

Stephane Arbault

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

92
papers

3,371
citations

34
h-index

56
g-index

101
ext. papers

3,857
ext. citations

6.5
avg, IF

5.16
L-index

#	Paper	IF	Citations
92	Electrochemical monitoring of single cell secretion: vesicular exocytosis and oxidative stress. <i>Chemical Reviews</i> , 2008 , 108, 2585-621	68.1	304
91	Single Cell Electrochemiluminescence Imaging: From the Proof-of-Concept to Disposable Device-Based Analysis. <i>Journal of the American Chemical Society</i> , 2017 , 139, 16830-16837	16.4	147
90	Surface-Confined Electrochemiluminescence Microscopy of Cell Membranes. <i>Journal of the American Chemical Society</i> , 2018 , 140, 14753-14760	16.4	144
89	Mapping electrogenerated chemiluminescence reactivity in space: mechanistic insight into model systems used in immunoassays. <i>Chemical Science</i> , 2014 , 5, 2568-2572	9.4	130
88	Monitoring in real time with a microelectrode the release of reactive oxygen and nitrogen species by a single macrophage stimulated by its membrane mechanical depolarization. <i>ChemBioChem</i> , 2006 , 7, 653-61	3.8	127
87	Monitoring an oxidative stress mechanism at a single human fibroblast. <i>Analytical Chemistry</i> , 1995 , 67, 3382-90	7.8	120
86	Glutamatergic Control of Microvascular Tone by Distinct GABA Neurons in the Cerebellum. <i>Journal of Neuroscience</i> , 2006 , 26, 6997-7006	6.6	106
85	Characterization of the electrochemical oxidation of peroxyxynitrite: relevance to oxidative stress bursts measured at the single cell level. <i>Chemistry - A European Journal</i> , 2001 , 7, 4171-9	4.8	104
84	Electrochemiluminescence Imaging for Bioanalysis. <i>Annual Review of Analytical Chemistry</i> , 2019 , 12, 275-295	2.5	94
83	Formation of reactive nitrogen species including peroxyxynitrite in physiological buffer exposed to cold atmospheric plasma. <i>RSC Advances</i> , 2016 , 6, 78457-78467	3.7	91
82	Real-time amperometric analysis of reactive oxygen and nitrogen species released by single immunostimulated macrophages. <i>ChemBioChem</i> , 2008 , 9, 1472-80	3.8	81
81	Correlation between vesicle quantal size and fusion pore release in chromaffin cell exocytosis. <i>Biophysical Journal</i> , 2005 , 88, 4411-20	2.9	80
80	Simultaneous detection of reactive oxygen and nitrogen species released by a single macrophage by triple potential-step chronoamperometry. <i>Analytical Chemistry</i> , 2010 , 82, 1411-9	7.8	78
79	Coupling of electrochemistry and fluorescence microscopy at indium tin oxide microelectrodes for the analysis of single exocytotic events. <i>Angewandte Chemie - International Edition</i> , 2006 , 45, 4000-3	16.4	73
78	Electrochemical detection in a microfluidic device of oxidative stress generated by macrophage cells. <i>Lab on A Chip</i> , 2007 , 7, 233-8	7.2	71
77	Regulation of exocytosis in chromaffin cells by trans-insertion of lysophosphatidylcholine and arachidonic acid into the outer leaflet of the cell membrane. <i>ChemBioChem</i> , 2006 , 7, 1998-2003	3.8	71
76	3D electrogenerated chemiluminescence: from surface-confined reactions to bulk emission. <i>Chemical Science</i> , 2015 , 6, 4433-4437	9.4	64

75	Coupling amperometry and total internal reflection fluorescence microscopy at ITO surfaces for monitoring exocytosis of single vesicles. <i>Angewandte Chemie - International Edition</i> , 2011 , 50, 5081-4	16.4	64
74	Analysis of individual biochemical events based on artificial synapses using ultramicroelectrodes: cellular oxidative burst. <i>Faraday Discussions</i> , 2000 , 319-33; discussion 335-51	3.6	64
73	Electrochemiluminescent swimmers for dynamic enzymatic sensing. <i>Chemical Communications</i> , 2014 , 50, 10202-5	5.8	59
72	Nitric oxide release during evoked neuronal activity in cerebellum slices: detection with platinized carbon-fiber microelectrodes. <i>ChemPhysChem</i> , 2006 , 7, 181-7	3.2	59
71	Generation of electrochemiluminescence at bipolar electrodes: concepts and applications. <i>Analytical and Bioanalytical Chemistry</i> , 2016 , 408, 7003-11	4.4	56
70	A Sensitive Electrochemiluminescence Immunosensor for Celiac Disease Diagnosis Based on Nanoelectrode Ensembles. <i>Analytical Chemistry</i> , 2015 , 87, 12080-7	7.8	54
69	Oxidative stress in cancer prone xeroderma pigmentosum fibroblasts. Real-time and single cell monitoring of superoxide and nitric oxide production with microelectrodes. <i>Carcinogenesis</i> , 2004 , 25, 509-15	4.6	49
68	Mechanistic insights into the impact of Cold Atmospheric Pressure Plasma on human epithelial cell lines. <i>Scientific Reports</i> , 2017 , 7, 41163	4.9	47
67	Finding out egyptian gods's secret using analytical chemistry: biomedical properties of egyptian black makeup revealed by amperometry at single cells. <i>Analytical Chemistry</i> , 2010 , 82, 457-60	7.8	47
66	Correlations between gaseous and liquid phase chemistries induced by cold atmospheric plasmas in a physiological buffer. <i>Physical Chemistry Chemical Physics</i> , 2018 , 20, 9198-9210	3.6	40
65	Striking inflammation from both sides: manganese(II) pentaazamacrocyclic SOD mimics act also as nitric oxide dismutases: a single-cell study. <i>Angewandte Chemie - International Edition</i> , 2010 , 49, 4228-32	16.4	40
64	Dynamics of full fusion during vesicular exocytotic events: release of adrenaline by chromaffin cells. <i>ChemPhysChem</i> , 2003 , 4, 147-54	3.2	40
63	Dual Enzymatic Detection by Bulk Electrogenerated Chemiluminescence. <i>Analytical Chemistry</i> , 2016 , 88, 6585-92	7.8	39
62	Relationship between amperometric pre-spike feet and secretion granule composition in chromaffin cells: an overview. <i>Biophysical Chemistry</i> , 2007 , 129, 181-9	3.5	37
61	Comparison of apex and bottom secretion efficiency at chromaffin cells as measured by amperometry. <i>Biophysical Chemistry</i> , 2007 , 127, 165-71	3.5	36
60	Microscopic imaging and tuning of electrogenerated chemiluminescence with boron-doped diamond nanoelectrode arrays. <i>Analytical and Bioanalytical Chemistry</i> , 2016 , 408, 7085-94	4.4	36
59	Spatially-resolved multicolor bipolar electrochemiluminescence. <i>Electrochemistry Communications</i> , 2017 , 77, 10-13	5.1	34
58	Coupling Electrochemistry with Fluorescence Confocal Microscopy To Investigate Electrochemical Reactivity: A Case Study with the Resazurin-Resorufin Fluorogenic Couple. <i>Analytical Chemistry</i> , 2016 , 88, 6292-300	7.8	34

57	Amplification of the inflammatory cellular redox state by human immunodeficiency virus type 1-immunosuppressive tat and gp160 proteins. <i>Journal of Virology</i> , 1999 , 73, 1447-52	6.6	32
56	Quantitative investigations of amperometric spike feet suggest different controlling factors of the fusion pore in exocytosis at chromaffin cells. <i>Biophysical Chemistry</i> , 2009 , 143, 124-31	3.5	31
55	Oxidative modification and electrochemical inactivation of Escherichia coli upon cold atmospheric pressure plasma exposure. <i>PLoS ONE</i> , 2017 , 12, e0173618	3.7	30
54	In situ electrochemical monitoring of reactive oxygen and nitrogen species released by single MG63 osteosarcoma cell submitted to a mechanical stress. <i>Physical Chemistry Chemical Physics</i> , 2010 , 12, 10048-54	3.6	25
53	Angeli® salt (Na ₂ N ₂ O ₃) is a precursor of HNO and NO: a voltammetric study of the reactive intermediates released by Angeli® salt decomposition. <i>ChemMedChem</i> , 2007 , 2, 898-903	3.7	24
52	Invariance of exocytotic events detected by amperometry as a function of the carbon fiber microelectrode diameter. <i>Analytical Chemistry</i> , 2009 , 81, 3087-93	7.8	23
51	Guiding pancreatic beta cells to target electrodes in a whole-cell biosensor for diabetes. <i>Lab on a Chip</i> , 2015 , 15, 3880-90	7.2	22
50	Vesicular exocytosis under hypotonic conditions shows two distinct populations of dense core vesicles in bovine chromaffin cells. <i>ChemPhysChem</i> , 2007 , 8, 578-85	3.2	22
49	Vitamin C stimulates or attenuates reactive oxygen and nitrogen species (ROS, RNS) production depending on cell state: Quantitative amperometric measurements of oxidative bursts at PLB-985 and RAW 264.7 cells at the single cell level. <i>Journal of Electroanalytical Chemistry</i> , 2008 , 615, 34-44	4.1	22
48	Electrochemical monitoring of the early events of hydrogen peroxide production by mitochondria. <i>Angewandte Chemie - International Edition</i> , 2014 , 53, 6655-8	16.4	21
47	Enhanced Detection of Hydrogen Peroxide with Platinized Microelectrode Arrays for Analyses of Mitochondria Activities. <i>Electrochimica Acta</i> , 2014 , 126, 171-178	6.7	21
46	Ex vivo activities of beta-lapachone and alpha-lapachone on macrophages: a quantitative pharmacological analysis based on amperometric monitoring of oxidative bursts by single cells. <i>ChemBioChem</i> , 2009 , 10, 528-38	3.8	20
45	Coupling Amperometry and Total Internal Reflection Fluorescence Microscopy at ITO Surfaces for Monitoring Exocytosis of Single Vesicles. <i>Angewandte Chemie</i> , 2011 , 123, 5187-5190	3.6	19
44	Shadow Electrochemiluminescence Microscopy of Single Mitochondria. <i>Angewandte Chemie - International Edition</i> , 2021 , 60, 18742-18749	16.4	18
43	Direct oxidative pathway from amplex red to resorufin revealed by in situ confocal imaging. <i>Physical Chemistry Chemical Physics</i> , 2016 , 18, 25817-22	3.6	18
42	Pro-oxidant properties of AZT and other thymidine analogues in macrophages: implication of the azido moiety in oxidative stress. <i>ChemMedChem</i> , 2010 , 5, 296-301	3.7	17
41	Triangulation mapping of oxidative bursts released by single fibroblasts by amperometry at microelectrodes. <i>Analytical Chemistry</i> , 2008 , 80, 9635-41	7.8	17
40	Coupling of Electrochemistry and Fluorescence Microscopy at Indium Tin Oxide Microelectrodes for the Analysis of Single Exocytotic Events. <i>Angewandte Chemie</i> , 2006 , 118, 4104-4107	3.6	17

39	Dual-Color Electrogenerated Chemiluminescence from Dispersions of Conductive Microbeads Addressed by Bipolar Electrochemistry. <i>ChemElectroChem</i> , 2016 , 3, 404-409	4.3	16
38	Selective electrochemiluminescent sensing of saccharides using boronic acid-modified coreactant. <i>Chemical Communications</i> , 2016 , 52, 12845-12848	5.8	15
37	Electroformation of phospholipid giant unilamellar vesicles in physiological phosphate buffer. <i>Integrative Biology (United Kingdom)</i> , 2018 , 10, 429-434	3.7	14
36	The nature and efficiency of neurotransmitter exocytosis also depend on physicochemical parameters. <i>ChemPhysChem</i> , 2007 , 8, 1597-605	3.2	13
35	Modelling release of nitric oxide in a slice of rat brain: describing stimulated functional hyperemia with diffusion-reaction equations. <i>Mathematical Medicine and Biology</i> , 2006 , 23, 27-44	1.3	13
34	Concerted activities of nitric oxide synthases and NADPH oxidases in PLB-985 cells. <i>Biochemical and Biophysical Research Communications</i> , 2007 , 361, 493-8	3.4	13
33	Full-Spectral Multiplexing of Bioluminescence Resonance Energy Transfer in Three TRPV Channels. <i>Biophysical Journal</i> , 2017 , 112, 87-98	2.9	11
32	Chemo- and Magnetotaxis of Self-Propelled Light-Emitting Chemo-electronic Swimmers. <i>Angewandte Chemie - International Edition</i> , 2020 , 59, 7508-7513	16.4	11
31	Oxygen Plasma Treatment of Platinized Ultramicroelectrodes Increases Sensitivity for Hydrogen Peroxide Detection on Mitochondria. <i>Electroanalysis</i> , 2013 , 25, 656-663	3	11
30	Double remote electrochemical addressing and optical readout of electrochemiluminescence at the tip of an optical fiber. <i>Analyst, The</i> , 2016 , 141, 4299-304	5	11
29	A snapshot of the electrochemical reaction layer by using 3 dimensionally resolved fluorescence mapping. <i>Chemical Science</i> , 2018 , 9, 6622-6628	9.4	10
28	Prediction of local pH variations during amperometric monitoring of vesicular exocytotic events at chromaffin cells. <i>ChemPhysChem</i> , 2010 , 11, 2931-41	3.2	10
27	Reactive Oxygen Species Generated by Cold Atmospheric Plasmas in Aqueous Solution: Successful Electrochemical Monitoring in Situ under a High Voltage System. <i>Analytical Chemistry</i> , 2019 , 91, 8002-8007	7.8	9
26	PDMS microwells for multi-parametric monitoring of single mitochondria on a large scale: a study of their individual membrane potential and endogenous NADH. <i>Integrative Biology (United Kingdom)</i> , 2016 , 8, 836-43	3.7	9
25	Monitoring metabolic responses of single mitochondria within poly(dimethylsiloxane) wells: study of their endogenous reduced nicotinamide adenine dinucleotide evolution. <i>Analytical Chemistry</i> , 2013 , 85, 5146-52	7.8	9
24	pKa tuning in quadrupolar-type two-photon ratiometric fluorescent membrane probes. <i>Chemical Communications</i> , 2015 , 51, 15245-8	5.8	8
23	Optical microwell array for large scale studies of single mitochondria metabolic responses. <i>Analytical and Bioanalytical Chemistry</i> , 2014 , 406, 931-41	4.4	8
22	Applications of Electrogenerated Chemiluminescence in Analytical Chemistry 2017 , 257-291		6

21	Microwell array integrating nanoelectrodes for coupled opto-electrochemical monitorings of single mitochondria. <i>Biosensors and Bioelectronics</i> , 2019 , 126, 672-678	11.8	6
20	Deciphering the Platinized Surface Reactivity to Improve the Detection of Hydrogen Peroxide in Bioanalyses. <i>ChemElectroChem</i> , 2016 , 3, 2288-2296	4.3	5
19	Remote Actuation of a Light-Emitting Device Based on Magnetic Stirring and Wireless Electrochemistry. <i>ChemPhysChem</i> , 2020 , 21, 600-604	3.2	4
18	Electrochemical Monitoring of the Early Events of Hydrogen Peroxide Production by Mitochondria. <i>Angewandte Chemie</i> , 2014 , 126, 6773-6776	3.6	4
17	Dynamic monitoring of a bi-enzymatic reaction at a single biomimetic giant vesicle. <i>Analyst, The</i> , 2021 , 145, 7922-7931	5	4
16	Shadow Electrochemiluminescence Microscopy of Single Mitochondria. <i>Angewandte Chemie</i> , 2021 , 133, 18890-18897	3.6	4
15	Dual microelectrodes decorated with nanotip arrays: Fabrication, characterization and spectroelectrochemical sensing. <i>Electrochimica Acta</i> , 2019 , 328, 135105	6.7	3
14	Optical microwell arrays for large-scale studies of single mitochondria metabolic responses. <i>Methods in Molecular Biology</i> , 2015 , 1264, 47-58	1.4	3
13	Effects of 50 Hz magnetic fields on gap junctional intercellular communication in NIH3T3 cells. <i>Bioelectromagnetics</i> , 2015 , 36, 287-93	1.6	2
12	Activation of the TRPV1 Thermoreceptor Induced by Modulated or Unmodulated 1800 MHz Radiofrequency Field Exposure. <i>Radiation Research</i> , 2018 , 189, 95-103	3.1	2
11	Dynamic Electrochemiluminescence Imaging of Single Giant Liposome Opening at Polarized Electrodes.. <i>Analytical Chemistry</i> , 2022 ,	7.8	2
10	Nano-structured optical fiber bundles for remote SPR detection: a first step toward in vivo biomolecular analysis 2017 ,		1
9	Toward the Analysis of Mitochondria Isolated from Leukemic Cells with Electrochemically Instrumented Microwell Arrays. <i>Proceedings (mdpi)</i> , 2017 , 1, 289	0.3	1
8	Striking Inflammation from Both Sides: Manganese(II) Pentaazamacrocyclic SOD Mimics Act Also as Nitric Oxide Dismutases: A Single-Cell Study. <i>Angewandte Chemie</i> , 2010 , 122, 4324-4328	3.6	1
7	Electroactivity of Superoxide Anion in Aqueous Phosphate Buffers Analyzed with Platinized Microelectrodes. <i>Electroanalysis</i> , 2021 , 33, 882-890	3	1
6	Electroanalysis at a Single Giant Vesicle Generating Enzymatically a Reactive Oxygen Species. <i>Analytical Chemistry</i> , 2021 , 93, 13143-13151	7.8	1
5	Impacts of vesicular environment on Nox2 activity measurements in vitro. <i>Biochimica Et Biophysica Acta - General Subjects</i> , 2021 , 1865, 129767	4	0
4	In Vivo Analyses with Electrochemical Microsensors 2013 , 353-372		

3 Ultramicroelectrodes: Their Use in Semi-Artificial Synapses **1998**, 409-412

2 Microwell Array Based Opto-Electrochemical Detections Revealing Co-Adaptation of Rheological Properties and Oxygen Metabolism in Budding Yeast. *Advanced Biology*, **2021**, 5, e2100484

1 Single-Particle Tracking Method in Fluorescence Microscopy to Monitor Bioenergetic Responses of Individual Mitochondria. *Methods in Molecular Biology*, **2021**, 2276, 153-163

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