Fernando Benito-Lopez

List of Publications by Year
in descending order

101 papers	3,871 citations	126708 33 h-index	128067 60 g-index
102 all docs	102 docs citations	102 times ranked	4932 citing authors

#	Article	IF	Citations
1	Review on microfluidic paper-based analytical devices towards commercialisation. Analytica Chimica Acta, 2018, 1001, 1-17.	2.6	379
2	Smartphone-Based Simultaneous pH and Nitrite Colorimetric Determination for Paper Microfluidic Devices. Analytical Chemistry, 2014, 86, 9554-9562.	3.2	348
3	Organic electrochemical transistor incorporating an ionogel as a solid state electrolyte for lactate sensing. Journal of Materials Chemistry, 2012, 22, 4440.	6.7	248
4	Real-time sweat pH monitoring based on a wearable chemical barcode micro-fluidic platform incorporating ionic liquids. Sensors and Actuators B: Chemical, 2012, 171-172, 1327-1334.	4.0	174
5	Measuring reaction kinetics in a lab-on-a-chip by microcoil NMR. Lab on A Chip, 2005, 5, 280.	3.1	149
6	Fabrication, mechanical testing and application of high-pressure glass microreactor chips. Chemical Engineering Journal, 2007, 131, 163-170.	6.6	117
7	Electrochemical transistors with ionic liquids for enzymatic sensing. Chemical Communications, 2010, 46, 7972.	2.2	110
8	Photoâ€Responsive Polymeric Structures Based on Spiropyran. Macromolecular Materials and Engineering, 2012, 297, 1148-1159.	1.7	102
9	Concept and development of an autonomous wearable micro-fluidic platform for real time pH sweat analysis. Sensors and Actuators B: Chemical, 2012, 175, 263-270.	4.0	101
10	Ionogel-based light-actuated valves for controlling liquid flow in micro-fluidic manifolds. Lab on A Chip, 2010, 10, 195-201.	3.1	94
11	Optically addressable single-use microfluidic valves by laser printer lithography. Lab on A Chip, 2010, 10, 2680.	3.1	93
12	Self-protonating spiropyran-co-NIPAM-co-acrylic acid hydrogel photoactuators. Soft Matter, 2013, 9, 8754.	1.2	83
13	Fast prototyping of paper-based microfluidic devices by contact stamping using indelible ink. RSC Advances, 2013, 3, 18811.	1.7	80
14	High pressure in organic chemistry on the way to miniaturization. Tetrahedron, 2008, 64, 10023-10040.	1.0	79
15	Spiropyran Polymeric Microcapillary Coatings for Photodetection of Solvent Polarity. Langmuir, 2013, 29, 2790-2797.	1.6	66
16	Photoâ€Chemopropulsion â€“ Lightâ€Stimulated Movement of Microdroplets. Advanced Materials, 2014, 26, 7339-7345.	11.1	64
17	Light-responsive polymers for microfluidic applications. Lab on A Chip, 2018, 18, 699-709.	3.1	64
18	Optical fiber-based on-line UV/Vis spectroscopic monitoring of chemical reaction kinetics under high pressure in a capillary microreactor. Chemical Communications, 2005, , 2857.	2.2	62

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19	Optical sensing system based on wireless paired emitter detector diode device and ionogels for lab-on-a-disc water quality analysis. Lab on A Chip, 2012, 12, 5069.	3.1	57
20	Substantial rate enhancements of the esterification reaction of phthalic anhydride with methanol at high pressure and using supercritical CO2 as a co-solvent in a glass microreactor. Lab on A Chip, 2007, 7, 1345.	3.1	55
21	Modular microfluidic valve structures based on reversible thermoresponsive ionogel actuators. Lab on A Chip, 2014, 14, 3530-3538.	3.1	55
22	Portable integrated microfluidic analytical platform for the monitoring and detection of nitrite. Talanta, 2013, 116, 997-1004.	2.9	52
23	TiO₂ Nanotubes Alginate Hydrogel Scaffold for Rapid Sensing of Sweat Biomarkers: Lactate and Glucose. ACS Applied Materials & Interfaces, 2021, 13, 37734-37745.	4.0	50
24	Dynamic pH mapping in microfluidic devices by integrating adaptive coatings based on polyaniline with colorimetric imaging techniques. Lab on A Chip, 2013, 13, 1079.	3.1	49
25	Fluidic flow delay by ionogel passive pumps in microfluidic paper-based analytical devices. Sensors and Actuators B: Chemical, 2016, 233, 402-408.	4.0	47
26	A new light emitting diodeâ€“light emitting diode portable carbon dioxide gas sensor based on an interchangeable membrane system for industrial applications. Analytica Chimica Acta, 2011, 699, 216-222.	2.6	46
27	Synthesis and characterisation of spiropyran-polymer brushes in micro-capillaries: Towards an integrated optical sensor for continuous flow analysis. Sensors and Actuators B: Chemical, 2012, 175, 92-99.	4.0	45
28	Materials science and the sensor revolution. Materials Today, 2010, 13, 16-23.	8.3	44
29	Spiropyran modified micro-fluidic chip channels as photonically controlled self-indicating system for metal ion accumulation and release. Sensors and Actuators B: Chemical, 2009, 140, 295-303.	4.0	38
30	Characterisation and analytical potential of a photo-responsive polymeric material based on spiropyran. Biosensors and Bioelectronics, 2010, 26, 1392-1398.	5.3	38
31	Swelling and shrinking behaviour of photoresponsive phosphonium-based ionogel microstructures. Sensors and Actuators B: Chemical, 2014, 194, 105-113.	4.0	38
32	Pump Less Wearable Microfluidic Device for Real Time pH Sweat Monitoring. Procedia Chemistry, 2009, 1, 1103-1106.	0.7	37
33	CMAS: fully integrated portable centrifugal microfluidic analysis system for on-site colorimetric analysis. RSC Advances, 2013, 3, 15928.	1.7	37
34	Porous self-protonating spiropyran-based NIPAAm gels with improved reswelling kinetics. Journal of Materials Science, 2016, 51, 1392-1399.	1.7	31
35	Microfluidics and materials for smart water monitoring: A review. Analytica Chimica Acta, 2021, 1186, 338392.	2.6	30
36	Probing the specific ion effects of biocompatible hydrated choline ionic liquids on lactate oxidase biofunctionality in sensor applications. Physical Chemistry Chemical Physics, 2014, 16, 1841-1849.	1.3	29

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37	Manipulation of fluid flow direction in microfluidic paper-based analytical devices with an ionogel negative passive pump. Sensors and Actuators B: Chemical, 2017, 247, 114-123.	4.0	28
38	Fabrication and mechanical testing of glass chips for high-pressure synthetic or analytical chemistry. Microsystem Technologies, 2006, 12, 450-454.	1.2	27
39	Poly(ionic liquid) thermo-responsive hydrogel microfluidic actuators. Sensors and Actuators B: Chemical, 2017, 247, 749-755.	4.0	27
40	Driving flows in microfluidic paper-based analytical devices with a cholinium based poly(ionic liquid) hydrogel. Sensors and Actuators B: Chemical, 2018, 261, 372-378.	4.0	27
41	Fluorescent sensor array in a microfluidic chip. Analytical and Bioanalytical Chemistry, 2008, 390, 307-315.	1.9	24
42	Wearable Bio and Chemical Sensors. , 2014, , 65-83.		23
43	Sensing parasites: Proteomic and advanced bio-detection alternatives. Journal of Proteomics, 2016, 136, 145-156.	1.2	22
44	Elucidating the role of the ionic liquid in the actuation behavior of thermo-responsive ionogels. Sensors and Actuators B: Chemical, 2018, 260, 380-387.	4.0	21
45	LEDâ€“LED portable oxygen gas sensor. Analytical and Bioanalytical Chemistry, 2012, 404, 2851-2858.	1.9	20
46	Self-assembled solvato-morphologically controlled photochromic crystals. Chemical Communications, 2014, 50, 924-926.	2.2	20
47	Tunable Superparamagnetic Ring (tSPRing) for Droplet Manipulation. Advanced Functional Materials, 2021, 31, 2100178.	7.8	19
48	Microcantilever arrays functionalised with spiropyran photoactive moieties as systems to measure photo-induced surface stress changes. Sensors and Actuators B: Chemical, 2016, 237, 479-486.	4.0	17
49	Phantom membrane microfluidic cross-flow filtration device for the direct optical detection of water pollutants. Sensors and Actuators B: Chemical, 2018, 257, 924-930.	4.0	16
50	Extracellular matrix protein microarray-based biosensor with single cell resolution: Integrin profiling and characterization of cell-biomaterial interactions. Sensors and Actuators B: Chemical, 2019, 299, 126954.	4.0	16
51	Alginate Bead Biosystem for the Determination of Lactate in Sweat Using Image Analysis. Biosensors, 2021, 11, 379.	2.3	16
52	Wearable electrochemical sensors for monitoring performance athletes. Proceedings of SPIE, 2011, , .	0.8	15
53	Reusable ionogel-based photo-actuators in a lab-on-a-disc. Sensors and Actuators B: Chemical, 2018, 257, 963-970.	4.0	15
54	Microtechnologies for Cell Microenvironment Control and Monitoring. Micromachines, 2017, 8, 166.	1.4	14

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55	Micro-Capillary Coatings Based on Spiropyran Polymeric Brushes for Metal Ion Binding, Detection, and Release in Continuous Flow. Sensors, 2018, 18, 1083.	2.1	14
56	Optical Single Cell Resolution Cytotoxicity Biosensor Based on Single Cell Adhesion Dot Arrays. Analytical Chemistry, 2020, 92, 9658-9665.	3.2	14
57	Photochromic spiropyran monolithic polymers: Molecular photo-controllable electroosmotic pumps for micro-fluidic devices. Sensors and Actuators B: Chemical, 2010, 148, 569-576.	4.0	13
58	Photoswitchable Layer-by-Layer Coatings Based on Photochromic Polynorbornenes Bearing Spiropyran Side Groups. Langmuir, 2018, 34, 4210-4216.	1.6	13
59	Selective Ultrasensitive Optical Fiber Nanosensors Based on Plasmon Resonance Energy Transfer. ACS Sensors, 2020, 5, 2018-2024.	4.0	13
60	The use of scanning contactless conductivity detection for the characterisation of stationary phases in micro-fluidic chips. Lab on A Chip, 2010, 10, 1777.	3.1	12
61	Polyaniline coated micro-capillaries for continuous flow analysis of aqueous solutions. Analytica Chimica Acta, 2013, 759, 1-7.	2.6	12
62	Low-cost origami fabrication of 3D self-aligned hybrid microfluidic structures. Microfluidics and Nanofluidics, 2016, 20, 1.	1.0	12
63	Type 1 Diabetes Mellitus reversal via implantation of magnetically purified microencapsulated pseudoislets. International Journal of Pharmaceutics, 2019, 560, 65-77.	2.6	12
64	On-demand generation and removal of alginate biocompatible microvalves for flow control in microfluidics. Sensors and Actuators B: Chemical, 2016, 234, 1-7.	4.0	11
65	Naked eye Y amelogenin gene fragment detection using DNAzymes on a paper-based device. Analytica Chimica Acta, 2020, 1123, 1-8.	2.6	11
66	Microfluidic chip with pillar arrays for controlled production and observation of lipid membrane nanotubes. Lab on A Chip, 2020, 20, 2748-2755.	3.1	11
67	Silicon Microcantilever Sensors to Detect the Reversible Conformational Change of a Molecular Switch, Spiropyan. Sensors, 2020, 20, 854.	2.1	11
68	Wearable biosensors and sample handling strategies. , 2020, , 65-88.		10
69	High-Resolution 3D Printing Fabrication of a Microfluidic Platform for Blood Plasma Separation. Polymers, 2022, 14, 2537.	2.0	10
70	Fibers and Fabrics for Chemical and Biological Sensing. Research Journal of Textile and Apparel, 2010, 14, 63-72.	0.6	9
71	Paper based microfluidic platform for single-step detection of mesenchymal stromal cells secreted VEGF. Analytica Chimica Acta, 2022, 1199, 339588.	2.6	9
72	Magneto Twister: Magneto Deformation of the Waterâ€“Air Interface by a Superhydrophobic Magnetic Nanoparticle Layer. Langmuir, 2022, 38, 3360-3369.	1.6	9

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73	Syntheses, structures and comparative electrochemical study of Ï€-acetylene complexes of cobalt. Journal of Organometallic Chemistry, 2006, 691, 138-149.	0.8	8
74	Synthesis, Characterization, and Redox Behavior of Mixed 1,3-Diyne Dicobalt/Triosmium and Dicobalt/Triruthenium Carbonyl Clusters. Organometallics, 2007, 26, 5199-5208.	1.1	8
75	Large-Volume Self-Powered Disposable Microfluidics by the Integration of Modular Polymer Micropumps with Plastic Microfluidic Cartridges. Industrial & Engineering Chemistry Research, 2020, 59, 22485-22491.	1.8	8
76	Ionogel-based hybrid polymer-paper handheld platform for nitrite and nitrate determination in water samples. Analytica Chimica Acta, 2022, 1205, 339753.	2.6	8
77	Adaptive coatings based on polyaniline for direct 2D observation of diffusion processes in microfluidic systems. Sensors and Actuators B: Chemical, 2016, 231, 744-751.	4.0	7
78	Photoswitchable Stationary Phase Based on Packed Spiropyran Functionalized Silica Microbeads. E-Journal of Surface Science and Nanotechnology, 2009, 7, 649-652.	0.1	5
79	Photo-Detection of Solvent Polarities using Non-Invasive Coatings in Capillaries. Procedia Engineering, 2011, 25, 1545-1548.	1.2	5
80	Real-Time Sweat Analysis: Concept and Development of an Autonomous Wearable Micro-Fluidic Platform. Procedia Engineering, 2011, 25, 1561-1564.	1.2	5
81	AZO Embedded Interdigitated Electrodes for Monitoring Stimuli Responsive Materials. Advanced Functional Materials, 2018, 28, 1803127.	7.8	5
82	Advances in Microtechnology for Improved Cytotoxicity Assessment. Frontiers in Materials, 2020, 7, .	1.2	5
83	Simple Barcode System Based on Inonogels for Real Time pH-Sweat Monitoring. , 2010, , .		4
84	Electrical and electrochemical properties of imidazolium and phosphonium-based pNIPAAM ionogels. Electrochimica Acta, 2020, 345, 136167.	2.6	4
85	An electroactive and thermo-responsive material for the capture and release of cells. Biosensors and Bioelectronics, 2021, 191, 113405.	5.3	4
86	Predicting Dimensions in Microfluidic Paper Based Analytical Devices. Sensors, 2021, 21, 101.	2.1	4
87	Ex situ and in situ Magnetic Phase Synthesised Magneto-Driven Alginate Beads. Journal of Colloid and Interface Science, 2022, 610, 741-750.	5.0	4
88	A method for the controllable fabrication of optical fiber-based localized surface plasmon resonance sensors. Scientific Reports, 2022, 12, .	1.6	4
89	Molecules with Multiple Personalities: How Switchable Materials Could Revolutionize Chemical Sensing. ECS Transactions, 2009, 19, 199-210.	0.3	3
90	Ionogel-based Nitrite and Nitrate Sensor for Water Control at the Point-of-Need. Procedia Engineering, 2016, 168, 518-521.	1.2	3

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91	Understanding the Behavior of Stimuli-response Ionogels for Microfluidic Applications. Procedia Engineering, 2016, 168, 473-476.	1.2	3
92	Incorporation of Acrylate Based Spiropyran Monoliths in Micro-Fluidic Devices for Photo-Controlled Electroosmotic Flow. Advances in Science and Technology, 0, , .	0.2	2
93	&. , 2010, , .		2
94	Opto-Smart Systems in Microfluidics. Advances in Chemical and Materials Engineering Book Series, 2016, , 265-288.	0.2	2
95	Electrochemical transistors with ionic liquids for enzymatic sensing. Proceedings of SPIE, 2011, , .	0.8	1
96	Ionogel-based nitrate sensor device. , 2016, , .		1
97	Continuous monitoring of cell transfection efficiency with micropatterned substrates. Biotechnology and Bioengineering, 2021, 118, 2626-2636.	1.7	1
98	Underwater Magneto Driven Air De-bubbler. Journal of Materials Chemistry A, 0, , .	5.2	1
99	A microfluidic column of water indexâ€“matched packed microspheres for label-free observation of water pollutants. Mikrochimica Acta, 2021, 188, 143.	2.5	0
100	Applications of Ionic Liquid Materials in Microfluidic Devices. RSC Smart Materials, 2017, , 234-271.	0.1	0
101	Ionogel based material for the colorimetric detection of Î”9-tetrahydrocannabinol. , 2021, , .		0