

F Javier Del Campo

List of Publications by Citations

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119
papers

4,298
citations

32
h-index

61
g-index

125
ext. papers

4,826
ext. citations

6
avg, IF

5.56
L-index

#	Paper	IF	Citations
119	Pathogen detection: a perspective of traditional methods and biosensors. <i>Biosensors and Bioelectronics</i> , 2007 , 22, 1205-17	11.8	1048
118	The cyclic and linear sweep voltammetry of regular arrays of microdisc electrodes: Fitting of experimental data. <i>Journal of Electroanalytical Chemistry</i> , 2005 , 585, 51-62	4.1	160
117	Mass Transport to Nanoelectrode Arrays and Limitations of the Diffusion Domain Approach: Theory and Experiment. <i>Journal of Physical Chemistry C</i> , 2009 , 113, 11119-11125	3.8	146
116	Microfluidic fuel cells on paper: meeting the power needs of next generation lateral flow devices. <i>Energy and Environmental Science</i> , 2014 , 7, 1744-1749	35.4	132
115	Inkjet-printed electrochemical sensors. <i>Current Opinion in Electrochemistry</i> , 2017 , 3, 29-39	7.2	97
114	Toward membrane-free amperometric gas sensors: a microelectrode array approach. <i>Analytical Chemistry</i> , 2010 , 82, 5238-45	7.8	93
113	Electroanalysis Utilizing Amperometric Microdisk Electrode Arrays. <i>Electroanalysis</i> , 2007 , 19, 1973-1986	3	93
112	Trace Detection of Mercury(II) Using Gold Ultra-Microelectrode Arrays. <i>Electroanalysis</i> , 2006 , 18, 573-578		91
111	Detection of Escherichia coli and Salmonella typhimurium using interdigitated microelectrode capacitive immunosensors: the importance of transducer geometry. <i>Analytical Chemistry</i> , 2008 , 80, 7239-7247	7.8	87
110	Continuous Detection of Hypochlorous Acid/Hypochlorite for Water Quality Monitoring and Control. <i>Electroanalysis</i> , 2005 , 17, 1641-1648	3	86
109	On-chip electric field driven electrochemical detection using a poly(dimethylsiloxane) microchannel with gold microband electrodes. <i>Analytical Chemistry</i> , 2008 , 80, 3622-32	7.8	77
108	Impedance biosensing using phages for bacteria detection: generation of dual signals as the clue for in-chip assay confirmation. <i>Biosensors and Bioelectronics</i> , 2010 , 26, 1261-7	11.8	68
107	Voltammetry at Regular Microband Electrode Arrays: Theory and Experiment. <i>Journal of Physical Chemistry C</i> , 2007 , 111, 12058-12066	3.8	66
106	Membraneless glucose/O ₂ microfluidic enzymatic biofuel cell using pyrolyzed photoresist film electrodes. <i>Lab on A Chip</i> , 2013 , 13, 2972-9	7.2	60
105	Improved bacteria detection by coupling magneto-immunocapture and amperometry at flow-channel microband electrodes. <i>Biosensors and Bioelectronics</i> , 2011 , 26, 3633-40	11.8	60
104	Regular arrays of microdisc electrodes: simulation quantifies the fraction of 'dead' electrodes. <i>Analyst, The</i> , 2006 , 131, 440-5	5	53
103	Emulsion electrosynthesis in the presence of power ultrasound Biphasic Kolbe coupling processes at platinum and boron-doped diamond electrodes. <i>Journal of Electroanalytical Chemistry</i> , 2001 , 507, 135-143	4.1	48

102	Recycling and environmental issues of lithium-ion batteries: Advances, challenges and opportunities. <i>Energy Storage Materials</i> , 2021 , 37, 433-465	19.4	48
101	Quantitative self-powered electrochromic biosensors. <i>Chemical Science</i> , 2017 , 8, 1995-2002	9.4	47
100	Paper-based microfluidic biofuel cell operating under glucose concentrations within physiological range. <i>Biosensors and Bioelectronics</i> , 2017 , 90, 475-480	11.8	43
99	Development of amperometric biosensors based on nanostructured tyrosinase-conducting polymer composite electrodes. <i>Sensors</i> , 2013 , 13, 6759-74	3.8	43
98	Multi-analyte determination of dopamine and catechol at single-walled carbon nanotubes □ Conducting polymer □ Tyrosinase based electrochemical biosensors. <i>Journal of Electroanalytical Chemistry</i> , 2015 , 744, 53-61	4.1	42
97	Sensitive electrochemical thrombin aptasensor based on gold disk microelectrode arrays. <i>Biosensors and Bioelectronics</i> , 2013 , 42, 17-22	11.8	42
96	Amperometric detection of Enterobacteriaceae in river water by measuring βgalactosidase activity at interdigitated microelectrode arrays. <i>Analytica Chimica Acta</i> , 2010 , 677, 156-61	6.6	42
95	Paper-based enzymatic microfluidic fuel cell: From a two-stream flow device to a single-stream lateral flow strip. <i>Journal of Power Sources</i> , 2016 , 326, 410-416	8.9	41
94	Microarrays of ring-recessed disk electrodes in transient generator-collector mode: theory and experiment. <i>Analytical Chemistry</i> , 2009 , 81, 9372-82	7.8	41
93	All-inkjet-printed dissolved oxygen sensors on flexible plastic substrates. <i>Organic Electronics</i> , 2016 , 39, 168-176	3.5	39
92	Improved free chlorine amperometric sensor chip for drinking water applications. <i>Analytica Chimica Acta</i> , 2005 , 554, 98-104	6.6	37
91	Electrochemical Lateral Flow Devices: Towards Rapid Immunomagnetic Assays. <i>ChemElectroChem</i> , 2017 , 4, 880-889	4.3	35
90	High-frequency sonoelectrochemical processes: mass transport, thermal and surface effects induced by cavitation in a 500 kHz reactor. <i>Ultrasonics Sonochemistry</i> , 1999 , 6, 189-197	8.9	35
89	Biosensing at disk microelectrode arrays. Inter-electrode functionalisation allows formatting into miniaturised sensing platforms of enhanced sensitivity. <i>Biosensors and Bioelectronics</i> , 2009 , 25, 920-6	11.8	33
88	Why 'the bigger the better' is not always the case when utilising microelectrode arrays: high density vs. low density arrays for the electroanalytical sensing of chromium(VI). <i>Analyst, The</i> , 2009 , 134, 2301-5	5	33
87	Investigating the concept of diffusional independence. Potential step transients at nano- and micro-electrode arrays: theory and experiment. <i>Analyst, The</i> , 2009 , 134, 343-8	5	32
86	Development of microelectrode arrays modified with inorganic□organic composite materials for dopamine electroanalysis. <i>Journal of Electroanalytical Chemistry</i> , 2010 , 639, 147-153	4.1	32
85	Use of sinusoidal voltages with fixed frequency in the preparation of tyrosinase based electrochemical biosensors for dopamine electroanalysis. <i>Sensors and Actuators B: Chemical</i> , 2017 , 240, 801-809	8.5	31

84	Electrochemical Investigation of Hemispherical Microdroplets of N,N-Didodecyl-N,N'-Diethylphenylenediamine Immobilized as Regular Arrays on Partially-Blocked Electrodes: A New Approach to Liquid-Liquid Voltammetry. <i>Journal of Physical Chemistry C</i> , 2007 , 111, 9992-10002	3.8	31
83	Low-temperature sonoelectrochemical processes: Part 1. Mass transport and cavitation effects of 20 kHz ultrasound in liquid ammonia. <i>Journal of Electroanalytical Chemistry</i> , 1999 , 477, 71-78	4.1	30
82	Electrochromic biosensors based on screen-printed Prussian Blue electrodes. <i>Sensors and Actuators B: Chemical</i> , 2019 , 290, 591-597	8.5	29
81	In situ electrodeposition of biocomposite materials by sinusoidal voltages on microelectrodes array for tyrosinase based amperometric biosensor development. <i>Sensors and Actuators B: Chemical</i> , 2013 , 181, 136-143	8.5	29
80	Miniaturization of electrochemical flow devices. <i>Electrochemistry Communications</i> , 2014 , 45, 91-94	5.1	28
79	Gold immuno-functionalisation via self-assembled monolayers: study of critical parameters and comparative performance for protein and bacteria detection. <i>Journal of Immunological Methods</i> , 2008 , 336, 203-12	2.5	28
78	Electrochemical POC device for fast malaria quantitative diagnosis in whole blood by using magnetic beads, Poly-HRP and microfluidic paper electrodes. <i>Biosensors and Bioelectronics</i> , 2020 , 150, 111925	11.8	28
77	Construction and characterisation of a modular microfluidic system: coupling magnetic capture and electrochemical detection. <i>Microfluidics and Nanofluidics</i> , 2010 , 8, 393-402	2.8	25
76	Sulfite Determination at In Situ Plated Copper Modified Gold Ultramicroelectrode Arrays. <i>Electroanalysis</i> , 2006 , 18, 247-252	3	25
75	Electroanalysis of Bromate, Iodate and Chlorate at Tungsten Oxide Modified Platinum Microelectrode Arrays. <i>Electroanalysis</i> , 2006 , 18, 1672-1680	3	25
74	Differential Pulse and Chronoamperometric Studies of Insonated Systems: Acoustic Streaming and Cavitational Effects. <i>Journal of Physical Chemistry A</i> , 2001 , 105, 666-674	2.8	25
73	Microfabrication and characterization of cylinder micropillar array electrodes. <i>Journal of Electroanalytical Chemistry</i> , 2011 , 662, 361-370	4.1	24
72	Sonoelectrochemistry at platinum and boron-doped diamond electrodes: achieving fast mass transport for low diffusors. <i>Journal of Electroanalytical Chemistry</i> , 2001 , 513, 94-99	4.1	24
71	Dual chronoamperometric detection of enzymatic biomarkers using magnetic beads and a low-cost flow cell. <i>Biosensors and Bioelectronics</i> , 2015 , 69, 328-36	11.8	23
70	Current collection efficiency of micro- and nano-ring-recessed disk electrodes and of arrays of these electrodes. <i>Sensors and Actuators B: Chemical</i> , 2009 , 138, 362-367	8.5	23
69	Fast electrochemical detection of anti-HIV antibodies: coupling allosteric enzymes and disk microelectrode arrays. <i>Analytica Chimica Acta</i> , 2009 , 641, 1-6	6.6	23
68	Gold ultra-microelectrode arrays: application to the steady-state voltammetry of hydroxide ion in aqueous solution. <i>Analytical Sciences</i> , 2006 , 22, 679-83	1.7	23
67	Immunofunctionalisation of gold transducers for bacterial detection by physisorption. <i>Analytical and Bioanalytical Chemistry</i> , 2008 , 391, 2825-35	4.4	21

66	High Aspect-Ratio, Fully Conducting Gold Micropillar Array Electrodes: Silicon Micromachining and Electrochemical Characterization. <i>Journal of Physical Chemistry C</i> , 2012 , 116, 18831-18846	3.8	20
65	Vertically aligned carbon nanotube based electrodes: Fabrication, characterisation and prospects. <i>Electrochemistry Communications</i> , 2008 , 10, 1242-1245	5.1	20
64	The linear sweep voltammetry of random arrays of microdisc electrodes: Fitting of experimental data. <i>Journal of Electroanalytical Chemistry</i> , 2006 , 592, 126-130	4.1	20
63	Determination of heterogeneous electron transfer rate constants at interdigitated nanoband electrodes fabricated by an optical mix-and-match process. <i>Sensors and Actuators B: Chemical</i> , 2014 , 194, 86-95	8.5	19
62	Fuel cell-powered microfluidic platform for lab-on-a-chip applications: Integration into an autonomous amperometric sensing device. <i>Lab on A Chip</i> , 2012 , 12, 4232-5	7.2	19
61	Cancer prognostics by direct detection of p53-antibodies on gold surfaces by impedance measurements. <i>Small</i> , 2012 , 8, 2106-15	11	19
60	Fabrication of PPF Electrodes by a Rapid Thermal Process. <i>Journal of the Electrochemical Society</i> , 2011 , 158, H63	3.9	19
59	Experimental cyclic voltammetry at partially blocked electrodes: Elevated cylindrical blocks: Significantly blocked and non-flat electrodes can appear to show one-dimensional diffusion. <i>Journal of Electroanalytical Chemistry</i> , 2006 , 596, 25-32	4.1	19
58	Low-temperature sonoelectrochemical processes: Part 3. Electrodimerisation of 2-nitrobenzylchloride in liquid ammonia. <i>Journal of Electroanalytical Chemistry</i> , 2001 , 506, 170-177	4.1	19
57	Detection of plasma MMP-9 within minutes. Unveiling some of the clues to develop fast and simple electrochemical magneto-immunosensors. <i>Biosensors and Bioelectronics</i> , 2018 , 115, 45-52	11.8	18
56	Plane-recessed disk electrodes and their arrays in transient generator-collector mode: The measurement of the rate of the chemical reaction of electrochemically generated species. <i>Journal of Electroanalytical Chemistry</i> , 2010 , 648, 28-35	4.1	18
55	Design and fabrication of a COP-based microfluidic chip: chronoamperometric detection of Troponin T. <i>Electrophoresis</i> , 2012 , 33, 3187-94	3.6	16
54	Publisher's Note: A Non-Enzymatic Glucose Sensor Based on the Use of Gold Micropillar Array Electrodes [J. Electrochem. Soc., 159, F134 (2012)]. <i>Journal of the Electrochemical Society</i> , 2012 , 159, X1-X1	3.9	16
53	Sinusoidal voltage electrodeposition and characterization of conducting polymers on gold microelectrode arrays. <i>Journal of Electroanalytical Chemistry</i> , 2012 , 687, 71-78	4.1	16
52	Disposable Miniaturized Screen-Printed pH and Reference Electrodes for Potentiometric Systems. <i>Electroanalysis</i> , 2011 , 23, 115-121	3	16
51	iR Drop Effects in Self-Powered and Electrochromic Biosensors. <i>Journal of Physical Chemistry C</i> , 2018 , 122, 2596-2607	3.8	15
50	Developing Random Network Theory for Carbon Nanotube Modified Electrode Voltammetry: Introduction and Application to Estimating the Potential Drop between MWCNT-MWCNT Contacts. <i>Journal of Physical Chemistry C</i> , 2008 , 112, 13729-13738	3.8	15
49	Continuous measurement of acute toxicity in water using a solid state microrespirometer. <i>Sensors and Actuators B: Chemical</i> , 2007 , 126, 515-521	8.5	15

48	Diffusional protection of electrode surfaces using regular arrays of immobilised droplets: overcoming interferences in electroanalysis. <i>Analyst, The</i> , 2006 , 131, 987-9	5	15
47	Microelectrode study of single cavitational bubbles induced by 500 kHz ultrasound. <i>Ultrasonics Sonochemistry</i> , 2002 , 9, 275-83	8.9	15
46	Electrochromic sensors: Innovative devices enabled by spectroelectrochemical methods. <i>Current Opinion in Electrochemistry</i> , 2019 , 15, 66-72	7.2	14
45	Rapid prototyping of electrochemical lateral flow devices: stencilled electrodes. <i>Analyst, The</i> , 2016 , 141, 2515-22	5	14
44	Electrochemical detection of testosterone by use of three-dimensional disc-ring microelectrode sensing platforms: application to doping monitoring. <i>Analytical Chemistry</i> , 2011 , 83, 4037-44	7.8	14
43	Electrochemical sizing of hemispherical microdroplets immobilized as regular arrays on partially blocked electrodes. <i>Journal of Electroanalytical Chemistry</i> , 2007 , 602, 1-7	4.1	14
42	Voltammetry at Boron-Doped Diamond Electrodes in Liquid Ammonia: Solvent Window Effects and Diamond Surface Modification. <i>Electrochemical and Solid-State Letters</i> , 1999 , 3, 224		14
41	Self-assembled monolayers as a base for immunofunctionalisation: unequal performance for protein and bacteria detection. <i>Analytical and Bioanalytical Chemistry</i> , 2008 , 390, 1557-62	4.4	13
40	Low-temperature sonoelectrochemical processes. <i>Journal of Electroanalytical Chemistry</i> , 2001 , 507, 144-151	4.51	13
39	A self-powered skin-patch electrochromic biosensor. <i>Biosensors and Bioelectronics</i> , 2021 , 175, 112879	11.8	13
38	Profiling of oxygen in biofilms using individually addressable disk microelectrodes on a microfabricated needle. <i>Mikrochimica Acta</i> , 2015 , 182, 985-993	5.8	12
37	Mercury detection at microfabricated pyrolyzed photoresist film (PPF) disk electrodes. <i>Sensors and Actuators B: Chemical</i> , 2013 , 186, 293-299	8.5	12
36	Integration of a zero dead-volume PDMS rotary switch valve in a miniaturised (bio)electroanalytical system. <i>Lab on A Chip</i> , 2010 , 10, 1841-7	7.2	12
35	CMOS Interfaces for Internet-of-Wearables Electrochemical Sensors: Trends and Challenges. <i>Electronics (Switzerland)</i> , 2019 , 8, 150	2.6	11
34	An electrochemical flow cell for the convenient oxidation of Furfuryl alcohols. <i>Journal of Flow Chemistry</i> , 2018 , 8, 123-128	3.3	11
33	Thick-film voltammetric pH-sensors with internal indicator and reference species. <i>Talanta</i> , 2012 , 99, 737-43	4.3	10
32	Ion Transport Across Liquid Liquid Interfacial Boundaries Monitored at Generator-Collector Electrodes. <i>Electroanalysis</i> , 2010 , 22, 2889-2896	3	10
31	Design of a microfluidic respirometer for semi-continuous amperometric short time biochemical oxygen demand (BOD _{st}) analysis. <i>Biochemical Engineering Journal</i> , 2012 , 66, 27-37	4.2	9

30	Non-Conventional Electrochemical Techniques for Assembly of Electrodes on Glassy Carbon-Like PPF Materials and Their Use in a Glucose Microfluidic Fuel-Cell. <i>Fuel Cells</i> , 2014 , 14, 810-817	2.9	8
29	Chronoamperometry on ring, ring-recessed and disk electrodes, and their arrays. The sensitive measurement of diffusion coefficients independent of a knowledge of concentration or number of electrons transferred. <i>Journal of Electroanalytical Chemistry</i> , 2010 , 647, 20-28	4.1	8
28	Coupled triple phase boundary processes: Liquid-liquid generator-collector electrodes. <i>Electrochemistry Communications</i> , 2010 , 12, 455-458	5.1	8
27	A new method for the study of processes at the liquid-liquid interface using an array of microdroplets on a Au electrode. <i>ChemPhysChem</i> , 2006 , 7, 2585-92	3.2	8
26	Fully-printed and silicon free self-powered electrochromic biosensors: Towards naked eye quantification. <i>Sensors and Actuators B: Chemical</i> , 2020 , 306, 127535	8.5	8
25	Antimony tin oxide (ATO) screen-printed electrodes and their application to spectroelectrochemistry. <i>Electrochemistry Communications</i> , 2018 , 93, 123-127	5.1	6
24	Biofilm Oxygen Profiling using an Array of Microelectrodes on a Microfabricated Needle. <i>Procedia Engineering</i> , 2014 , 87, 256-259		6
23	Photoelectrochemical ruler: measurement at the micron scale. <i>Analyst, The</i> , 2007 , 132, 983-5	5	6
22	Stability of Mercury Film Electrodes under the Influence of High Frequency (500kHz) Ultrasound. <i>Journal of Applied Electrochemistry</i> , 2001 , 31, 475-480	2.6	6
21	Rapid Detection of in Drinking Water, Based on Filter Immunoassay and Chronoamperometric Measurement. <i>Biosensors</i> , 2020 , 10,	5.9	6
20	Screen-printable Electrochromic Polymer Inks and Ion Gel Electrolytes for the Design of Low-power, Flexible Electrochromic Devices. <i>Electroanalysis</i> , 2019 , 31, 1664-1671	3	5
19	Construction of a Hydrogen Peroxide Biosensor on Interdigitated Microband Electrodes Fabricated by a Mix-and-Match Process. <i>Journal of the Electrochemical Society</i> , 2015 , 162, B133-B137	3.9	5
18	Development of an Automated Heavy Metal Analyser. <i>Electroanalysis</i> , 2015 , 27, 929-937	3	5
17	Suspended Silicon Microphotodiodes for Electrochemical and Biological Applications. <i>Small</i> , 2017 , 13, 1701920	11	4
16	A 15-W 105-dB 1.8-Vpp Potentiostatic Delta-Sigma Modulator for Wearable Electrochemical Transducers in 65-nm CMOS Technology. <i>IEEE Access</i> , 2020 , 8, 62127-62136	3.5	4
15	(Invited) Micro Fuel Cells: Can We Apply Them to a Successful Market?. <i>ECS Transactions</i> , 2014 , 64, 875-880		4
14	Measuring acute toxicity using a solid-state microrespirometer. <i>Sensors and Actuators B: Chemical</i> , 2008 , 135, 13-20	8.5	4
13	Scanning electrochemical microscopy for study of aptamer-thrombin interfacial interactions on gold disk microelectrodes. <i>Journal of Colloid and Interface Science</i> , 2014 , 417, 333-5	9.3	3

12	Voltammetric sizing and shaping of a cylinder. <i>Journal of Electroanalytical Chemistry</i> , 2007 , 611, 201-207	4.1	3
11	Preliminary Contribution to the Quantification of HMF in Honey by Electrochemical Biosensor Chips. <i>Electroanalysis</i> , 2006 , 18, 2435-2440	3	3
10	Integrated Photonic System for Early Warning of Cyanobacterial Blooms in Aquaponics. <i>Analytical Chemistry</i> , 2021 , 93, 722-730	7.8	3
9	Laser-induced highly oriented pyrolytic graphite for high-performance screen-printed electrodes. <i>Materials Advances</i> , 2021 , 2, 5912-5921	3.3	3
8	2015 ,		2
7	Improved electrical characteristics of porous germanium photodiode obtained by phosphorus ion implantation. <i>International Journal of Nanotechnology</i> , 2013 , 10, 553	1.5	2
6	Laser-activated screen-printed carbon electrodes for enhanced dopamine determination in the presence of ascorbic and uric acid. <i>Electrochimica Acta</i> , 2021 , 399, 139374	6.7	2
5	Disposable hydrogen fuel cells for powering next-generation lateral flow devices 2015 ,		1
4	Small-volume multiparametric electrochemical detection at low cost polymeric devices featuring nanoelectrodes 2015 ,		1
3	Chapter 2:Development of Microelectrode-based Biosensors for Biomedical Analysis. <i>RSC Detection Science</i> , 2015 , 19-84	0.4	1
2	A low-power electronic instrumentation for multi-parametric diabetes mellitus analysis 2016 ,		1
1	Understanding Electrogenerated Chemiluminescence at graphite screen-printed electrodes. <i>Journal of Electroanalytical Chemistry</i> , 2022 , 116331	4.1	