Ignacio Del Villar

List of Publications by Year
in descending order

157 papers	4,798 citations	94269 37 h-index	114278 63 g-index
165 all docs	165 docs citations	165 times ranked	1973 citing authors

#	Article	IF	Citations
1	Optimization of sensitivity in Long Period Fiber Gratings with overlay deposition. Optics Express, 2005, 13, 56.	1.7	318
2	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
3	Femtomolar Detection by Nanocoated Fiber Label-Free Biosensors. ACS Sensors, 2018, 3, 936-943.	4.0	193
4	Optical sensors based on lossy-mode resonances. Sensors and Actuators B: Chemical, 2017, 240, 174-185.	4.0	182
5	Design rules for lossy mode resonance based sensors. Applied Optics, 2012, 51, 4298.	0.9	177
6	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
7	Deposition of overlays by electrostatic self-assembly in long-period fiber gratings. Optics Letters, 2005, 30, 720.	1.7	129
8	Tunable humidity sensor based on ITO-coated optical fiber. Sensors and Actuators B: Chemical, 2010, 146, 414-417.	4.0	126
9	A Comprehensive Review of Optical Fiber Refractometers: Toward a Standard Comparative Criterion. Laser and Photonics Reviews, 2019, 13, 1900094.	4.4	120
10	Optical fiber refractometers based on lossy mode resonances supported by TiO_2 coatings. Applied Optics, 2010, 49, 3980.	2.1	118
11	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
12	Giant sensitivity of optical fiber sensors by means of lossy mode resonance. Sensors and Actuators B: Chemical, 2016, 232, 660-665.	4.0	92
13	Fiber-optic pH-sensors in long-period fiber gratings using electrostatic self-assembly. Optics Letters, 2007, 32, 29.	1.7	78
14	Nanodeposition of materials with complex refractive index in long-period fiber gratings. Journal of Lightwave Technology, 2005, 23, 4192-4199.	2.7	75
15	Design of pH Sensors in Long-Period Fiber Gratings Using Polymeric Nanocoatings. IEEE Sensors Journal, 2007, 7, 455-463.	2.4	75
16	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
17	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
18	ITO Coated Optical Fiber Refractometers Based on Resonances in the Infrared Region. IEEE Sensors Journal, 2010, 10, 365-366.	2.4	65

#	Article	IF	Citations
19	Trends in the design of wavelength-based optical fibre biosensors (2008â€“2018). Biosensors and Bioelectronics: X, 2019, 1, 100015.	0.9	65
20	Sensitivity optimization with cladding-etched long period fiber gratings at the dispersion turning point. Optics Express, 2016, 24, 17680.	1.7	58
21	Fiber-optic biosensor based on lossy mode resonances. Sensors and Actuators B: Chemical, 2012, 174, 263-269.	4.0	54
22	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
23	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
24	Enhancement of sensitivity in long-period fiber gratings with deposition of low-refractive-index materials. Optics Letters, 2005, 30, 2363.	1.7	48
25	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
26	Micro and Nanostructured Materials for the Development of Optical Fibre Sensors. Sensors, 2017, 17, 2312.	2.1	48
27	Optimization in nanocoated D-shaped optical fiber sensors. Optics Express, 2017, 25, 10743.	1.7	47
28	Fourier modal methods for modeling optical dielectric waveguides. Optical and Quantum Electronics, 2005, 37, 107-119.	1.5	43
29	Dual-Peak Resonance-Based Optical Fiber Refractometers. IEEE Photonics Technology Letters, 2010, 22, 1778-1780.	1.3	43
30	Arc-Induced Long-Period Fiber Gratings in the Dispersion Turning Points. Journal of Lightwave Technology, 2016, 34, 4584-4590.	2.7	43
31	Lossy mode resonance sensors based on lateral light incidence in nanocoated planar waveguides. Scientific Reports, 2019, 9, 8882.	1.6	43
32	Two-Layer Nanocoatings in Long-Period Fiber Gratings for Improved Sensitivity of Humidity Sensors. IEEE Nanotechnology Magazine, 2008, 7, 394-400.	1.1	40
33	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
34	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
35	Wavelength and Phase Detection Based SMS Fiber Sensors Optimized With Etching and Nanodeposition. Journal of Lightwave Technology, 2017, 35, 3743-3749.	2.7	39
36	ESA-Based In-Fiber Nanocavity for Hydrogenâ€“Peroxide Detection. IEEE Nanotechnology Magazine, 2005, 4, 187-193.	1.1	38

#	Article	IF	Citations
37	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
38	Fiber-based early diagnosis of venous thromboembolic disease by label-free D-dimer detection. Biosensors and Bioelectronics: X, 2019, 2, 100026.	0.9	37
39	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
40	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
41	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
42	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
43	Experimental demonstration of lossy mode and surface plasmon resonance generation with Kretschmann configuration. Optics Letters, 2015, 40, 4739.	1.7	35
44	Fiber-optic hydrogen peroxide nanosensor. IEEE Sensors Journal, 2005, 5, 365-371.	2.4	34
45	Mode transition in complex refractive index coated single-modeâ€"multimodeâ€"single-mode structure. Optics Express, 2013, 21, 12668.	1.7	34
46	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
47	(INVITED)Nanocoated fiber label-free biosensing for perfluorooctanoic acid detection by lossy mode resonance. Results in Optics, 2021, 5, 100123.	0.9	33
48	Lossy mode resonances toward the fabrication of optical fiber humidity sensors. Measurement Science and Technology, 2012, 23, 014002.	1.4	31
49	Generation of Lossy Mode Resonances With Absorbing Thin-Films. Journal of Lightwave Technology, 2010, , .	2.7	30
50	Optical Fiber Humidity Sensor Based on Lossy Mode Resonances Supported by TiO_2/PSS Coatings. Procedia Engineering, 2011, 25, 1385-1388.	1.2	30
51	Fringe generation with non-uniformly coated long-period fiber gratings. Optics Express, 2007, 15, 9326.	1.7	29
52	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
53	Resonances in coated long period fiber gratings and cladding removed multimode optical fibers: a comparative study. Optics Express, 2010, 18, 20183.	1.7	28
54	Sensing Properties of Indium Oxide Coated Optical Fiber Devices Based on Lossy Mode Resonances. IEEE Sensors Journal, 2012, 12, 151-155.	2.4	28

#	Article	IF	Citations
55	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
56	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
57	Fiber-optic Lossy Mode Resonance Sensors. Procedia Engineering, 2014, 87, 3-8.	1.2	26
58	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
59	Fiber-Optic Immunosensor Based on an Etched SMS Structure. IEEE Journal of Selected Topics in Quantum Electronics, 2017, 23, 314-321.	1.9	25
60	Long-period fiber gratings with overlay of variable refractive index. IEEE Photonics Technology Letters, 2005, 17, 1893-1895.	1.3	24
61	Nanofilms on hollow core fiber-based structures: an optical study. Journal of Lightwave Technology, 2006, 24, 2100-2107.	2.7	24
62	Optical fiber refractometers based on indium tin oxide coatings fabricated by sputtering. Optics Letters, 2012, 37, 28.	1.7	24
63	Generation of lossy mode resonances with different nanocoatings deposited on coverslips. Optics Express, 2020, 28, 288.	1.7	24
64	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
65	Sensitivity Enhancement in Low Cutoff Wavelength Long-Period Fiber Gratings by Cladding Diameter Reduction. Sensors, 2017, 17, 2094.	2.1	23
66	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
67	Dually nanocoated planar waveguides towards multi-parameter sensing. Scientific Reports, 2021, 11, 3669.	1.6	22
68	Spectral evolution with incremental nanocoating of long period fiber gratings. Optics Express, 2006, 14, 11972.	1.7	21
69	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
70	Generation of Lossy Mode Resonances in Planar Waveguides Toward Development of Humidity Sensors. Journal of Lightwave Technology, 2019, 37, 2300-2306.	2.7	21
71	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
72	Temperature sensor based on a hybrid ITO-silica resonant cavity. Optics Express, 2015, 23, 1930.	1.7	20

#	Article	IF	Citations
73	Multimode-Coreless-Multimode Fiber-Based Sensors: Theoretical and Experimental Study. Journal of Lightwave Technology, 2019, 37, 3844-3850.	2.7	20
74	Optical fiber sensors based on Layer-by-Layer nanostructured films. Procedia Engineering, 2010, 5, 1087-1090.	1.2	19
75	Considerations for Lossy-Mode Resonance-Based Optical Fiber Sensor. IEEE Sensors Journal, 2013, 13, 1167-1171.	2.4	19
76	Lossy mode resonance sensors based on nanocoated multimode-coreless-multimode fibre. Sensors and Actuators B: Chemical, 2020, 304, 126955.	4.0	19
77	Deposition of coatings on long-period fiber gratings: tunnel effect analogy. Optical and Quantum Electronics, 2006, 38, 655-665.	1.5	18
78	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
79	Fiber optic glucose biosensor. Optical Engineering, 2006, 45, 104401.	0.5	17
80	Fiber-Optic Chemical Nanosensors by Electrostatic Molecular Self- Assembly. Current Analytical Chemistry, 2008, 4, 341-355.	0.6	17
81	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
82	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
83	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
84	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
85	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
86	Lossy mode resonances supported by TiO2 -coated optical fibers. Procedia Engineering, 2010, 5, 1099-1102.	1.2	15
87	Analysis of lossy mode resonances on thin-film coated cladding removed plastic fiber. Optics Letters, 2015, 40, 4867.	1.7	14
88	Bloch waves at the surface of a single-layer coating D-shaped photonic crystal fiber. Optics Letters, 2020, 45, 2547.	1.7	14
89	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
90	Interdigital concept in photonic sensors based on an array of lossy mode resonances. Scientific Reports, 2021, 11, 13228.	1.6	13

#	Article	IF	Citations
91	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
92	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
93	Development of an optical refractometer by analysis of one-dimensional photonic bandgap structures with defects. Optics Letters, 2003, 28, 1099.	1.7	12
94	Optical fiber thermo-refractometer. Optics Express, 2022, 30, 11036.	1.7	11
95	Lossy Mode Resonance Based Microfluidic Platform Developed on Planar Waveguide for Biosensing Applications. Biosensors, 2022, 12, 403.	2.3	11
96	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
97	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
98	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
99	OPTICAL FIBER HUMIDITY SENSOR BASED ON LOSSY MODE RESONANCES. International Journal on Smart Sensing and Intelligent Systems, 2009, 2, 653-660.	0.4	9
100	Simultaneous Generation of Surface Plasmon and Lossy Mode Resonances in the Same Planar Platform. Sensors, 2022, 22, 1505.	2.1	9
101	Advances in Fiber Optic DNA-Based Sensors: A Review. IEEE Sensors Journal, 2021, 21, 12679-12691.	2.4	8
102	Optical Fiber Refractometers with Tunable Sensitivity Based on Indium Tin Oxide Coatings. Sensor Letters, 2010, 8, 744-746.	0.4	8
103	Multichannel Refractometer Based on Lossy Mode Resonances. IEEE Sensors Journal, 2022, 22, 3181-3187.	2.4	8
104	Sensing properties of ITO coated optical fibers to diverse VOCs. Procedia Engineering, 2010, 5, 653-656.	1.2	7
105	LMR-based optical fiber refractometers based on transparent conducting and semiconducting oxide coatings: a comparative study. Proceedings of SPIE, 2010, , .	0.8	7
106	Lossy Mode Resonance-based pH sensor using a tapered single mode optical fiber coated with a polymeric nanostructure. , 2011, , .		7
107	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
108	Optimization of Fiber Bragg Gratings Inscribed in Thin Films Deposited on D-Shaped Optical Fibers. Sensors, 2021, 21, 4056.	2.1	7

#	Article	IF	Citations
109	Twin lossy mode resonance on a single D-shaped optical fiber. Optics Letters, 2021, 46, 3284.	1.7	7
110	Wavelength and intensity based lossy mode resonance breathing sensor. Optics and Laser Technology, 2021, 140, 107063.	2.2	7
111	Spectral characteristics in long-period fiber gratings with nonuniform symmetrically ring shaped coatings. Applied Physics Letters, 2007, 90, 141105.	1.5	6
112	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
113	Fiber-Optic Nanorefractometer Based on One-Dimensional Photonic-Bandgap Structures With Two Defects. IEEE Nanotechnology Magazine, 2004, 3, 293-299.	1.1	5
114	Enhanced Sensitivity in Humidity Sensors based on Long Period Fiber Gratings. , 2006, , .		5
115	Lossy-mode resonance-based refractometers by means of indium oxide coatings fabricated onto optical fibers. Proceedings of SPIE, 2010, , .	0.8	5
116	Humidity sensor fabricated by deposition of SnO₂layers onto optical fibers. Proceedings of SPIE, 2013, , .	0.8	5
117	Optical Fiber Immunosensors Optimized with Cladding Etching and ITO Nanodeposition. , 2018, , .		5
118	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
119	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
120	D-shape optical fiber pH sensor based on Lossy Mode Resonances (LMRs). , 2015, , .		4
121	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
122	Lossy Mode Resonance Sensors based on Tungsten Oxide Thin Films. , 2020, , .		4
123	Nanorefractometer based on deposition of an overlay on a long period fiber grating. , 2005, 5855, 840.		3
124	Optical Fiber Sensors Based on Lossy Mode Resonances. Smart Sensors, Measurement and Instrumentation, 2013, , 191-210.	0.4	3
125	Fiber-optic immunosensor based on lossy mode resonances induced by indium tin oxide thin-films. , 2016, , .		3
126	Lossy mode resonance-based optical fiber humidity sensor. , 2011, , .		2

#	Article	IF	Citations
127	A comparative study between SMS interferometers and lossy mode resonace optical fiber devices for sensing applications. Proceedings of SPIE, 2015, , .	0.8	2
128	Monitoring the Etching Process in LPFGs towards Development of Highly Sensitive Sensors. Proceedings (mdpi), 2017, 1, .	0.2	2
129	Etched and Nanocoated SMS Fiber Sensor for Detection of Salinity Concentration. Proceedings (mdpi), 2017, 1, .	0.2	2
130	[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
131	Low Cutoff Wavelength Etched SMS Structures Towards Verification of the Quality of Automotive Antifreeze. IEEE Sensors Journal, 2020, 20, 11342-11349.	2.4	2
132	Simultaneous Measurement of Refractive Index and Temperature using LMR on planar waveguide. , 2020, , .		2
133	Nanosensor for detection of glucose. , 2004, , .		1
134	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
135	Optical fiber refractometers based on sputtered indium tin oxide coatings. , 2011, , .		1
136	SnO₂ based optical fiber refractometers. Proceedings of SPIE, 2012, , .	0.8	1
137	D-shape optical fiber refractometer based on TM and TE lossy mode resonances. Proceedings of SPIE, 2014, , .	0.8	1
138	AC/DC Millivoltage Sensor by means of ITO-coated Optical Fibers: Towards Monitoring of Biosignals. , 2019, , .		1
139	Lossy Mode Resonances Generated in Planar Configuration for Two-Parameter Sensing. IEEE Sensors Journal, 2022, 22, 11264-11270.	2.4	1
140	Detection of wind turbine gearbox oil degradation with etched single-mode multimode single-mode (SMS) fiber. , 2018, , .		1
141	Molecules assembly toward fiber optic nanosensor development. , 2004, , .		0
142	Non-uniform nano-coated long-period fiber gratings for sensing applications. Proceedings of SPIE, 2007, , .	0.8	0
143	Nanofilm-based optical fiber sensor schemes. , 2009, , .		0
144	Resonance-based optical fiber refractometers. , 2011, , .		0

#	Article	IF	Citations
145	Celiac disease biodetection using lossy-mode resonances generated in tapered single-mode optical fibers. , 2014, , .		0
146	Asymmetrically and symmetrically coated tapered optical fiber for sensing applications. , 2015, , .		0
147	Long period fiber gratings for bio-sensing: an improved design methodology. , 2017, , .		0
148	Sensitivity enhancement by diameter reduction in low cutoff wavelength single-mode multimode singlemode (SMS) fiber sensors. , 2017, , .		0
149	Intrusive Passive Optical Tapping Device. IEEE Access, 2021, 9, 31627-31637.	2.6	0
150	Fiber optic sensors based on lossy mode resonances. , 2014, , .		0
151	All Fiber Interferometer for Ice Detection. , 2018, , .		0
152	Ultra-low detection limit lossy mode resonance-based fibre-optic biosensor. , 2018, , .		0
153	Telecommunications on Earth and their possible relation with the anthropic principle. Scientia Et Fides, 2019, 7, 9.	0.3	0
154	Fiber-optics: a new route towards ultra-low detection limit label-free biosensing. , 2019, , .		0
155	Lossy Mode Resonance Excitation in Fiber-Optics: Applications in Biosensing. , 2020, , .		0
156	Thin film coated D-shaped Fiber regenerable biosensor. , 2021, , .		0
157	Lab on Fiber Technology Towards Advanced and Multifunctional Point-of-Care Platforms for Precision Medicine. , 2023, , 504-527.		0