

Jiri Ctyroky

List of Publications by Year in descending order

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152
papers

2,818
citations

186265

28
h-index

182427

51
g-index

152
all docs

152
docs citations

152
times ranked

1874
citing authors

#	ARTICLE	IF	CITATIONS
1	Surface plasmon resonance biosensor based on integrated optical waveguide. Sensors and Actuators B: Chemical, 2001, 76, 8-12.	7.8	250
2	Novel spectral fiber optic sensor based on surface plasmon resonance. Sensors and Actuators B: Chemical, 2001, 74, 106-111.	7.8	230
3	Surface plasmon resonance sensor based on a single-mode polarization-maintaining optical fiber. Sensors and Actuators B: Chemical, 2003, 90, 236-242.	7.8	226
4	Single-mode optical fiber surface plasmon resonance sensor. Sensors and Actuators B: Chemical, 1999, 54, 74-79.	7.8	168
5	Miniaturization of fiber optic surface plasmon resonance sensor. Sensors and Actuators B: Chemical, 1998, 51, 311-315.	7.8	115
6	Optical Theorem Helps Understand Thresholds of Lasing in Microcavities With Active Regions. IEEE Journal of Quantum Electronics, 2011, 47, 20-30.	1.9	93
7	Theory and modelling of optical waveguide sensors utilising surface plasmon resonance. Sensors and Actuators B: Chemical, 1999, 54, 66-73.	7.8	92
8	A surface plasmon resonance based integrated optical sensor. Sensors and Actuators B: Chemical, 1997, 39, 286-290.	7.8	88
9	Analytic approach to dielectric optical bent slab waveguides. Optical and Quantum Electronics, 2005, 37, 37-61.	3.3	75
10	Design of narrowband Bragg spectral filters in subwavelength grating metamaterial waveguides. Optics Express, 2018, 26, 179.	3.4	74
11	Waveguide structures with antisymmetric gain/loss profile. Optics Express, 2010, 18, 21585.	3.4	61
12	Analysis of a deep waveguide Bragg grating. Optical and Quantum Electronics, 1998, 30, 343-358.	3.3	55
13	Low-threshold lasing eigenmodes of an infinite periodic chain of quantum wires. Optics Letters, 2010, 35, 3634.	3.3	55
14	3-D analysis of LiNbO ₃ : Ti channel waveguides and directional couplers. IEEE Journal of Quantum Electronics, 1984, 20, 400-409.	1.9	53
15	Tuning of spectral operation range of a waveguide surface plasmon resonance sensor. Electronics Letters, 1997, 33, 1246.	1.0	50
16	On the accuracy of WKB analysis of TE and TM modes in planar graded-index waveguides. Optics Communications, 1978, 25, 49-52.	2.1	47
17	Dual resonance in a waveguide-coupled ring microresonator. Optical and Quantum Electronics, 2007, 38, 781-797.	3.3	42
18	Bragg filter bandwidth engineering in subwavelength grating metamaterial waveguides. Optics Letters, 2019, 44, 1043.	3.3	41

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19	Cylindrical integrated optical microresonators: Modeling by 3-D vectorial coupled mode theory. Optics Communications, 2005, 256, 46-67.	2.1	38
20	Interaction between fiber modes and surface plasmon waves: spectral properties. Optics Letters, 1997, 22, 1403.	3.3	36
21	Modelling of the surface plasmon resonance waveguide sensor with Bragg grating. Optical and Quantum Electronics, 1999, 31, 927-941.	3.3	36
22	Field modeling of circular microresonators by film mode matching. IEEE Journal of Selected Topics in Quantum Electronics, 2005, 11, 217-223.	2.9	36
23	Lasing frequencies and thresholds of the dipole supermodes in an active microdisk concentrically coupled with a passive microring. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2008, 25, 2884.	1.5	35
24	Bragg waveguide grating as a 1D photonic band gap structure: COST 268 modelling task. Optical and Quantum Electronics, 2002, 34, 455-470.	3.3	33
25	Disorder effects in subwavelength grating metamaterial waveguides. Optics Express, 2017, 25, 12222.	3.4	31
26	Vectorial Eigenmode Solver for Bent Waveguides Based on Mode Matching. IEEE Photonics Technology Letters, 2004, 16, 2057-2059.	2.5	30
27	Reflectivity of Superimposed Bragg Gratings Induced by Longitudinal Mode Instabilities in Fiber Lasers. IEEE Journal of Selected Topics in Quantum Electronics, 2018, 24, 1-8.	2.9	30
28	Photonic bandgap structures in planar waveguides. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2001, 18, 435.	1.5	28
29	Dispersion properties of silicon nanophotonic waveguides investigated with Fourier optics. Optics Letters, 2007, 32, 2723.	3.3	28
30	Fourier Series-Based Bidirectional Propagation Algorithm With Adaptive Spatial Resolution. Journal of Lightwave Technology, 2010, 28, 2969-2976.	4.6	28
31	Guided and semileaky modes in anisotropic optical waveguides of the LiNbO ₃ type. Optics Communications, 1978, 27, 353-357.	2.1	24
32	Ring microresonator as a photonic structure with complex eigenfrequency. Optical and Quantum Electronics, 2004, 36, 259-269.	3.3	24
33	A comparison between different propagative schemes for the simulation of tapered step index slab waveguides. Journal of Lightwave Technology, 1996, 14, 1557-1569.	4.6	22
34	3-D Bidirectional Propagation Algorithm Based on Fourier Series. Journal of Lightwave Technology, 2012, 30, 3699-3708.	4.6	22
35	Narrowband Bragg filters based on subwavelength grating waveguides for silicon photonic sensing. Optics Express, 2020, 28, 37971.	3.4	22
36	Improved Bidirectional-Mode Expansion Propagation Algorithm Based on Fourier Series. Journal of Lightwave Technology, 2007, 25, 2321-2330.	4.6	21

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37	Thin-film polariser for Ti:LiNbO ₃ waveguides at $\lambda = 1.314\mu\text{m}$. Electronics Letters, 1986, 22, 756.	1.0	20
38	Complex spectral filters in silicon waveguides based on cladding-modulated Bragg gratings. Optics Express, 2021, 29, 15867.	3.4	20
39	Er ³⁺ /Yb Waveguide Amplifiers in Novel Silicate Glasses. IEEE Journal of Quantum Electronics, 2008, 44, 536-541.	1.9	19
40	Diamond photonic crystal slab: Leaky modes and modified photoluminescence emission of surface-deposited quantum dots. Scientific Reports, 2012, 2, 914.	3.3	19
41	Analysis of hybrid dielectric-plasmonic slot waveguide structures with 3D Fourier Modal Methods. Journal of the European Optical Society-Rapid Publications, 0, 8, .	1.9	18
42	Efficient Boundary Conditions for Bidirectional Propagation Algorithm Based on Fourier Series. Journal of Lightwave Technology, 2009, 27, 2575-2582.	4.6	17
43	Generalized WKB method for the analysis of light propagation in inhomogeneous anisotropic optical waveguides. IEEE Journal of Quantum Electronics, 1981, 17, 1064-1070.	1.9	16
44	Inverted-graded index fiber structures for evanescent-wave chemical sensing. Sensors and Actuators B: Chemical, 1998, 51, 340-347.	7.8	15
45	Optical fields of the lowest modes in a uniformly active thin subwavelength spiral microcavity. Optics Letters, 2009, 34, 3773.	3.3	15
46	Resonance effects in the optical antennas shaped as finite comb-like gratings of noble-metal nanostrips. , 2013, , .		15
47	Novel approach to surface plasmon resonance multichannel sensing. , 2001, 4416, 86.		14
48	Grating Resonances on Periodic Arrays of Sub-wavelength Wires and Strips: From Discoveries to Photonic Device Applications. Springer Series in Optical Sciences, 2016, , 65-79.	0.7	14
49	Temperature sensitivity of long-period gratings inscribed with a CO ₂ laser in optical fiber with graded-index cladding. Sensors and Actuators B: Chemical, 2006, 119, 642-650.	7.8	13
50	A Simple Bi-directional Mode Expansion Propagation Algorithm Based on Modes of a Parallel-plate Waveguide. Optical and Quantum Electronics, 2006, 38, 45-62.	3.3	13
51	<title>Novel surface plasmon resonance sensor based on single-mode optical fiber</title>. , 1997, , .		11
52	Nonreciprocal waveguiding structures for THz region based on InSb. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2017, 34, 892.	1.5	11
53	Graphene on an optical waveguide: comparison of simulation approaches. Optical and Quantum Electronics, 2020, 52, 1.	3.3	11
54	Coupled-mode theory of Bragg diffraction in the presence of multiple internal reflections. Optics Communications, 1976, 16, 259-261.	2.1	10

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55	Dispersion properties of coupled waveguides with loss and gain: a full-vectorial analysis. Optical and Quantum Electronics, 2014, 46, 465-475.	3.3	10
56	Wave Propagation in a Waveguide with a Balance of Gain and Loss. , 1996, , .		10
57	Transmission properties and band structure of a segmented dielectric waveguide for the terahertz range. Optics Communications, 2007, 273, 99-104.	2.1	9
58	Comparison of 2D and 3D Fourier modal methods for modeling subwavelength-structured silicon waveguides. , 2011, , .		9
59	Analysis of a directional coupler by coupled modes of a single waveguide. Optics Letters, 1994, 19, 1621.	3.3	8
60	WKB analysis of guided and semileaky modes in graded-index anisotropic optical waveguides. Optics Communications, 1979, 28, 59-63.	2.1	7
61	Refractive-index profile measurement of highly multimode planar waveguides by guided-beam tracking. Optics Letters, 1982, 7, 552.	3.3	7
62	Voltage-Length Product of X and Z-Cut Ti: LiNbO3 Directional Coupler and BOA Switches: A Comparison. Journal of Optical Communications, 1986, 7, .	4.7	7
63	On the efficiency of small-angle Eerenkov second harmonic generation in optical waveguides. Optical and Quantum Electronics, 2000, 32, 799-818.	3.3	7
64	Fabrication and characterization of channel optical waveguides in Er/Yb-doped silicate glasses. Optical Materials, 2007, 30, 457-461.	3.6	7
65	High-power fiber laser with a polarizing diffraction grating milled on the facet of an optical fiber. Optics Express, 2016, 24, 30225.	3.4	7
66	Two-mode-interference Ti:LiNbO3 electro-optic polarisation-independent switch or polarisation splitter. Electronics Letters, 1991, 27, 965-966.	1.0	6
67	Modelling of self-aligned total internal reflection waveguide mirrors: an interlaboratory comparison. Optical and Quantum Electronics, 1995, 27, 935-942.	3.3	6
68	A COST 240 benchmark test for beam propagation methods applied to an electrooptical modulator based on surface plasmons. Journal of Lightwave Technology, 1998, 16, 1921-1927.	4.6	6
69	Bend sensing with long-period fiber gratings in capillaries embedded in structures. Materials Science and Engineering C, 2008, 28, 716-721.	7.3	6
70	Mode solvers for very thin long-range plasmonic waveguides. Optical and Quantum Electronics, 2011, 42, 557-570.	3.3	6
71	Simulations of waveguide Bragg grating filters based on subwavelength grating waveguide. Proceedings of SPIE, 2015, , .	0.8	6
72	<title>Detection of refractive-index changes by using a sensing fiber with an inverted parabolic index profile</title>. , 1999, , .		5

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73	Analysis of couplers between photonic nanowires and subwavelength grating waveguides. Proceedings of SPIE, 2013, , .	0.8	5
74	Nonlinear nanophotonic and nanoplasmonic directional couplers: comparison of modelling methods. Optical and Quantum Electronics, 2015, 47, 3201-3212.	3.3	5
75	Leaky-mode resonant gratings on a fibre facet. Optical and Quantum Electronics, 2018, 50, 1.	3.3	5
76	Silicon waveguides with graphene: coupling of waveguide mode to surface plasmons. Journal of Optics (United Kingdom), 2020, 22, 095801.	2.2	5
77	<title>Modified inverted-graded-index fibers for evanescent-wave chemical sensing</title>. , 1999, 3860, 443.		4
78	On the efficiency of the second harmonic generation in optical waveguides: TM case. Optical and Quantum Electronics, 2001, 33, 541-559.	3.3	4
79	Guided-Wave Optical Microresonators: Calculation of Eigenmodes. AIP Conference Proceedings, 2004, , .	0.4	4
80	Comments on "Approximate calculation of leaky-mode loss coefficients for Ti-diffused LiNbO3 waveguides". IEEE Journal of Quantum Electronics, 1980, 16, 1287-1288.	1.9	3
81	Advances in development of miniature fiber optic surface plasmon resonance sensors. , 2001, , .		3
82	Evaluation of cerenkov second harmonic generation in planar waveguides in the fourier domain. Journal of Lightwave Technology, 2003, 21, 299-304.	4.6	3
83	Analysis of a long-period grating inscribed in the core of a fibre with inverse parabolic-index cladding. Materials Science and Engineering C, 2006, 26, 431-435.	7.3	3
84	Advanced photonic and plasmonic waveguide nanostructures analyzed with Fourier modal methods. , 2013, , .		3
85	Broadly tunable laser based on novel metallic resonant leaky-mode diffraction grating. Optics Express, 2020, 28, 4340.	3.4	3
86	On the Propagation of Wave Beams in Anisotropic Media. Optica Acta, 1975, 22, 435-441.	0.7	2
87	Guided-wave Electro-optic X-type Switches: Symmetry, Switching Characteristics and Cross-talk. Journal of Modern Optics, 1988, 35, 1007-1015.	1.3	2
88	Analysis of Polarization Effects in Near-Z-Axis Ti:LiNbO3 Devices. Journal of Optical Communications, 1993, 14, .	4.7	2
89	<title>Characterization of optical waveguides with very different refractive-index contrasts</title>. , 2006, , .		2
90	Critical comparison of three modal methods: bidirectional eigenmode expansion propagation method, aperiodic rigorous coupled mode analysis, and harmonic expansion method. , 2008, , .		2

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91	Novel types of plasmonic waveguiding structures. Proceedings of SPIE, 2012, , .	0.8	2
92	RCWA/aRCWA - An efficient and diligent workhorse for nanophotonic/nanoplasmonic simulations - can it work even better?. , 2015, , .		2
93	Comment on "Photonic integrated circuits with bound states in the continuum" Optica, 0, , .	9.3	2
94	Photorefractive effect in optical waveguides made of different cuts of lithium niobate. Soviet Journal of Quantum Electronics, 1983, 13, 1536-1538.	0.1	1
95	Model of Ti: LiNbO3 Two-Mode-Interference Polarization-Independent Switch and Polarization Splitter. Journal of Optical Communications, 1992, 13, .	4.7	1
96	Influence of optical fibers on the spectrum of transmitted light-emitting-diode radiation. Applied Optics, 1995, 34, 4312.	2.1	1
97	Waveguide Bragg grating as a 1D photonic bandgap structure. , 1999, 4016, 92.		1
98	Abnormal reflecting mirror structures for intra-cavity Aerenkov second-harmonic generation. Applied Physics B: Lasers and Optics, 2001, 73, 541-545.	2.2	1
99	Plasmon and structure resonances in the scattering of light by a periodic chain of silver nanocylinders. , 2010, , .		1
100	Application of Fourier modal methods to simulating novel plasmonic guiding nanostructures. , 2012, , .		1
101	Modal methods for 3D modelling of advanced photonic structures. , 2012, , .		1
102	Physics and advanced simulations of photonic and plasmonic structures. , 2014, , .		1
103	Self-sweeping of laser wavelength and associated mode instabilities in fiber lasers. , 2017, , .		1
104	High performance silicon photonic devices based on practical metamaterials. , 2019, , .		1
105	Sensitivity Characteristics of Long-Period Gratings Written with a CO ₂ Laser in Fiber with Parabolic-Index Cladding. Sensor Letters, 2009, 7, 979-983.	0.4	1
106	Bottle Microresonators Fabricated by Shaping Optical Fibers with a Beam of a CO2 Laser. Sensor Letters, 2011, 9, 2279-2282.	0.4	1
107	Analysis and Design of a Flat Transducer Array Acousto-optic Deflector with Respect to the Second-order Diffraction. Optica Acta, 1978, 25, 1081-1086.	0.7	0
108	Novel beam-to-waveguide coupler for LiNbO3 optical waveguides. Electronics Letters, 1979, 15, 519.	1.0	0

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109	<title>Attenuation of light in polymeric Langmuir-Blodgett and spin-coated films</title>. , 1994, , .		0
110	<title>Bidirectional beam propagation modeling of photonic structures based on mode expansion and matching</title>. , 1994, , .		0
111	Surface plasmon resonance sensors using optical waveguides. , 1997, , .		0
112	Miniature fiber optic surface plasmon resonance biosensors. , 1999, , .		0
113	Modified graded-index fibers for chemical sensing. , 1999, , .		0
114	Fiber optic surface plasmon resonance sensor with a Bragg grating. , 1999, , .		0
115	Frequency doubling in the Cerenkov regime utilizing an abnormal reflecting mirror structure. , 2001, 4350, 154.		0
116	Exchangeable grating couplers for integrated optics. , 2003, , .		0
117	Evaluation of the length dependence of the pump-depleted Cerenkov SHG. , 2004, , .		0
118	Tunability of Polymeric Ring Microresonators. AIP Conference Proceedings, 2004, , .	0.4	0
119	Waveguide Diagnostics by a Tunable Semiconductor Laser. AIP Conference Proceedings, 2004, , .	0.4	0
120	The 2003 International Workshop on Optical Waveguide Theory and Numerical Modelling. Optical and Quantum Electronics, 2004, 36, 1-3.	3.3	0
121	<title>Mode expansion and propagation method based on eigenmodes of a parallel-plate waveguide</title>. , 2006, 6180, 99.		0
122	<title>Novel optical fibers for the inscription of long-period gratings</title>. , 2006, 6180, 194.		0
123	Long-period gratings with high insensitivity to external refractive index inscribed by using a CO ₂ laser in fibers with parabolic-index cladding. , 2007, , .		0
124	Analysis of bending effects in long period gratings in fibres with parabolic refractive index profile of the cladding. Materials Science and Engineering C, 2008, 28, 739-743.	7.3	0
125	Light Advancement and Delay by Linear Filters With Close to Zero Resonant Transmittance. Journal of Lightwave Technology, 2008, 26, 3708-3713.	4.6	0
126	Nystrom-type technique for numerical analysis of lasing spectra and thresholds in arbitrary-shaped active 2-D microcavities. , 2008, , .		0

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127	Optical theorem helps understand thresholds of lasing in open semiconductor microcavities. , 2008, , .		0
128	New aspects of the use of Optical Theorem in the analysis of microcavity lasers. , 2008, , .		0
129	Mode solvers and mode expansion methods for integrated photonics. , 2008, , .		0
130	Lasing spectra and thresholds of supermodes in an active microdisk assisted with a passive microring in view of the mode overlap coefficients. , 2008, , .		0
131	A robust full-vectorial mode solver for metalized fiber taper. , 2008, , .		0
132	Bend insensitive long-period gratings written with a CO2 laser in fiber with parabolic-index cladding. Proceedings of SPIE, 2008, , .	0.8	0
133	Nyström-method analysis of active spiral subwavelength 2-D microresonators. , 2009, , .		0
134	Surface plasmons on nanostructured metal-dielectric surfaces. Proceedings of SPIE, 2010, , .	0.8	0
135	Surface waves at the interface with an antisymmetric gain&^*loss profile. , 2010, , .		0
136	Preparation and characterization of bottle optical microresonators with circular and hexagonal cross-sections. , 2011, , .		0
137	Photonic waveguiding structures with loss and gain. Proceedings of SPIE, 2011, , .	0.8	0
138	Recent developments in Fourier modal methods for modeling guided-wave devices. , 2011, , .		0
139	Finite comb-like silver nanostrip grating in the optical range: Interplay of resonances. , 2013, , .		0
140	Mathematical simulation of optical nanoantenna based on a comb-like finite nanostrip grating. , 2013, , .		0
141	Grating resonances on periodic arrays of sub-wavelength wires and strips: Historical narrative and possible applications. , 2013, , .		0
142	Analysis of the modes of a core-shell plasmonic nanowire laser with a silver core. , 2015, , .		0
143	Study on one-way guiding InSb structures for THz spectral region. , 2016, , .		0
144	Anti-reflection and polarizing photonic structures for high-power fiber applications. Proceedings of SPIE, 2017, , .	0.8	0

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145	Novel Effects and Functionalities in Subwavelength Photonic and Plasmonic (Nano)Structures. , 2018, , .		0
146	Separation of refractive index and temperature measurements using surface plasmon-coupled fiber grating. , 2000, , .		0
147	Linear and Nonlinear Propagation in Microring Resonators. , 2007, , .		0
148	Frequency Conversion in Ti:LiNbO3 Channel Waveguides. , 1995, , 407-413.		0
149	Magneto-optical waveguiding InSb-based structures with nonreciprocal properties. , 2017, , .		0
150	Fiber facet gratings for high power fiber lasers. , 2017, , .		0
151	Flat metal-dielectric grating with 100% retro-diffraction efficiency: rigorous theory. Journal of Optics (United Kingdom), 2021, 23, 015601.	2.2	0
152	Coupling of waveguide mode and graphene plasmons. EPJ Web of Conferences, 2021, 255, 07002.	0.3	0