Miguel Holgado BolaÃ‘os

List of Publications by Year
in descending order

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Version: 2024-02-01

79 papers	2,281 citations	394421 19 h-index	214800 47 g-index
79 all docs	79 docs citations	79 times ranked	2465 citing authors

#	Article	IF	Citations
1	3D Long-range ordering in ein SiO2submicrometer-sphere sintered superstructure. Advanced Materials, 1997, 9, 257-260.	21.0	350
2	Slot-waveguide biochemical sensor. Optics Letters, 2007, 32, 3080.	3.3	339
3	Electrophoretic Deposition To Control Artificial Opal Growth. Langmuir, 1999, 15, 4701-4704.	3.5	270
4	Label-free optical biosensing with slot-waveguides. Optics Letters, 2008, 33, 708.	3.3	201
5	Rayleigh-wave attenuation by a semi-infinite two-dimensional elastic-band-gap crystal. Physical Review B, 1999, 59, 12169-12172.	3.2	118
6	Demonstration of slot-waveguide structures on silicon nitride / silicon oxide platform. Optics Express, 2007, 15, 6846.	3.4	91
7	On the Determination of Uncertainty and Limit of Detection in Label-Free Biosensors. Sensors, 2018, 18, 2038.	3.8	88
8	Germanium FCC Structure from a Colloidal Crystal Template. Langmuir, 2000, 16, 4405-4408.	3.5	87
9	Label-free biosensing by means of periodic lattices of high aspect ratio SU-8 nano-pillars. Biosensors and Bioelectronics, 2010, 25, 2553-2558.	10.1	61
10	Biodegradable Implantable Sensors: Materials Design, Fabrication, and Applications. Advanced Functional Materials, 2021, 31, 2104149.	14.9	53
11	Three-Dimensional Arrays Formed by Monodisperse TiO2 Coated on SiO2 Spheres. Journal of Colloid and Interface Science, 2000, 229, 6-11.	9.4	51
12	Transparent Nanometric Organic Luminescent Films as UVâ€Active Components in Photonic Structures. Advanced Materials, 2011, 23, 761-765.	21.0	33
13	Bio-Photonic Sensing Cells over transparent substrates for anti-gestrinone antibodies biosensing. Biosensors and Bioelectronics, 2011, 26, 4842-4847.	10.1	32
14	Silicon nanopillar arrays with SiO_2 overlayer for biosensing application. Optical Materials Express, 2014, 4, 1345.	3.0	28
15	Efficient design and optimization of bio-photonic sensing cells (BICELLs) for label free biosensing. Sensors and Actuators B: Chemical, 2013, 176, 753-760.	7.8	27
16	High aspect-ratio SU-8 resist nano-pillar lattice by e-beam direct writing and its application for liquid trapping. Microelectronic Engineering, 2010, 87, 663-667.	2.4	24
17	Developing an Optical Interferometric Detection Method based biosensor for detecting specific SARS-CoV-2 immunoglobulins in Serum and Saliva, and their corresponding ELISA correlation. Sensors and Actuators B: Chemical, 2021, 345, 130394.	7.8	23
18	Towards reliable optical label-free point-of-care (PoC) biosensing devices. Sensors and Actuators B: Chemical, 2016, 236, 765-772.	7.8	21

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19	Description of an Advantageous Optical Label-Free Biosensing Interferometric Read-Out Method to Measure Biological Species. Sensors, 2014, 14, 3675-3689.	3.8	20
20	Optical characterization of extremely small volumes of liquid in sub-micro-holes by simultaneous reflectivity, ellipsometry and spectrometry. Optics Express, 2007, 15, 13318.	3.4	18
21	Sensitive metal layer-assisted guided-mode resonance SU8 nanopillar array for label-free optical biosensing. Sensors and Actuators B: Chemical, 2016, 226, 204-210.	7.8	18
22	Arrays of resonant nanopillars for biochemical sensing. Optics Letters, 2015, 40, 2370.	3.3	17
23	Resonant nanopillars arrays for label-free biosensing. Optics Letters, 2016, 41, 5430.	3.3	16
24	Bulk sensing performance comparison between silicon dioxide and resonant high aspect ratio nanopillars arrays fabricated by means of interference lithography. Optical Materials Express, 2016, 6, 2264.	3.0	15
25	Dye-based photonic sensing systems. Sensors and Actuators B: Chemical, 2016, 228, 649-657.	7.8	15
26	Development towards Compact Nitrocellulose-Based Interferometric Biochips for Dry Eye MMP9 Label-Free In-Situ Diagnosis. Sensors, 2017, 17, 1158.	3.8	15
27	A new microfluidic method enabling the generation of multi-layered tissues-on-chips using skin cells as a proof of concept. Scientific Reports, 2021, 11, 13160.	3.3	15
28	Two-dimensional elastic bandgap crystal to attenuate surface waves. Journal of Lightwave Technology, 1999, 17, 2196-2201.	4.6	14
29	Engineering vertically interrogated interferometric sensors for optical label-free biosensing. Analytical and Bioanalytical Chemistry, 2020, 412, 3285-3297.	3.7	12
30	Cost-effective SU-8 micro-structures by DUV excimer laser lithography for label-free biosensing. Applied Surface Science, 2011, 257, 5403-5407.	6.1	11
31	Label-free biosensing by means of BICELLs for dry eye. Sensors and Actuators B: Chemical, 2014, 203, 209-212.	7.8	11
32	Antigen-Antibody Affinity for Dry Eye Biomarkers by Label Free Biosensing. Comparison with the ELISA Technique. Sensors, 2015, 15, 19819-19829.	3.8	11
33	Optical sensor based on periodic array of resonant nanopillars for real time monitoring. Sensors and Actuators B: Chemical, 2017, 244, 323-326.	7.8	10
34	The uncertainty and limit of detection in biosensors from immunoassays. Measurement Science and Technology, 2020, 31, 044004.	2.6	10
35	Biomolecular Interaction Analysis of Gestrinone-anti-Gestrinone Using Arrays of High Aspect Ratio SU-8 Nanopillars. Biosensors, 2012, 2, 291-304.	4.7	8
36	A New Device Based on Interferometric Optical Detection Method for Label-Free Screening of C-Reactive Protein. IEEE Transactions on Instrumentation and Measurement, 2019, 68, 3193-3199.	4.7	8

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37	Slot-waveguide biochemical sensor: erratum. Optics Letters, 2008, 33, 2554.	3.3	7
38	Study of the refractive index change in a-Si:H thin films patterned by 532 nm laser radiation for photovoltaic applications. Thin Solid Films, 2010, 518, 5331-5339.	1.8	7
39	Optimization of Dengue Immunoassay by Label-Free Interferometric Optical Detection Method. Sensors, 2014, 14, 6695-6700.	3.8	7
40	How the surrounding environment affects the biosensing performance of resonant nanopillars arrays: Under dry conditions or immersed in fluid. Sensors and Actuators B: Chemical, 2018, 259, 956-962.	7.8	7
41	A Proof-of-Concept of Label-Free Biosensing System for Food Allergy Diagnostics in Biophotonic Sensing Cells: Performance Comparison with ImmunoCAP. Sensors, 2018, 18, 2686.	3.8	7
42	Phosphorylcholine-based hydrogel for immobilization of biomolecules. Application to fluorometric microarrays for use in hybridization assays and immunoassays, and nanophotonic biosensing. Mikrochimica Acta, 2019, 186, 570.	5.0	7
43	A Novel Data Processing Technique for Expert Resonant Nano-Pillars Transducers: A Case Study Measuring Ethanol in Water and Wine Liquid Matrices. IEEE Access, 2019, 7, 129778-129788.	4.2	7
44	Alternative Brain Slice-on-a-Chip for Organotypic Culture and Effective Fluorescence Injection Testing. International Journal of Molecular Sciences, 2022, 23, 2549.	4.1	7
45	Reconfiguration of microring resonators by liquid adhesion. Applied Physics Letters, 2008, 93, 203114.	3.3	6
46	Development of a versatile biotinylated material based on SU-8. Journal of Materials Chemistry B, 2013, 1, 2750.	5.8	6
47	Sub-micrometric reflectometry for localized label-free biosensing. Optics Express, 2015, 23, 12544.	3.4	6
48	Participation of women in doctorate, research, innovation, and management activities at Universidad PolitÃ©cnica de Madrid: analysis of the decade 2006â€“2016. Scientometrics, 2019, 120, 1059-1089.	3.0	6
49	Simultaneous Reflectivity, Ellipsometry and Spectrometry Measurements in Submicron Structures for Liquid Sensing. Sensor Letters, 2008, 6, 564-569.	0.4	6
50	Fabrication of Si₃N₄/SiO₂ tiered resonant nanopillars with nickel caps arrays: application for optochemical sensing. Optical Materials Express, 2018, 8, 1082.	3.0	5
51	Automated Chemical Sensing Unit Integration for Parallel Optical Interrogation. Sensors, 2019, 19, 878.	3.8	5
52	A new optical interferometric-based in vitro detection system for the specific IgE detection in serum of the main peach allergen. Biosensors and Bioelectronics, 2020, 169, 112641.	10.1	5
53	Generation of a Simplified Three-Dimensional Skin-on-a-chip Model in a Micromachined Microfluidic Platform. Journal of Visualized Experiments, 2021, , .	0.3	5
54	Neuronal circuits on a chip for biological network monitoring. Biotechnology Journal, 2021, 16, e2000355.	3.5	5

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55	Optimization of a label-free biosensor vertically characterized based on a periodic lattice of high aspect ratio SU-8 nano-pillars with a simplified 2D theoretical model. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 1087-1092.	0.8	4
56	A Point-of-Care Based on Label-Free Interferometric Optical Detection Method to Evaluate Interferon Gamma (IFN-Î³): A Correlation with the ELISA Technique. Sensors, 2020, 20, 4776.	3.8	4
57	Optical Vapor Sensors Based on Periodic Resonant Nanopillar Structures. ACS Omega, 2020, 5, 25913-25918.	3.5	4
58	Biodegradable Implantable Sensors: Materials Design, Fabrication, and Applications (Adv. Funct. Mater.) Tj ETQq0 0 0 rgBT /Overlock 10	14.9	3
59	Micro-nano photonic biosensors scalable at the wafer level. Proceedings of SPIE, 2009, , .	0.8	2
60	Optical characterization of the heat-affected zone in laser patterning of thin film a-Si:H. , 2009, , .		2
61	Luminescent Thin Films: Transparent Nanometric Organic Luminescent Films as UV-Active Components in Photonic Structures (Adv. Mater. 6/2011). Advanced Materials, 2011, 23, 684-684.	21.0	2
62	UV laser-induced high resolution cleaving of Si wafers for microâ€“nano devices and polymeric waveguide characterization. Applied Surface Science, 2011, 257, 5424-5428.	6.1	2
63	Micronâ€scale wedge thin films prepared by plasma enhanced chemical vapor deposition. Plasma Processes and Polymers, 2017, 14, 1700043.	3.0	2
64	Photonic sensor systems for the identification of hydrocarbons and crude oils in static and flow conditions. Sensors and Actuators B: Chemical, 2021, 344, 130265.	7.8	1
65	Development towards compact nitrocellulose interferometric biochips for dry eye diagnosis based on MMP9, S100A6 and CST4 biomarkers using a Point-of-Care device. , 2018, , .		1
66	New Label-Free Biosensing for the Evaluation of the AX-024 Inhibitor: Case Study for the Development of New Drugs in Autoimmune Diseases. Sensors, 2022, 22, 1218.	3.8	1
67	Efficient Chemical Surface Modification Protocol on SiO2 Transducers Applied to MMP9 Biosensing. Sensors, 2021, 21, 8156.	3.8	1
68	Optical sensing based on simultaneous ellipsometry, reflectivity and spectrometry profiles in sub-micro-holes structures for bio-applications. , 2007, , .		0
69	Photonic sensors based on integrated reflectivity, ellipsometry and spectrometry measurements in submicron size geometries. , 2007, , .		0
70	Short pulse Laser Shock Microforming of thin metal MEMS components. , 2009, , .		0
71	Model based analysis of the effect of irradiation parameters on the plasma driven thermal fluxes in laser shock processing. , 2009, , .		0
72	New type of standalone gas sensors based on dye, thin films, and subwavelength structures. Proceedings of SPIE, 2009, , .	0.8	0

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73	Performance evaluation for different sensing surface of BICELLs bio-transducers for dry eye biomarkers. , 2015, , .		0
74	Direct laser interference patterning (DLIP) technique applied to the development of optical biosensors based on biophotonic sensing cells (bicells). Proceedings of SPIE, 2015, , .	0.8	0
75	Hardware Accelerator for Ethanol Detection in Water Media based on Machine Learning Techniques. , 2019, , .		0
76	A Machine Learning-based Methodology for in-Process Fluid Characterisation with Photonic Sensors. IEEE Sensors Journal, 2021, , 1-1.	4.7	0
77	Uncertainty in optical bio-sensors due to the spectral displacement of the interference modes of the transduction signal. Optica Pura Y Aplicada, 2014, 47, 27-34.	0.1	0
78	Resonant nanopillars as label-free optical biosensors. , 2018, , .		0
79	A compact multichannel spectrometer for label-free monitoring of biochips for point-of-care testing. , 2019, , .		0