Xavi Illa

List of Publications by Year
in descending order

48 papers	1,229 citations	361413 20 h-index	395702 33 g-index
51 all docs	51 docs citations	51 times ranked	1821 citing authors

#	Article	IF	Citations
1	High-resolution mapping of infraslow cortical brain activity enabled by graphene microtransistors. Nature Materials, 2019, 18, 280-288.	27.5	121
2	Online oxygen monitoring using integrated inkjet-printed sensors in a liver-on-a-chip system. Lab on A Chip, 2018, 18, 2023-2035.	6.0	100
3	Flexible Graphene Solutionâ€Gated Fieldâ€Effect Transistors: Efficient Transducers for Microâ€Electrocorticography. Advanced Functional Materials, 2018, 28, 1703976.	14.9	97
4	Slow Waves in Cortical Slices: How Spontaneous Activity is Shaped by Laminar Structure. Cerebral Cortex, 2019, 29, 319-335.	2.9	68
5	A compartmentalized microfluidic chip with crisscross microgrooves and electrophysiological electrodes for modeling the bloodâ€“retinal barrier. Lab on A Chip, 2018, 18, 95-105.	6.0	61
6	Gut-on-a-chip: Mimicking and monitoring the human intestine. Biosensors and Bioelectronics, 2021, 181, 113156.	10.1	58
7	Geometric correction factor for transepithelial electrical resistance measurements in transwell and microfluidic cell cultures. Journal Physics D: Applied Physics, 2016, 49, 375401.	2.8	53
8	Engineering and monitoring cellular barrier models. Journal of Biological Engineering, 2018, 12, 18.	4.7	52
9	A cyclo olefin polymer microfluidic chip with integrated gold microelectrodes for aqueous and non-aqueous electrochemistry. Lab on A Chip, 2010, 10, 1254.	6.0	49
10	Full-bandwidth electrophysiology of seizures and epileptiform activity enabled by flexible graphene microtransistor depth neural probes. Nature Nanotechnology, 2022, 17, 301-309.	31.5	49
11	Graphene active sensor arrays for long-term and wireless mapping of wide frequency band epicortical brain activity. Nature Communications, 2021, 12, 211.	12.8	44
12	Switchless Multiplexing of Graphene Active Sensor Arrays for Brain Mapping. Nano Letters, 2020, 20, 3528-3537.	9.1	42
13	Resemblance of the human liver sinusoid in a fluidic device with biomedical and pharmaceutical applications. Biotechnology and Bioengineering, 2018, 115, 2585-2594.	3.3	38
14	An array of ordered pillars with retentive properties for pressure-driven liquid chromatography fabricated directly from an unmodified cyclo olefin polymer. Lab on A Chip, 2009, 9, 1511.	6.0	31
15	A Novel Modular Bioreactor to In Vitro Study the Hepatic Sinusoid. PLoS ONE, 2014, 9, e111864.	2.5	31
16	Analyses of the ammonia response of integrated gas sensors working in pulsed mode. Sensors and Actuators B: Chemical, 2006, 118, 318-322.	7.8	28
17	Quantification of Signal-to-Noise Ratio in Cerebral Cortex Recordings Using Flexible MEAs With Co-localized Platinum Black, Carbon Nanotubes, and Gold Electrodes. Frontiers in Neuroscience, 2018, 12, 862.	2.8	28
18	3D Printed porous polyamide macrocapsule combined with alginate microcapsules for safer cell-based therapies. Scientific Reports, 2018, 8, 8512.	3.3	25

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19	Multiplexed neural sensor array of graphene solution-gated field-effect transistors. 2D Materials, 2020, 7, 025046.	4.4	23
20	Determination of heterogeneous electron transfer rate constants at interdigitated nanoband electrodes fabricated by an optical mix-and-match process. Sensors and Actuators B: Chemical, 2014, 194, 86-95.	7.8	20
21	Distortionâ€Free Sensing of Neural Activity Using Graphene Transistors. Small, 2020, 16, 1906640.	10.0	20
22	Mesoporous Silica: A Suitable Adsorbent for Amines. Nanoscale Research Letters, 2009, 4, 1303-8.	5.7	19
23	Improved metal-graphene contacts for low-noise, high-density microtransistor arrays for neural sensing. Carbon, 2020, 161, 647-655.	10.3	19
24	Experimental study of the depth influence on the band broadening effect in a cyclo-olefin polymer column containing an array of ordered pillars. Journal of Chromatography A, 2010, 1217, 5817-5821.	3.7	15
25	Characterization of an encapsulated insulin secreting human pancreatic beta cell line in a modular microfluidic device. Journal of Drug Targeting, 2018, 26, 36-44.	4.4	15
26	Nanostructured oxides on porous silicon microhotplates for NH3 sensing. Microelectronic Engineering, 2008, 85, 1116-1119.	2.4	14
27	Characterization of optogenetically-induced cortical spreading depression in awake mice using graphene micro-transistor arrays. Journal of Neural Engineering, 2021, 18, 055002.	3.5	13
28	Novel Graphene Electrode for Retinal Implants: An in vivo Biocompatibility Study. Frontiers in Neuroscience, 2021, 15, 615256.	2.8	12
29	Miniaturized multiparametric flexible platform for the simultaneous monitoring of ionic: Application in real urine. Sensors and Actuators B: Chemical, 2018, 255, 2861-2870.	7.8	10
30	Experimental study of the retention properties of a cyclo olefin polymer pillar array column in reversedâ€phase mode. Journal of Separation Science, 2010, 33, 3313-3318.	2.5	9
31	Spontaneous formation of spiral-like patterns with distinct periodic physical properties by confined electrodeposition of Co-In disks. Scientific Reports, 2016, 6, 30398.	3.3	9
32	A perfusion chamber for monitoring transepithelial NaCl transport in an in vitro model of the renal tubule. Biotechnology and Bioengineering, 2018, 115, 1604-1613.	3.3	8
33	A Minimally Invasive Microsensor Specially Designed for Simultaneous Dissolved Oxygen and pH Biofilm Profiling. Sensors, 2019, 19, 4747.	3.8	8
34	A novel strategy to monitor microfluidic in-vitro blood-brain barrier models using impedance spectroscopy. Proceedings of SPIE, 2015, , .	0.8	7
35	A 1024-Channel 10-Bit 36-muW/ch CMOS ROIC for Multiplexed GFET-Only Sensor Arrays in Brain Mapping. IEEE Transactions on Biomedical Circuits and Systems, 2021, 15, 860-876.	4.0	6
36	Flexible probe for in vivo quantification of corneal epithelium permeability through non-invasive tetrapolar impedance measurements. Biomedical Microdevices, 2013, 15, 849-858.	2.8	5

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37	New Trends in Quantitative Assessment of the Corneal Barrier Function. Sensors, 2014, 14, 8718-8727.	3.8	4
38	A SU-8-based flexible microprobe for close and distal recordings from the cortical network. Proceedings of SPIE, 2015, , .	0.8	3
39	Bias dependent variability of low-frequency noise in single-layer graphene FETs. Nanoscale Advances, 2020, 2, 5450-5460.	4.6	3
40	Micro and nanotechnologies for the development of an integrated chromatographic system. , 2007, , .		2
41	Flexible Polyimide Platform based on the Integration of Potentiometric Multi-sensor for Biomedical Applications. Procedia Engineering, 2014, 87, 276-279.	1.2	2
42	Carbon Nanotubes as Suitable Interface for Improving Neural Recordings. , 0, , .		2
43	Flexible microfluidic bio-lab-on-a-chip multi-sensor platform for electrochemical measurements. , 2014, , .		1
44	Neural interfaces based on flexible graphene transistors: A new tool for electrophysiology. , 2019, , .		1
45	Single and Multisite Grapheneâ€Based Electroretinography Recording Electrodes: A Benchmarking Study. Advanced Materials Technologies, 0, , 2101181.	5.8	1
46	In vivo assessment of corneal barrier function through non-invasive impedance measurements using a flexible probe. Journal of Physics: Conference Series, 2013, 434, 012072.	0.4	0
47	P0104 : The liver sinusoid within a microfluidic chamber: A new tool for vascular biology research. Journal of Hepatology, 2015, 62, S339-S340.	3.7	0
48	Maintenance of Hepatocyte Phenotype in Vitro: The Sinusoidal Milieu is the Key. Journal of Hepatology, 2016, 64, S307-S308.	3.7	0