Ignacio Del Villar

List of Publications by Year
in descending order

157	4,798	94269 37	114278 63
papers	citations	h-index	g-index

165	165	165	1973
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Lab on Fiber Technology Towards Advanced and Multifunctional Point-of-Care Platforms for Precision Medicine. , 2023, , 504-527.		0
2	Lossy Mode Resonances Generated in Planar Configuration for Two-Parameter Sensing. IEEE Sensors Journal, 2022, 22, 11264-11270.	2.4	1
3	Multichannel Refractometer Based on Lossy Mode Resonances. IEEE Sensors Journal, 2022, 22, 3181-3187.	2.4	8
4	Optical fiber thermo-refractometer. Optics Express, 2022, 30, 11036.	1.7	11
5	Simultaneous Generation of Surface Plasmon and Lossy Mode Resonances in the Same Planar Platform. Sensors, 2022, 22, 1505.	2.1	9
6	Lossy Mode Resonance Based Microfluidic Platform Developed on Planar Waveguide for Biosensing Applications. Biosensors, 2022, 12, 403.	2.3	11
7	Mode Transitions and Thickness Measurements During Deposition of Nanoscale TiO₂ Coatings on Tilted Fiber Bragg Gratings. Journal of Lightwave Technology, 2022, 40, 6006-6012.	2.7	5
8	Ultrahigh Sensitive Detection of Tau Protein as Alzheimer's Biomarker via Microfluidics and Nanofunctionalized Optical Fiber Sensors. Advanced Photonics Research, 2022, 3, .	1.7	28
9	Advances in Fiber Optic DNA-Based Sensors: A Review. IEEE Sensors Journal, 2021, 21, 12679-12691.	2.4	8
10	Intrusive Passive Optical Tapping Device. IEEE Access, 2021, 9, 31627-31637.	2.6	0
11	Dually nanocoated planar waveguides towards multi-parameter sensing. Scientific Reports, 2021, 11, 3669.	1.6	22
12	Novel Bloch wave excitation platform based on few-layer photonic crystal deposited on D-shaped optical fiber. Scientific Reports, 2021, 11, 11266.	1.6	21
13	Optimization of Fiber Bragg Gratings Inscribed in Thin Films Deposited on D-Shaped Optical Fibers. Sensors, 2021, 21, 4056.	2.1	7
14	Interdigital concept in photonic sensors based on an array of lossy mode resonances. Scientific Reports, 2021, 11, 13228.	1.6	13
15	Twin lossy mode resonance on a single D-shaped optical fiber. Optics Letters, 2021, 46, 3284.	1.7	7
16	Wavelength and intensity based lossy mode resonance breathing sensor. Optics and Laser Technology, 2021, 140, 107063.	2.2	7
17	(INVITED)Nanocoated fiber label-free biosensing for perfluorooctanoic acid detection by lossy mode resonance. Results in Optics, 2021, 5, 100123.	0.9	33
18	Thin film coated D-shaped Fiber regenerable biosensor. , 2021, , .		0

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19	Lossy mode resonance sensors based on nanocoated multimode-coreless-multimode fibre. Sensors and Actuators B: Chemical, 2020, 304, 126955.	4.0	19
20	Low Cutoff Wavelength Etched SMS Structures Towards Verification of the Quality of Automotive Antifreeze. IEEE Sensors Journal, 2020, 20, 11342-11349.	2.4	2
21	Monitoring of the Critical Meniscus of Very Low Liquid Volumes Using an Optical Fiber Sensor. IEEE Sensors Journal, 2020, 20, 12232-12240.	2.4	6
22	Generation of lossy mode resonances in a broadband range with multilayer coated coverslips optimized for humidity sensing. Sensors and Actuators B: Chemical, 2020, 325, 128795.	4.0	13
23	Generation of lossy mode resonances with different nanocoatings deposited on coverslips. Optics Express, 2020, 28, 288.	1.7	24
24	Bloch waves at the surface of a single-layer coating D-shaped photonic crystal fiber. Optics Letters, 2020, 45, 2547.	1.7	14
25	Improving the width of lossy mode resonances in a reflection configuration D-shaped fiber by nanocoating laser ablation. Optics Letters, 2020, 45, 4738.	1.7	13
26	Lossy Mode Resonance Excitation in Fiber-Optics: Applications in Biosensing. , 2020, , .		0
27	Lossy Mode Resonance Sensors based on Tungsten Oxide Thin Films. , 2020, , .		4
28	Simultaneous Measurement of Refractive Index and Temperature using LMR on planar waveguide. , 2020, , .		2
29	Etched and Nanocoated Single-Mode Multimode Single-Mode (SMS) Fibers for Detection of Wind Turbine Gearbox Oil Degradation. Journal of Lightwave Technology, 2019, 37, 4665-4673.	2.7	7
30	A Comprehensive Review of Optical Fiber Refractometers: Toward a Standard Comparative Criterion. Laser and Photonics Reviews, 2019, 13, 1900094.	4.4	120
31	Fiber-based early diagnosis of venous thromboembolic disease by label-free D-dimer detection. Biosensors and Bioelectronics: X, 2019, 2, 100026.	0.9	37
32	Lossy mode resonance sensors based on lateral light incidence in nanocoated planar waveguides. Scientific Reports, 2019, 9, 8882.	1.6	43
33	Trends in the design of wavelength-based optical fibre biosensors (2008â€“2018). Biosensors and Bioelectronics: X, 2019, 1, 100015.	0.9	65
34	Multimode-Coreless-Multimode Fiber-Based Sensors: Theoretical and Experimental Study. Journal of Lightwave Technology, 2019, 37, 3844-3850.	2.7	20
35	Lossy mode resonance optical sensors based on indium-gallium-zinc oxide thin film. Sensors and Actuators A: Physical, 2019, 290, 20-27.	2.0	29
36	Generation of Lossy Mode Resonances in Planar Waveguides Toward Development of Humidity Sensors. Journal of Lightwave Technology, 2019, 37, 2300-2306.	2.7	21

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37	AC/DC Millivoltage Sensor by means of ITO-coated Optical Fibers: Towards Monitoring of Biosignals. , 2019, , .		1
38	Telecommunications on Earth and their possible relation with the anthropic principle. Scientia Et Fides, 2019, 7, 9.	0.3	0
39	Fiber-optics: a new route towards ultra-low detection limit label-free biosensing. , 2019, , .		0
40	Label-free wavelength and phase detection based SMS fiber immunosensors optimized with cladding etching. Sensors and Actuators B: Chemical, 2018, 265, 10-19.	4.0	36
41	Sensitivity enhancement experimental demonstration using a low cutoff wavelength SMS modified structure coated with a pH sensitive film. Sensors and Actuators B: Chemical, 2018, 262, 696-702.	4.0	4
42	Femtomolar Detection by Nanocoated Fiber Label-Free Biosensors. ACS Sensors, 2018, 3, 936-943.	4.0	193
43	Optimized Strain Long-Period Fiber Grating (LPFG) Sensors Operating at the Dispersion Turning Point. Journal of Lightwave Technology, 2018, 36, 2240-2247.	2.7	40
44	Long Period Fiber Grating for Biosensing: An Improved Design Methodology to Enhance Add-Layer Sensitivity. Journal of Lightwave Technology, 2018, 36, 1178-1184.	2.7	21
45	[INVITED] Nanofabrication of phase-shifted Bragg gratings on the end facet of multimode fiber towards development of optical filters and sensors. Optics and Laser Technology, 2018, 101, 49-56.	2.2	2
46	Optical Fiber Immunosensors Optimized with Cladding Etching and ITO Nanodeposition. , 2018, , .		5
47	Fabrication of Long Period Gratings by Periodically Removing the Coating of Cladding-Etched Single Mode Optical Fiber Towards Optical Fiber Sensor Development. Sensors, 2018, 18, 1866.	2.1	9
48	Detection of wind turbine gearbox oil degradation with etched single-mode multimode single-mode (SMS) fiber. , 2018, , .		1
49	All Fiber Interferometer for Ice Detection. , 2018, , .		0
50	Ultra-low detection limit lossy mode resonance-based fibre-optic biosensor. , 2018, , .		0
51	Fiber-Optic Immunosensor Based on an Etched SMS Structure. IEEE Journal of Selected Topics in Quantum Electronics, 2017, 23, 314-321.	1.9	25
52	Long period fiber gratings for bio-sensing: an improved design methodology. , 2017, , .		0
53	Wavelength and Phase Detection Based SMS Fiber Sensors Optimized With Etching and Nanodeposition. Journal of Lightwave Technology, 2017, 35, 3743-3749.	2.7	39
54	Optical sensors based on lossy-mode resonances. Sensors and Actuators B: Chemical, 2017, 240, 174-185.	4.0	182

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55	Sensitivity enhancement by diameter reduction in low cutoff wavelength single-mode multimode singlemode (SMS) fiber sensors. , 2017, , .		0
56	Optimization in nanocoated D-shaped optical fiber sensors. Optics Express, 2017, 25, 10743.	1.7	47
57	Monitoring the Etching Process in LPFGs towards Development of Highly Sensitive Sensors. Proceedings (mdpi), 2017, 1, .	0.2	2
58	Etched and Nanocoated SMS Fiber Sensor for Detection of Salinity Concentration. Proceedings (mdpi), 2017, 1, .	0.2	2
59	Sensitivity Enhancement in Low Cutoff Wavelength Long-Period Fiber Gratings by Cladding Diameter Reduction. Sensors, 2017, 17, 2094.	2.1	23
60	Micro and Nanostructured Materials for the Development of Optical Fibre Sensors. Sensors, 2017, 17, 2312.	2.1	48
61	Increasing the Sensitivity of an Optic Level Sensor With a Wavelength and Phase Sensitive Single-Mode Multimode Single-Mode Fiber Structure. IEEE Sensors Journal, 2017, 17, 5515-5522.	2.4	17
62	Sensitivity optimization with cladding-etched long period fiber gratings at the dispersion turning point. Optics Express, 2016, 24, 17680.	1.7	58
63	Indium tin oxide refractometer in the visible and near infrared via lossy mode and surface plasmon resonances with Kretschmann configuration. Applied Physics Letters, 2016, 108, .	1.5	22
64	Fiber-optic immunosensor based on lossy mode resonances induced by indium tin oxide thin-films. , 2016, , .		3
65	Tunable optical fiber pH sensors based on TE and TM Lossy Mode Resonances (LMRs). Sensors and Actuators B: Chemical, 2016, 231, 484-490.	4.0	36
66	Arc-Induced Long-Period Fiber Gratings in the Dispersion Turning Points. Journal of Lightwave Technology, 2016, 34, 4584-4590.	2.7	43
67	Giant sensitivity of optical fiber sensors by means of lossy mode resonance. Sensors and Actuators B: Chemical, 2016, 232, 660-665.	4.0	92
68	Single-modeâ€"multimodeâ€"single-mode and lossy mode resonance-based devices: a comparative study for sensing applications. Microsystem Technologies, 2016, 22, 1633-1638.	1.2	10
69	Sensors Based on Thin-Film Coated Cladding Removed Multimode Optical Fiber and Single-Mode Multimode Single-Mode Fiber: A Comparative Study. Journal of Sensors, 2015, 2015, 1-7.	0.6	10
70	Experimental Study and Sensing Applications of Polarization-Dependent Lossy Mode Resonances Generated by D-Shape Coated Optical Fibers. Journal of Lightwave Technology, 2015, 33, 2412-2418.	2.7	23
71	Analysis of lossy mode resonances on thin-film coated cladding removed plastic fiber. Optics Letters, 2015, 40, 4867.	1.7	14
72	Experimental demonstration of lossy mode and surface plasmon resonance generation with Kretschmann configuration. Optics Letters, 2015, 40, 4739.	1.7	35

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73	D-shape optical fiber pH sensor based on Lossy Mode Resonances (LMRs). , 2015, , .		4
74	Generation of Surface Plasmon Resonance and Lossy Mode Resonance by thermal treatment of ITO thin-films. Optics and Laser Technology, 2015, 69, 1-7.	2.2	37
75	Temperature sensor based on a hybrid ITO-silica resonant cavity. Optics Express, 2015, 23, 1930.	1.7	20
76	Ultrahigh-sensitivity sensors based on thin-film coated long period gratings with reduced diameter, in transition mode and near the dispersion turning point. Optics Express, 2015, 23, 8389.	1.7	104
77	High sensitive refractometers based on lossy mode resonances (LMRs) supported by ITO coated D-shaped optical fibers. Optics Express, 2015, 23, 8045.	1.7	69
78	A comparative study between SMS interferometers and lossy mode resonace optical fiber devices for sensing applications. Proceedings of SPIE, 2015, , .	0.8	2
79	Asymmetrically and symmetrically coated tapered optical fiber for sensing applications. , 2015, , .		0
80	D-shape optical fiber refractometer based on TM and TE lossy mode resonances. Proceedings of SPIE, 2014, , .	0.8	1
81	Celiac disease biodetection using lossy-mode resonances generated in tapered single-mode optical fibers. , 2014, , .		0
82	Fiber-optic Lossy Mode Resonance Sensors. Procedia Engineering, 2014, 87, 3-8.	1.2	26
83	Sensitivity enhancement in a multimode interference-based SMS fibre structure coated with a thin-film: Theoretical and experimental study. Sensors and Actuators B: Chemical, 2014, 190, 363-369.	4.0	36
84	Spectral width reduction in lossy mode resonance-based sensors by means of tapered optical fibre structures. Sensors and Actuators B: Chemical, 2014, 200, 53-60.	4.0	48
85	Refractometric sensors based on multimode interference in a thin-film coated single-modeâ€“multimodeâ€“single-mode structure with reflection configuration. Applied Optics, 2014, 53, 3913.	0.9	34
86	Fiber optic sensors based on lossy mode resonances. , 2014, , .		0
87	Optimization of Sensors Based on Multimode Interference in Single-Modeâ€“Multimodeâ€“Single-Mode Structure. Journal of Lightwave Technology, 2013, 31, 3460-3468.	2.7	25
88	Considerations for Lossy-Mode Resonance-Based Optical Fiber Sensor. IEEE Sensors Journal, 2013, 13, 1167-1171.	2.4	19
89	Optical Fiber Sensors Based on Lossy Mode Resonances. Smart Sensors, Measurement and Instrumentation, 2013, , 191-210.	0.4	3
90	Humidity sensor fabricated by deposition of SnO₂layers onto optical fibers. Proceedings of SPIE, 2013, , .	0.8	5

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91	Mode transition in complex refractive index coated single-modeâ€“multimodeâ€“single-mode structure. Optics Express, 2013, 21, 12668.	1.7	34
92	Design rules for lossy mode resonance based sensors. Applied Optics, 2012, 51, 4298.	0.9	177
93	Optical fiber refractometers based on indium tin oxide coatings fabricated by sputtering. Optics Letters, 2012, 37, 28.	1.7	24
94	Lossy mode resonances toward the fabrication of optical fiber humidity sensors. Measurement Science and Technology, 2012, 23, 014002.	1.4	31
95	SnO₂ based optical fiber refractometers. Proceedings of SPIE, 2012, , .	0.8	1
96	Fiber-optic biosensor based on lossy mode resonances. Sensors and Actuators B: Chemical, 2012, 174, 263-269.	4.0	54
97	Resonance-based refractometric response of cladding-removed optical fibers with sputtered indium tin oxide coatings. Sensors and Actuators B: Chemical, 2012, 175, 106-110.	4.0	39
98	Tapered Single-Mode Optical Fiber pH Sensor Based on Lossy Mode Resonances Generated by a Polymeric Thin-Film. IEEE Sensors Journal, 2012, 12, 2598-2603.	2.4	36
99	Sensing Properties of Indium Oxide Coated Optical Fiber Devices Based on Lossy Mode Resonances. IEEE Sensors Journal, 2012, 12, 151-155.	2.4	28
100	Lossy mode resonances dependence on the geometry of a tapered monomode optical fiber. Sensors and Actuators A: Physical, 2012, 180, 25-31.	2.0	16
101	Lossy mode resonance-based optical fiber humidity sensor. , 2011, , .		2
102	Lossy Mode Resonance-based pH sensor using a tapered single mode optical fiber coated with a polymeric nanostructure. , 2011, , .		7
103	Optical fiber refractometers based on sputtered indium tin oxide coatings. , 2011, , .		1
104	Influence of Waist Length in Lossy Mode Resonances Generated With Coated Tapered Single-Mode Optical Fibers. IEEE Photonics Technology Letters, 2011, 23, 1579-1581.	1.3	17
105	Optical Fiber Refractometers based on Indium Tin Oxide Coatings with Response in the Visible Spectral Region. Procedia Engineering, 2011, 25, 499-502.	1.2	4
106	Optical Fiber Humidity Sensor Based on Lossy Mode Resonances Supported by TiO2/PSS Coatings. Procedia Engineering, 2011, 25, 1385-1388.	1.2	30
107	Optical fiber pH sensor based on lossy-mode resonances by means of thin polymeric coatings. Sensors and Actuators B: Chemical, 2011, 155, 290-297.	4.0	149
108	Resonance-based optical fiber refractometers. , 2011, , .		0

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109	Lossy-mode resonance-based refractometers by means of indium oxide coatings fabricated onto optical fibers. Proceedings of SPIE, 2010, , .	0.8	5
110	Sensing properties of ITO coated optical fibers to diverse VOCs. Procedia Engineering, 2010, 5, 653-656.	1.2	7
111	Optical fiber sensors based on Layer-by-Layer nanostructured films. Procedia Engineering, 2010, 5, 1087-1090.	1.2	19
112	Lossy mode resonances supported by TiO2 -coated optical fibers. Procedia Engineering, 2010, 5, 1099-1102.	1.2	15
113	Tunable humidity sensor based on ITO-coated optical fiber. Sensors and Actuators B: Chemical, 2010, 146, 414-417.	4.0	126
114	Optical fiber pH sensor fabrication by means of indium tin oxide coated optical fiber refractometers. Physica Status Solidi C: Current Topics in Solid State Physics, 2010, 7, 2705-2707.	0.8	18
115	Agarose optical fibre humidity sensor based on electromagnetic resonance in the infraâ€red region. Physica Status Solidi C: Current Topics in Solid State Physics, 2010, 7, 2767-2769.	0.8	13
116	Generation of lossy mode resonances by deposition of high-refractive-index coatings on uncladded multimode optical fibers. Journal of Optics (United Kingdom), 2010, 12, 095503.	1.0	73
117	LMR-based optical fiber refractometers based on transparent conducting and semiconducting oxide coatings: a comparative study. Proceedings of SPIE, 2010, , .	0.8	7
118	Dual-Peak Resonance-Based Optical Fiber Refractometers. IEEE Photonics Technology Letters, 2010, 22, 1778-1780.	1.3	43
119	Optical fiber refractometers based on lossy mode resonances supported by TiO_2 coatings. Applied Optics, 2010, 49, 3980.	2.1	118
120	Resonances in coated long period fiber gratings and cladding removed multimode optical fibers: a comparative study. Optics Express, 2010, 18, 20183.	1.7	28
121	Lossy Mode Resonance Generation With Indium-Tin-Oxide-Coated Optical Fibers for Sensing Applications. Journal of Lightwave Technology, 2010, 28, 111-117.	2.7	228
122	Generation of Lossy Mode Resonances With Absorbing Thin-Films. Journal of Lightwave Technology, 2010, , .	2.7	30
123	ITO Coated Optical Fiber Refractometers Based on Resonances in the Infrared Region. IEEE Sensors Journal, 2010, 10, 365-366.	2.4	65
124	Optical Fiber Refractometers with Tunable Sensitivity Based on Indium Tin Oxide Coatings. Sensor Letters, 2010, 8, 744-746.	0.4	8
125	Nanofilm-based optical fiber sensor schemes. , 2009, , .		0
126	OPTICAL FIBER HUMIDITY SENSOR BASED ON LOSSY MODE RESONANCES. International Journal on Smart Sensing and Intelligent Systems, 2009, 2, 653-660.	0.4	9

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127	Two-Layer Nanocoatings in Long-Period Fiber Gratings for Improved Sensitivity of Humidity Sensors. IEEE Nanotechnology Magazine, 2008, 7, 394-400.	1.1	40
128	Fiber-Optic Chemical Nanosensors by Electrostatic Molecular Self- Assembly. Current Analytical Chemistry, 2008, 4, 341-355.	0.6	17
129	Spectral characteristics in long-period fiber gratings with nonuniform symmetrically ring shaped coatings. Applied Physics Letters, 2007, 90, 141105.	1.5	6
130	Non-uniform nano-coated long-period fiber gratings for sensing applications. Proceedings of SPIE, 2007, , .	0.8	0
131	Fiber-optic pH-sensors in long-period fiber gratings using electrostatic self-assembly. Optics Letters, 2007, 32, 29.	1.7	78
132	Fringe generation with non-uniformly coated long-period fiber gratings. Optics Express, 2007, 15, 9326.	1.7	29
133	Design of pH Sensors in Long-Period Fiber Gratings Using Polymeric Nanocoatings. IEEE Sensors Journal, 2007, 7, 455-463.	2.4	75
134	Enhanced Sensitivity in Humidity Sensors based on Long Period Fiber Gratings. , 2006, , .		5
135	Influence on cladding mode distribution of overlay deposition on long-period fiber gratings. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2006, 23, 651.	0.8	50
136	Influence on cladding mode distribution of overlay deposition on long-period fiber gratings: errata. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2006, 23, 2969.	0.8	1
137	Spectral evolution with incremental nanocoating of long period fiber gratings. Optics Express, 2006, 14, 11972.	1.7	21
138	Nanofilms on hollow core fiber-based structures: an optical study. Journal of Lightwave Technology, 2006, 24, 2100-2107.	2.7	24
139	Deposition of coatings on long-period fiber gratings: tunnel effect analogy. Optical and Quantum Electronics, 2006, 38, 655-665.	1.5	18
140	Fiber optic glucose biosensor. Optical Engineering, 2006, 45, 104401.	0.5	17
141	Nanorefractometer based on deposition of an overlay on a long period fiber grating. , 2005, 5855, 840.		3
142	Strategies for fabrication of hydrogen peroxide sensors based on electrostatic self-assembly (ESA) method. Sensors and Actuators B: Chemical, 2005, 108, 751-757.	4.0	26
143	Fourier modal methods for modeling optical dielectric waveguides. Optical and Quantum Electronics, 2005, 37, 107-119.	1.5	43
144	ESA-Based In-Fiber Nanocavity for Hydrogenâ€“Peroxide Detection. IEEE Nanotechnology Magazine, 2005, 4, 187-193.	1.1	38

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145	Nanodeposition of materials with complex refractive index in long-period fiber gratings. Journal of Lightwave Technology, 2005, 23, 4192-4199.	2.7	75
146	Optimization of sensitivity in Long Period Fiber Gratings with overlay deposition. Optics Express, 2005, 13, 56.	1.7	318
147	Deposition of overlays by electrostatic self-assembly in long-period fiber gratings. Optics Letters, 2005, 30, 720.	1.7	129
148	Enhancement of sensitivity in long-period fiber gratings with deposition of low-refractive-index materials. Optics Letters, 2005, 30, 2363.	1.7	48
149	Fiber-optic hydrogen peroxide nanosensor. IEEE Sensors Journal, 2005, 5, 365-371.	2.4	34
150	Long-period fiber gratings with overlay of variable refractive index. IEEE Photonics Technology Letters, 2005, 17, 1893-1895.	1.3	24
151	Fiber-Optic Nanorefractometer Based on One-Dimensional Photonic-Bandgap Structures With Two Defects. IEEE Nanotechnology Magazine, 2004, 3, 293-299.	1.1	5
152	Fiber-Optic Multiple-Wavelength Filter Based on One-Dimensional Photonic Bandgap Structures With Defects. Journal of Lightwave Technology, 2004, 22, 1615-1621.	2.7	16
153	Nanosensor for detection of glucose. , 2004, , .		1
154	Molecules assembly toward fiber optic nanosensor development. , 2004, , .		0
155	Development of an optical refractometer by analysis of one-dimensional photonic bandgap structures with defects. Optics Letters, 2003, 28, 1099.	1.7	12
156	Comparative study of the modeling of three-dimensional photonic bandgap structures. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2003, 20, 644.	0.8	16
157	Analysis of one-dimensional photonic band gap structures with a liquid crystal defect towards development of fiber-optic tunable wavelength filters. Optics Express, 2003, 11, 430.	1.7	49