nonlinear absorption in silicon and the prospects of mid-infrared silicon Raman lasers. Physica Status Solidi (A) Applications and Materials Science, 2006, 203, R38-R40.	0.8	53
32	Giant tunable optical dispersion using chromo-modal excitation of a multimode waveguide. Optics Express, 2011, 19, 23809.	1.7	53
33	Multilayer 3-D photonics in silicon. Optics Express, 2007, 15, 12686.	1.7	51
34	Periodically poled silicon. Applied Physics Letters, 2009, 94, .	1.5	50
35	High-throughput optical coherence tomography at 800 nm. Optics Express, 2012, 20, 19612.	1.7	50
36	Distortion Cancellation in Time-Stretch Analog-to-Digital Converter. Journal of Lightwave Technology, 2007, 25, 3716-3721.	2.7	47

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37	Can silicon change photonics?. Physica Status Solidi (A) Applications and Materials Science, 2008, 205, 213-224.	0.8	47
38	Optical Data Compression in Time Stretch Imaging. PLoS ONE, 2015, 10, e0125106.	1.1	47
39	Teaching silicon new tricks. Nature Photonics, 2007, 1, 193-195.	15.6	46
40	All-dielectric photonic-assisted radio front-end technology. Nature Photonics, 2007, 1, 535-538.	15.6	43
41	Add-drop filters utilizing vertically coupled microdisk resonators in silicon. Applied Physics Letters, 2005, 86, 091102.	1.5	42
42	Raman amplification and lasing in SiGe waveguides. Optics Express, 2005, 13, 2459.	1.7	42
43	Limiting nature of continuum generation in silicon. Applied Physics Letters, 2008, 93, .	1.5	42
44	Anamorphic transformation and its application to time–bandwidth compression. Applied Optics, 2013, 52, 6735.	0.9	42
45	Spectro-temporal encoded multiphoton microscopy and fluorescence lifetime imaging at kilohertz frame-rates. Nature Communications, 2020, 11, 2062.	5.8	41
46	Simultaneous mechanical-scan-free confocal microscopy and laser microsurgery. Optics Letters, 2009, 34, 2099.	1.7	40
47	Real-time optical reflectometry enabled by amplified dispersive Fourier transformation. Applied Physics Letters, 2008, 93, .	1.5	37
48	Tailoring Wideband Signals With a Photonic Hardware Accelerator. Proceedings of the IEEE, 2015, 103, 1071-1086.	16.4	36
49	Experimental demonstration of optical real-time data compression. Applied Physics Letters, 2014, 104, 111101.	1.5	35
50	Nomarski serial time-encoded amplified microscopy for high-speed contrast-enhanced imaging of transparent media. Biomedical Optics Express, 2011, 2, 3387.	1.5	34
51	The Anamorphic Stretch Transform: Putting the Squeeze on "Big Data― Optics and Photonics News, 2014, 25, 24.	0.4	34
52	Two-Photon Photovoltaic Effect in Silicon. IEEE Journal of Quantum Electronics, 2007, 43, 1211-1217.	1.0	33
53	Ultrafast dark-field surface inspection with hybrid-dispersion laser scanning. Applied Physics Letters, 2014, 104, 251106.	1.5	33
54	Tera-sample per second real-time waveform digitizer. Applied Physics Letters, 2005, 87, 241116.	1.5	32

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55	Photonic Bandwidth Compression Front End for Digital Oscilloscopes. Journal of Lightwave Technology, 2009, 27, 5073-5077.	2.7	32
56	Discrete Anamorphic Transform for Image Compression. IEEE Signal Processing Letters, 2014, 21, 829-833.	2.1	32
57	Spectral periodicity in soliton explosions on a broadband mode-locked Yb fiber laser using time-stretch spectroscopy. Optics Letters, 2018, 43, 1862.	1.7	32
58	Vertically-coupled micro-resonators realized usingthree-dimensional sculpting in silicon. Applied Physics Letters, 2004, 85, 1018-1020.	1.5	30
59	Digital broadband linearization technique and its application to photonic time-stretch analog-to-digital converter. Optics Letters, 2011, 36, 1077.	1.7	30
60	Time stretch enhanced recording oscilloscope. Applied Physics Letters, 2009, 94, .	1.5	28
61	Phase Diversity Electro-optic Sampling: A new approach to single-shot terahertz waveform recording. Light: Science and Applications, 2022, 11, 14.	7.7	27
62	Noise Figure of Silicon Raman Amplifiers. Journal of Lightwave Technology, 2008, 26, 847-852.	2.7	26
63	Optically amplified detection for biomedical sensing and imaging. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2013, 30, 2124.	0.8	26
64	Gain Enhancement in Cladding-Pumped Silicon Raman Amplifiers. IEEE Journal of Quantum Electronics, 2008, 44, 692-704.	1.0	24
65	Optical time-domain analog pattern correlator for high-speed real-time image recognition. Optics Letters, 2011, 36, 220.	1.7	24
66	Coherent time-stretch transformation for real-time capture of wideband signals. Optics Express, 2013, 21, 21618.	1.7	23
67	Design of Warped Stretch Transform. Scientific Reports, 2015, 5, 17148.	1.6	23
68	Light Generation, Amplification, and Wavelength Conversion via Stimulated Raman Scattering in Silicon Microstructures. Topics in Applied Physics, 0, , 199-238.	0.4	22
69	Compact, transmissive two-dimensional spatial disperser design with application in simultaneous endoscopic imaging and laser microsurgery. Applied Optics, 2014, 53, 376.	0.9	21
70	Analog optical computing primitives in silicon photonics. Optics Letters, 2016, 41, 1273.	1.7	20
71	Feature Enhancement in Visually Impaired Images. IEEE Access, 2018, 6, 1407-1415.	2.6	19
72	Continuum generation and carving on a silicon chip. Applied Physics Letters, 2007, 91, 061111.	1.5	18

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73	Fourier-domain mode-locked laser combined with a master-oscillator power amplifier architecture. Optics Letters, 2019, 44, 1952.	1.7	18
74	Broadband Raman amplification in silicon. Applied Physics Letters, 2008, 93, 191105.	1.5	17
75	Coherent Time-Stretch Transform for Near-Field Spectroscopy. IEEE Photonics Journal, 2014, 6, 1-7.	1.0	17
76	Tera-sample-per-second single-shot device analyzer. Optics Express, 2019, 27, 23321.	1.7	17
77	All-dielectric photonic-assisted wireless receiver. Optics Express, 2008, 16, 1742.	1.7	16
78	150 CS/s real-time oscilloscope using a photonic front end. , 2008, , .		16
79	Electrical control of parametric processes in silicon waveguides. Optics Express, 2008, 16, 9838.	1.7	15
80	Subterranean silicon photonics: Demonstration of buried waveguide-coupled microresonators. Applied Physics Letters, 2005, 87, 081114.	1.5	14
81	Influence of Pump-to-Signal RIN Transfer on Noise Figure in Silicon Raman Amplifiers. IEEE Photonics Technology Letters, 2008, 20, 2021-2023.	1.3	14
82	Demonstration of Raman gain at 800 nm in single-mode fiber and its potential application to biological sensing and imaging. Applied Physics Letters, 2009, 95, 251101.	1.5	13
83	Impact of Optical Nonlinearity on Performance of Photonic Time-Stretch Analog-to-Digital Converter. Journal of Lightwave Technology, 2011, 29, 2025-2030.	2.7	13
84	Al boosts photonics and vice versa. APL Photonics, 2020, 5, 070401.	3.0	13
85	Single-shot network analyzer for extremely fast measurements. Applied Optics, 2016, 55, 8406.	2.1	12
86	Spectral dynamics on saturable absorber in mode-locking with time stretch spectroscopy. Scientific Reports, 2020, 10, 14460.	1.6	12
87	Spectrally encoded angular light scattering. Optics Express, 2013, 21, 28960.	1.7	11
88	Nonlinear SchrĶdinger Kernel for Hardware Acceleration of Machine Learning. Journal of Lightwave Technology, 2022, 40, 1308-1319.	2.7	11
89	Phase stretch transform for super-resolution localization microscopy. Biomedical Optics Express, 2016, 7, 4198.	1.5	10
90	Observation of simultaneous Stokes and anti-Stokes emission in a silicon Raman laser. IEICE Electronics Express, 2004, 1, 435-441.	0.3	9

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91	Three-dimensional integration of metal-oxide-semiconductor transistor with subterranean photonics in silicon. Applied Physics Letters, 2006, 88, 121108.	1.5	9
92	Real-time wavelength and bandwidth-independent optical integrator based on modal dispersion. Optics Express, 2012, 20, 14109.	1.7	9
93	Artificial Intelligence in Label-free Microscopy. , 2017, , .		9
94	Scaling laws of nonlinear silicon nanophotonics. , 2005, , .		8
95	Time-gated filter for sideband suppression. Optics Letters, 2009, 34, 869.	1.7	8
96	Noise figure of amplified dispersive Fourier transformation. Physical Review A, 2010, 82, .	1.0	8
97	Neural network enabled time stretch spectral regression. Optics Express, 2021, 29, 20786.	1.7	8
98	A Unified Framework for Photonic Timeâ $\in$ Stretch Systems. Laser and Photonics Reviews, 2022, 16, .	4.4	8
99	Raman beam cleanup in silicon in the mid-infrared. Optics Express, 2010, 18, 12411.	1.7	7
100	Digitally synthesized beat frequency-multiplexed fluorescence lifetime spectroscopy. Biomedical Optics Express, 2014, 5, 4428.	1.5	7
101	Invited Article: Optical dynamic range compression. APL Photonics, 2018, 3, 110806.	3.0	7
102	Nonlinear optics in silicon waveguides: stimulated Raman scattering and two-photon absorption. , 2003, 4987, 140.		6
103	Warped time lens in temporal imaging for optical real-time data compression. Science Bulletin, 2014, 59, 2649-2654.	1.7	6
104	Raman induced wavelength conversion in scaled Silicon waveguides. IEICE Electronics Express, 2004, 1, 298-304.	0.3	5
105	Stress-induced phase matching in Silicon waveguides. , 2006, , .		5
106	Two-Dimensional Spatio-Temporal Signal Processing for Dispersion Compensation in Time-Stretched ADC. Journal of Lightwave Technology, 2007, 25, 1580-1587.	2.7	5
107	Breaking Speed and Sensitivity Limits. Optik & Photonik, 2010, 5, 32-36.	0.3	5
108	Context-Aware Image Compression. PLoS ONE, 2016, 11, e0158201.	1.1	5

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109	Demonstration of CW Raman gain with zero electrical power dissipation in p-i-n silicon waveguides. , 2006, , .		4
110	Spectral Efficiency Improvement in Photonic Time-Stretch Analog-to-Digital Converter via Polarization Multiplexing. IEEE Photonics Technology Letters, 2011, 23, 947-949.	1.3	4
111	Sparsity and self-adaptivity in anamorphic stretch transform. , 2015, , .		4
112	Raman scattering from acoustic modes in Si/Ge superlattice waveguides. Superlattices and Microstructures, 2006, 39, 501-516.	1.4	3
113	Broadband Raman amplification in silicon. Conference Proceedings - Lasers and Electro-Optics Society Annual Meeting-LEOS, 2007, , .	0.0	3
114	Time warps in photonic time stretch ADC and their mitigation. , 2008, , .		3
115	Time-stretch oscilloscope with dual-channel differential detection front end for monitoring of 100 Gb/s return-to-zero differential quadrature phase-shift keying data. Optics Letters, 2011, 36, 3804.	1.7	3
116	High-throughput biological cell classification featuring real-time optical data compression. , 2015, , .		3
117	Radiofrequency encoded angular-resolved light scattering. Applied Physics Letters, 2015, 106, 123701.	1.5	3
118	Engineering Strain in Silicon Using SIMOX 3-D Sculpting. IEEE Photonics Journal, 2016, 8, 1-9.	1.0	3
119	Matrix Analysis of Warped Stretch Imaging. Scientific Reports, 2017, 7, 11150.	1.6	3
120	Phase-Stretch Adaptive Gradient-Field Extractor (PAGE). , 0, , .		3
121	Chromo-modal dispersion for optical communication and time-stretch spectroscopy. Optics Letters, 2021, 46, 500.	1.7	3
122	Dispersive Fourier transformation in the 800 nm spectral range. , 2012, , .		3
123	Silicon Raman amplifiers lasers and their applications. , 2005, , .		2
124	Multilayer 3-D Photonics in Silicon. , 2007, , .		2
125	Time-stretch accelerated processor for real-time, in-service, signal analysis. , 2014, , .		2
126	Noise and Information Capacity in Silicon Nanophotonics. IEEE Photonics Journal, 2015, 7, 1-20.	1.0	2

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127	A self-imaging silicon waveguide Raman amplifier. , 2007, , .		2
128	Time-stretch Network Analyzer for Single-shot Characterization of Electronic Devices. , 2019, , .		2
129	Time-Stretch Analog-to-Digital Conversion Using Phase Modulation and Broadband Balanced Coherent Detection for Improving Resolution. , 2011, , .		2
130	Silicon Raman laser, amplifier, and wavelength converter (Keynote Paper). , 2005, , .		1
131	Optical continuum generation on a silicon chip. , 2005, , .		1
132	Multi-mode Mid-IR Silicon Raman Amplifiers. Materials Research Society Symposia Proceedings, 2006, 958, 1.	0.1	1
133	Energy Harvesting in Silicon Photonic Devices. , 2006, , .		1
134	Nonlinear Photovoltaic Effect. Conference Proceedings - Lasers and Electro-Optics Society Annual Meeting-LEOS, 2007, , .	0.0	1
135	All-Dielectric Photonic-Assisted Wireless Receiver. Conference Proceedings - Lasers and Electro-Optics Society Annual Meeting-LEOS, 2007, , .	0.0	1
136	Serial Time Encoded Amplified Microscopy. , 2009, , .		1
137	Phase-contrast serial time-encoded amplified microscopy. , 2009, , .		1
138	Nonlinear silicon photonics. Proceedings of SPIE, 2010, , .	0.8	1
139	Digital Equalization of Ultrafast Data Using Real-time Burst Sampling. , 2010, , .		1
140	Floating body CMOS phototransistor memory. IEICE Electronics Express, 2010, 7, 1790-1795.	0.3	1
141	Eye diagram measurements and equalization with Real-time Burst Sampling. , 2010, , .		1
142	Broadband linearization and its application to photonic time-stretch ADC. , 2010, , .		1
143	100-Gb/s RZ-DQPSK Signal Monitoring Using Time-Stretch Enhanced Recording Oscilloscope. , 2011, , .		1
144	Ultrafast automated image cytometry for cancer detection. , 2013, 2013, 129-32.		1

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145	Self-adaptive stretch in anamorphic image compression. , 2014, , .		1
146	Nanoscale Strain Mapping in SIMOX 3-D Sculpted Silicon Waveguides Using Tip-Enhanced Raman Spectroscopy. IEEE Photonics Journal, 2016, 8, 1-12.	1.0	1
147	Optics-inspired context-aware image compression using warped stretch transform. , 2016, , .		1
148	Signal De-convolution with analog logarithmic computing primitives in silicon photonics. , 2016, , .		1
149	Physics-Based Feature Engineering. Springer Series in Optical Sciences, 2019, , 255-275.	0.5	1
150	Mid-infrared silicon Raman amplifier. , 2008, , .		1
151	Raman Emission in Silicon Waveguides. , 2003, , .		1
152	Performance of serial time-encoded amplified microscopy. , 2010, , .		1
153	Dispersion Engineering Employing Curved Space Mapping and Chromo-Modal Excitation. , 2015, , .		1
154	Engineering Strain in Silicon Using SIMOX 3D Sculpting. , 2016, , .		1
155	Time stretch dispersive Fourier transform based single-shot pulse-by-pulse spectrum measurement using a pulse-repetition-frequency-variable gain-switched laser. , 2018, , .		1
156	Enhanced OFDM communication using optical dynamic range compression. Optics Communications, 2022, 508, 127773.	1.0	1
157	3D integration of sub-surface photonics with CMOS. , 2006, , .		0
158	Si/Ge elatform for lasers, amplifiers, and nonlinear optical devices based on the Raman Effect. , 2007, , .		0
159	3-D Integration of Continuum Generation and Carving on a Silicon Chip. , 2007, , .		0
160	Silicon Lasers. , 0, , 147-189.		0
161	Silicon photonics: The inside story. , 2008, , .		0
162	Photonic time stretch enhanced recording scope. , 2008, , .		0

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163	A Non-Electronic Wireless Receiver with Immunity to Damage by Electromagnetic Pulses. Optical Science and Engineering, 2009, , 421-446.	0.1	0
164	Raman amplification at 800 nm in single-mode fiber for biological sensing and imaging. , 2010, , .		0
165	Stereopsis-inspired time-stretched amplified real-time spectrometer (STARS). , 2012, , .		Ο
166	Dispersive Fourier Transformation and Application to Cancer Detection. , 2013, , .		0
167	Miniaturized optical fiber endoscope without inertial scan for simultaneous imaging and laser microsurgery. , 2013, , .		0
168	Time-bandwidth engineering for arbitrary waveform generation. , 2014, , .		0
169	Near-field and complex-field time-stretch transform. , 2014, , .		0
170	Time-stretched spectrally encoded angular light scattering for high-throughput real-time diagnostics. Proceedings of SPIE, 2014, , .	0.8	0
171	Silicon photonics coprocessors for energy efficient computing. , 2015, , .		Ο
172	Time stretch imaging with optical data compression for label-free biological cell classification. , 2015, , .		0
173	Silicon photonics cloud (SiCloud). , 2015, , .		0
174	Analog gearbox: A photonic hardware accelerator. , 2016, , .		0
175	Al-augmented time stretch microscopy. Proceedings of SPIE, 2017, , .	0.8	Ο
176	Deep Learning Smart Microscope. , 2018, , .		0
177	Optical Computing of Mathematical Derivatives using Dispersion and Coherent Detection. , 2019, , .		Ο
178	Single-shot Measurement of THz pulses with sub-picosecond resolution and Megahertz acquisition rates. , 2019, , .		0
179	Al Enhances Femtosecond Spectral Interferometry. , 2021, , .		0
180	Time Stretch Computing for Ultrafast Single-shot Data Acquisition and Inference. , 2021, , .		0

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181	Silicon Raman Laser. , 2005, , .		Ο
182	Silicon and Silicon-Germanium Raman Laser. , 2005, , .		0
183	Mid-IR Silicon Raman Lasers. , 2006, , .		0
184	Pump to Signal RIN Transfer in Silicon Raman Amplifiers. , 2009, , .		0
185	Doubling the Spectral Efficiency of Photonic Time-Stretch Analog-to-Digital Converter by Polarization Multiplexing. , 2010, , .		0
186	From Analog to Digital Conversion to Blood Screening; Evolution of Photonic Time Stretch. , 2011, , .		0
187	Stress and Piezoelectric Tuning of Silicon's Optical Properties. , 2011, , 77-106.		0
188	Ultrahigh Throughput Single Cell Imaging. , 2013, , .		0
189	Ultrafast Dark-Field Surface Inspection by Hybrid Dispersion Laser Scanning. Kyokai Joho Imeji Zasshi/Journal of the Institute of Image Information and Television Engineers, 2015, 69, 574-579.	0.0	0
190	Differential Interference Imaging via Radio-frequency Sideband Encoding. , 2015, , .		0
191	Analog Logarithmic Computing Primitives with Silicon Photonics. , 2016, , .		0
192	Chapter 11 Information Capacity of Silicon Nanophotonics. , 2016, , 317-354.		0
193	History of Brain Mapping and Neurophotonics. , 2016, , 1-18.		0
194	Time Stretch Quantitative Phase Imaging. , 2017, , 43-63.		0
195	Time Stretch. , 2017, , 7-11.		0
196	Three-Dimensional Ultrafast Laser Scanner. , 2017, , 21-29.		0
197	Optical Data Compression in Time Stretch Imaging. , 2017, , 89-99.		0
198	Optical SNR Engineering using Warped Stretch. , 2018, , .		0

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199	Compressing the dynamic range and statistics of optical signals. , 2018, , .		0
200	Discrete spectral-temporal encoded LiDAR. , 2019, , .		0
201	Pulse-by-pulse single-shot optical spectrum analyzer developed on a single platform. , 2019, , .		0