Eduardo Laborda

List of Publications by Year in Descending Order

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Version: 2024-04-26

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

118 papers	2,122 citations	25 h-index	38 g-index
121 ext. papers	2,360 ext. citations	5.6 avg, IF	5.09 L-index

#	Paper	IF	Citations
118	Theoretical-experimental synergy towards better understanding of interfacial electron transfer kinetics. *Current Opinion in Electrochemistry*, **2022**, 101028	7.2	1
117	Impact experiments at the Interface between Two Immiscible Electrolyte Solutions (ITIES). *Current Opinion in Electrochemistry*, **2021**, 26, 100664	7.2	1
116	Insights into the Voltammetry of Cavity Microelectrodes Filled with Metal Powders: The Value of Square Wave Voltammetry. *ChemElectroChem*, **2021**, 8, 735-744	4.3	
115	Spectroelectrochemistry for the study of reversible electrode reactions with complex stoichiometries. *Electrochemistry Communications*, **2021**, 123, 106915	5.1	3
114	Analytical Modelling of Electron-coupled Ion Transfers with Immobilized vs Soluble Redox Transducer at Thick Film-modified Electrodes. *Electroanalysis*, **2021**, 33, 2267	3	
113	Cyclic square wave voltammetry of electrode reactions with nonunity stoichiometry. *Journal of Electroanalytical Chemistry*, **2020**, 873, 114421	4.1	2
112	Voltammetry at microelectrodes of reversible electrode reactions with complex stoichiometry: A general analytical theoretical framework. *Journal of Electroanalytical Chemistry*, **2020**, 872, 113932	4.1	2
111	General Explicit Mathematical Solution for the Voltammetry of Nonunity Stoichiometry Electrode Reactions: Diagnosis Criteria in Cyclic Voltammetry. *Analytical Chemistry*, **2020**, 92, 3728-3734	7.8	8
110	Differential double pulse voltammetry (DDPV) and additive differential pulse voltammetry (ADPV) applied to the study of the ACDT mechanism. *Journal of Solid State Electrochemistry*, **2020**, 24, 2819-2831	2.6	1
109	Analytical theory for ion transfer-electron transfer coupled reactions at redox layer-modified/thick film-modified electrodes. *Current Opinion in Electrochemistry*, **2020**, 19, 78-87	7.2	8
108	Guidelines for the Voltammetric Study of Electrode Reactions with Coupled Chemical Kinetics at an Arbitrary Electrode Geometry. *Analytical Chemistry*, **2019**, 91, 6072-6079	7.8	3
107	Unified theoretical treatment of the Eirrev, CE, EC and CEC mechanisms under voltammetric conditions. *Electrochemistry Communications*, **2018**, 92, 48-55	5.1	5
106	Double pulse voltammetric study of the IT-CeqC mechanism underlying the oxygen reduction and hydrogen evolution reactions at liquid/liquid interfaces. *Electrochimica Acta*, **2018**, 265, 638-650	6.7	1
105	Double Transfer Voltammetry in Two-Polarizable Interface Systems: Effects of the Lipophilicity and Charge of the Target and Compensating Ions. *Analytical Chemistry*, **2018**, 90, 3402-3408	7.8	2
104	Individual Detection and Characterization of Non-Electrocatalytic, Redox-Inactive Particles in Solution by using Electrochemistry. *ChemElectroChem*, **2018**, 5, 410-417	4.3	14
103	Electrochemical and Electrostatic Cleavage of Alkoxyamines. *Journal of the American Chemical Society*, **2018**, 140, 766-774	16.4	88
102	Theoretical Treatment of Ion Transfers in Two Polarizable Interface Systems When the Analyte Has Access to Both Interfaces. *Analytical Chemistry*, **2018**, 90, 2088-2094	7.8	5

101	Spectroscopy takes electrochemistry beyond the interface: A compact analytical solution for the reversible first-order catalytic mechanism. *Electrochimica Acta*, **2018**, 284, 721-732	6.7	4
100	Detailed theoretical treatment of homogeneous chemical reactions coupled to interfacial charge transfers. *Electrochimica Acta*, **2018**, 286, 374-396	6.7	4
99	Mathematical modeling of nonlinear reaction–diffusion processes in enzymatic biofuel cells. *Current Opinion in Electrochemistry*, **2017**, 1, 121-132	7.2	17
98	Carbon Support Effects and Mechanistic Details of the Electrocatalytic Activity of Polyoxometalates Investigated via Square Wave Voltacoulometry. *ACS Catalysis*, **2017**, 7, 1501-1511	13.1	7
97	General theoretical treatment of simple and facilitated ion transfer processes at the most common liquid/liquid microinterfaces. *Sensors and Actuators B: Chemical*, **2017**, 253, 326-334	8.5	3
96	Electrochemistry of single droplets of inverse (water-in-oil) emulsions. *Physical Chemistry Chemical Physics*, **2017**, 19, 15662-15666	3.6	31
95	Microelectrode voltammetry of multi-electron transfers complicated by coupled chemical equilibria: a general theory for the extended square scheme. *Physical Chemistry Chemical Physics*, **2017**, 19, 16464-16476	3.6	4
94	Reprint of “Analytical theoretical approach to the transient and steady state voltammetric response of reaction mechanisms. Linear diffusion and reaction layers at micro- and submicroelectrodes of arbitrary geometry” *Journal of Electroanalytical Chemistry*, **2017**, 793, 104-112	4.1	0
93	Single Fusion Events at Polarized Liquid-Liquid Interfaces. *Angewandte Chemie - International Edition*, **2017**, 56, 782-785	16.4	24
92	Single Fusion Events at Polarized Liquid–Liquid Interfaces. *Angewandte Chemie*, **2017**, 129, 800-803	3.6	13
91	Aqueous Voltammetry in the Near Absence of Electrolyte. *Chemistry - A European Journal*, **2017**, 23, 15222-15226	4.8	1
90	Electrochemical and Computational Study of Ion Association in the Electroreduction of PW12O403− *Journal of Physical Chemistry C*, **2017**, 121, 26751-26763	3.8	8
89	Characterization of inclusion complexes of organic ions with hydrophilic hosts by ion transfer voltammetry with solvent polymeric membranes. *Talanta*, **2017**, 164, 636-644	6.2	6
88	Staircase, cyclic and differential voltammetries of the nine-member square scheme at microelectrodes of any geometry with arbitrary chemical stabilization of the three redox states. *Journal of Solid State Electrochemistry*, **2016**, 20, 3239-3253	2.6	5
87	The reaction layer at microdiscs: A cornerstone for the analytical theoretical treatment of homogeneous chemical kinetics at non-uniformly accessible microelectrodes. *Electrochemistry Communications*, **2016**, 71, 18-22	5.1	12
86	Voltammetry of the aqueous complexation-dissociation coupled to transfer (ACDT) mechanism with charged ligands. *Physical Chemistry Chemical Physics*, **2016**, 18, 17091-104	3.6	5
85	Brute force (or not so brute) digital simulation in electrochemistry revisited. *Chemical Physics Letters*, **2016**, 643, 71-76	2.5	6
84	A Comprehensive Voltammetric Characterisation of ECE Processes. *Electrochimica Acta*, **2016**, 195, 230-245	6.7	11

83	Catalase-Modified Carbon Electrodes: Persuading Oxygen To Accept Four Electrons Rather Than Two. *Chemistry - A European Journal*, **2016**, 22, 5904-8	4.8	7
82	Electrical double layer effects on ion transfer reactions. *Physical Chemistry Chemical Physics*, **2016**, 18, 9829-37	3.6	19
81	Transfer of complexed and dissociated ionic species at soft interfaces: a voltammetric study of chemical kinetic and diffusional effects. *Physical Chemistry Chemical Physics*, **2016**, 18, 10158-72	3.6	6
80	New Insights into Fundamental Electron Transfer from Single Nanoparticle Voltammetry. *Journal of Physical Chemistry Letters*, **2016**, 7, 1554-8	6.4	12
79	Analytical theoretical approach to the transient and steady state voltammetric response of reaction mechanisms. Linear diffusion and reaction layers at micro- and submicroelectrodes of arbitrary geometry. *Journal of Electroanalytical Chemistry*, **2016**, 782, 59-66	4.1	4
78	Linear Sweep and Cyclic Voltammetries of Reversible Ion Transfer Processes at Macro- and Microcapillaries under Transient Regime. *Electroanalysis*, **2015**, 27, 93-100	3	6
77	Effects of Unequal Diffusion Coefficients and Coupled Chemical Equilibria on Square Wave Voltammetry at Disc and Hemispherical Microelectrodes. *Electrochimica Acta*, **2015**, 176, 1044-1053	6.7	8
76	Reverse Pulse Voltammetry at Spherical and Disc Microelectrodes: Characterization of Homogeneous Chemical Equilibria and Their Impact on the Species Diffusivities. *Electrochimica Acta* , **2015**, 169, 300-309	6.7	6
75	Tafel–Volmer Electrode Reactions: The Influence of Electron-Transfer Kinetics. *Journal of Physical Chemistry C*, **2015**, 119, 22415-22424	3.8	11
74	Analytical solutions for fast and straightforward study of the effect of the electrode geometry in transient and steady state voltammetries: Single- and multi-electron transfers, coupled chemical reactions and electrode kinetics. *Journal of Electroanalytical Chemistry*, **2015**, 756, 1-21	4.1	21
73	Recent Advances in Voltammetry. *ChemistryOpen*, **2015**, 4, 224-60	2.3	91
72	Normal Pulse Voltammetry and Steady State Voltammetry of the Square Mechanism at Spherical Microelectrodes. *Electroanalysis*, **2015**, 27, 970-979	3	4
71	Differential double pulse voltammetry at spherical microelectrodes for the characterization of the square mechanism. *Journal of Electroanalytical Chemistry*, **2015**, 741, 140-148	4.1	3
70	Application of voltammetric techniques at microelectrodes to the study of the chemical stability of highly reactive species. *Analytical Chemistry*, **2015**, 87, 1676-84	7.8	13
69	Voltammetric speciation studies of systems where the species diffusivities differ significantly. *Journal of Solid State Electrochemistry*, **2015**, 19, 549-561	2.6	8
68	Heterogeneous Catalysis of Multiple-Electron-Transfer Reactions at Nanoparticle-Modified Electrodes. *ChemElectroChem*, **2014**, 1, 909-916	4.3	3
67	Recent advances on the theory of pulse techniques: A mini review. *Electrochemistry Communications*, **2014**, 43, 25-30	5.1	43
66	The strong catalytic effect of Pb(II) on the oxygen reduction reaction on 5 nm gold nanoparticles. *Physical Chemistry Chemical Physics*, **2014**, 16, 3200-8	3.6	17

65	Cyclic and Square-Wave Voltammetry at Diffusionally Asymmetric Microscopic and Nanoscopic Liquid|Liquid Interfaces: A Simple Theoretical Approach. *Journal of Physical Chemistry C*, **2014**, 118, 18249-18256	3.8	14
64	Strong negative nanocatalysis: oxygen reduction and hydrogen evolution at very small (2 nm) gold nanoparticles. *Nanoscale*, **2014**, 6, 11024-30	7.7	26
63	An approximate theoretical treatment of ion transfer processes at asymmetric microscopic and nanoscopic liquid|liquid interfaces: Single and double potential pulse techniques. *Chemical Physics Letters*, **2014**, 597, 126-133	2.5	10
62	Understanding Voltammetry **2014**,		50
61	Reply to comments contained in "Are the reactions of quinones on graphite adiabatic?" by N.B. Luque, W. Schmickler [Electrochim. Acta xx (2012) yyy]. *Electrochimica Acta*, **2013**, 88, 895-898	6.7	21
60	Effects of convergent diffusion and charge transfer kinetics on the diffusion layer thickness of spherical micro- and nanoelectrodes. *Physical Chemistry Chemical Physics*, **2013**, 15, 7106-13	3.6	12
59	On the meaning of the diffusion layer thickness for slow electrode reactions. *Physical Chemistry Chemical Physics*, **2013**, 15, 2381-8	3.6	23
58	A kinetic study of oxygen reduction reaction and characterization on electrodeposited gold nanoparticles of diameter between 17 nm and 40 nm in 0.5 M sulfuric acid. *Nanoscale*, **2013**, 5, 9699-708	7.7	26
57	Oxygen reduction at sparse arrays of platinum nanoparticles in aqueous acid: hydrogen peroxide as a liberated two electron intermediate. *Physical Chemistry Chemical Physics*, **2013**, 15, 19487-95	3.6	22
56	A theoretical and experimental approach to the adiabaticity of diffusional electron transfer processes. Electroreduction of 2-nitropropane on mercury microelectroelectrodes. *Journal of Electroanalytical Chemistry*, **2013**, 704, 102-110	4.1	3
55	On the adiabaticity of electrode processes: Effect of the supporting electrolyte cation on the kinetics of electroreduction of 3-nitrophenolate. *Journal of Electroanalytical Chemistry*, **2013**, 694, 30-36	4.1	7
54	Characterization of follow-up chemical reactions by reverse pulse voltammetry. An analytical solution for spherical electrodes and microelectrodes. *Electrochimica Acta*, **2013**, 87, 416-424	6.7	8
53	Variable temperature study of electro-reduction of 3-nitrophenolate via cyclic and square wave voltammetry: Molecular insights into electron transfer processes based on the asymmetric Marcus-Hush model. *Electrochimica Acta*, **2013**, 110, 772-779	6.7	7
52	Asymmetric Marcus-Hush theory for voltammetry. *Chemical Society Reviews*, **2013**, 42, 4894-905	58.5	88
51	A joint experimental and computational search for authentic nano-electrocatalytic effects: electrooxidation of nitrite and L-ascorbate on gold nanoparticle-modified glassy carbon electrodes. *Small*, **2013**, 9, 478-86	11	33
50	Surface oxidation of gold nanoparticles supported on a glassy carbon electrode in sulphuric acid medium: contrasts with the behaviour of 'macro' gold. *Physical Chemistry Chemical Physics*, **2013**, 15, 3133-6	3.6	35
49	New approach to electrode kinetic measurements in square-wave voltammetry: amplitude-based quasireversible maximum. *Analytical Chemistry*, **2013**, 85, 5586-94	7.8	62
48	Performance of silver nanoparticles in the catalysis of the oxygen reduction reaction in neutral media: Efficiency limitation due to hydrogen peroxide escape. *Nano Research*, **2013**, 6, 511-524	10	62

47	Electrode modification using porous layers. Maximising the analytical response by choosing the most suitable voltammetry: Differential Pulse vs Square Wave vs Linear sweep voltammetry. *Electrochimica Acta*, **2012**, 73, 3-9	6.7	20
46	Giving physical insight into the Butler–Volmer model of electrode kinetics: Application of asymmetric Marcus–Hush theory to the study of the electroreductions of 2-methyl-2-nitropropane, cyclooctatetraene and europium(III) on mercury microelectrodes. *Journal of Electroanalytical Chemistry*, **2012**, 672, 45-52	4.1	34
45	Differential pulse techniques in weakly supported media: Changes in the kinetics and thermodynamics of electrode processes resulting from the supporting electrolyte concentration. *Journal of Electroanalytical Chemistry*, **2012**, 673, 13-23	4.1	10
44	Asymmetric Marcus–Hush model of electron transfer kinetics: Application to the voltammetry of surface-bound redox systems. *Journal of Electroanalytical Chemistry*, **2012**, 674, 90-96	4.1	22
43	Mass transport at electrodes of arbitrary geometry. Reversible charge transfer reactions in square wave voltammetry. *Russian Journal of Electrochemistry*, **2012**, 48, 600-609	1.2	16
42	Comparative evaluation of the symmetric and asymmetric Marcus–Hush formalisms of electrode kinetics – The one-electron oxidation of tetraphenylethylene in dichloromethane on platinum microdisk electrodes. *Journal of Electroanalytical Chemistry*, **2012**, 677-680, 120-126	4.1	13
41	Square wave voltammetry at disc microelectrodes for characterization of two electron redox processes. *Physical Chemistry Chemical Physics*, **2012**, 14, 8319-27	3.6	18
40	Some insights into the facilitated ion transfer voltammetric responses at ITIES exhibiting interfacial and bulk membrane kinetic effects. *Physical Chemistry Chemical Physics*, **2012**, 14, 15340-54	3.6	5
39	Characterization of the Electrocatalytic Response of Monolayer-Modified Electrodes with Square-Wave Voltammetry. *Journal of Physical Chemistry C*, **2012**, 116, 11206-11215	3.8	10
38	Experimental comparison of the Butler–Volmer and Marcus–Hush–Chidsey formalisms of electrode kinetics: The reduction of cyclooctatetraene at mercury hemispherical electrodes via cyclic and square wave voltammetries. *Journal of Electroanalytical Chemistry*, **2012**, 665, 38-44	4.1	25
37	Asymmetric Marcus theory: Application to electrode kinetics. *Journal of Electroanalytical Chemistry*, **2012**, 667, 48-53	4.1	38
36	The use of differential pulse voltammetries to discriminate between the Butler–Volmer and the simple Marcus–Hush models for heterogeneous electron transfer: The electro-reduction of europium (III) in aqueous solution. *Journal of Electroanalytical Chemistry*, **2012**, 668, 7-12	4.1	32
35	Electrochemical oxidation of nitrite: Kinetic, mechanistic and analytical study by square wave voltammetry. *Journal of Electroanalytical Chemistry*, **2012**, 670, 56-61	4.1	50
34	Giving physical insight into the Butler–Volmer model of electrode kinetics: Part 2 – Nonlinear solvation effects on the voltammetry of heterogeneous electron transfer processes. *Journal of Electroanalytical Chemistry*, **2012**, 681, 96-102	4.1	10
33	Redox systems obeying Marcus–Hush–Chidsey electrode kinetics do not obey the Randles–Ševčík equation for linear sweep voltammetry. *Journal of Electroanalytical Chemistry*, **2012**, 664, 73-79	4.1	35
32	Molecular insights into electron transfer processes via variable temperature cyclic voltammetry. Application of the asymmetric Marcus–Hush model. *Journal of Electroanalytical Chemistry*, **2012**, 685, 53-62	4.1	16
31	Marcus–Hush–Chidsey theory of electron transfer applied to voltammetry: A review. *Electrochimica Acta*, **2012**, 84, 12-20	6.7	117
30	Analytical Solutions for the Study of Multielectron Transfer Processes by Staircase, Cyclic, and Differential Voltammetries at Disc Microelectrodes. *Journal of Physical Chemistry C*, **2012**, 116, 11470-11479	3.8	21

29	Electrochemical Behavior of Two-Electron Redox Processes by Differential Pulse Techniques at Microelectrodes. *Journal of Physical Chemistry C*, **2012**, 116, 1070-1079	3.8	7
28	Steady-state voltammetry at a microdisc electrode in the absence of excess supporting electrolyte for reversible, quasi-reversible and irreversible electrode kinetics. *Physical Chemistry Chemical Physics*, **2012**, 14, 14635-49	3.6	5
27	Facile in situ characterization of gold nanoparticles on electrode surfaces by electrochemical techniques: average size, number density and morphology determination. *Analyst, The*, **2012**, 137, 4693-7	5	16
26	Quantitative weaknesses of the Marcus-Hush theory of electrode kinetics revealed by Reverse Scan Square Wave Voltammetry: The reduction of 2-methyl-2-nitropropane at mercury microelectrodes. *Chemical Physics Letters*, **2011**, 512, 133-137	2.5	31
25	An experimental comparison of the Marcus–Hush and Butler–Volmer descriptions of electrode kinetics applied to cyclic voltammetry. The one electron reductions of europium (III) and 2-methyl-2-nitropropane studied at a mercury microhemisphere electrode. *Chemical Physics Letters*, **2011**, 517, 29-35	2.5	35
24	Catalytic mechanism in cyclic voltammetry at disc electrodes: an analytical solution. *Physical Chemistry Chemical Physics*, **2011**, 13, 14694-704	3.6	16
23	A comparison of Marcus–Hush vs. Butler–Volmer electrode kinetics using potential pulse voltammetric techniques. *Journal of Electroanalytical Chemistry*, **2011**, 660, 169-177	4.1	24
22	Analytical theory of the catalytic mechanism in square wave voltammetry at disc electrodes. *Physical Chemistry Chemical Physics*, **2011**, 13, 16748-55	3.6	33
21	Study of homogeneous chemical reactions at spherical electrodes and microelectrodes in Additive Differential Pulse Voltammetry. *Electrochimica Acta*, **2011**, 56, 5335-5342	6.7	9
20	The transient and stationary behaviour of first-order catalytic mechanisms at disc and hemisphere electrodes. *Electrochimica Acta*, **2011**, 56, 7404-7410	6.7	15
19	Electrochemical digital simulation with highly expanding grid four point discretization: Can Crank–Nicolson uncouple diffusion and homogeneous chemical reactions?. *Electrochimica Acta*, **2011**, 56, 5707-5716	6.7	20
18	Comparison between double pulse and multipulse differential techniques. *Journal of Electroanalytical Chemistry*, **2011**, 659, 12-24	4.1	35
17	Electrocatalysis at Modified Microelectrodes: A Theoretical Approach to Cyclic Voltammetry. *Journal of Physical Chemistry C*, **2010**, 114, 14542-14551	3.8	9
16	Lability of metal complexes at spherical sensors. Dynamic voltammetric measurements. *Physical Chemistry Chemical Physics*, **2010**, 12, 5396-404	3.6	14
15	Application of double pulse theory for hemispherical microelectrodes to the experimental study of slow charge transfer processes. *Electrochimica Acta*, **2010**, 55, 6577-6585	6.7	13
14	Study of Electrochemical Processes with Coupled Homogeneous Chemical Reaction in Differential Pulse Voltammetry at Spherical Electrodes and Microhemispheres. *Electroanalysis*, **2010**, 22, 1857-1866	3	15
13	Additive Differential Pulse Voltammetry for the Study of Slow Charge Transfer Processes at Spherical Electrodes. *Electroanalysis*, **2010**, 22, 2784-2793	3	11
12	Analytical solution for Reverse Pulse Voltammetry at spherical electrodes: A remarkably sensitive method for the characterization of electrochemical reversibility and electrode kinetics. *Journal of Electroanalytical Chemistry*, **2010**, 648, 67-77	4.1	12

11	Characterization of slow charge transfer processes in differential pulse voltammetry at spherical electrodes and microelectrodes. *Electrochimica Acta*, **2010**, 55, 5163-5172	6.7	25
10	Theory of linear sweep/cyclic voltammetry for the electrochemical reaction mechanism involving a redox catalyst couple attached to a spherical electrode. *Electrochimica Acta*, **2010**, 56, 543-552	6.7	13
9	Rigorous analytical solution for a preceding chemical reaction in Normal Pulse Voltammetry at spherical electrodes and microelectrodes. *Journal of Electroanalytical Chemistry*, **2009**, 633, 7-14	4.1	14
8	Reverse Pulse Voltammetry at spherical electrodes: Simultaneous determination of diffusion coefficients and formal potentials. Application to Room Temperature Ionic Liquids. *Journal of Electroanalytical Chemistry*, **2009**, 634, 1-10	4.1	19
7	Theory for double potential step chronoamperometry for any potential values at spherical electrodes: Simultaneous determination of the diffusion coefficients of the electroactive species. *Electrochimica Acta*, **2009**, 54, 2320-2328	6.7	21
6	Theoretical and experimental study of Differential Pulse Voltammetry at spherical electrodes: Measuring diffusion coefficients and formal potentials. *Journal of Electroanalytical Chemistry*, **2009**, 634, 73-81	4.1	38
5	A simple transient approach to dynamic metal speciation: Can independent of time complex voltammetric lability criteria be used?. *Electrochemistry Communications*, **2009**, 11, 562-567	5.1	8
4	Electrochemical digital simulations with an exponentially expanding grid: General expressions for higher order approximations to spatial derivatives. *Electrochimica Acta*, **2009**, 54, 1042-1055	6.7	26
3	Uptake of Molecular Species by Spherical Droplets and Particles Monitored Voltammetrically. *Journal of Physical Chemistry C*, **2009**, 113, 17215-17222	3.8	8
2	Potentiostatic voltammetry at spherical electrodes and microelectrodes in the presence of product. *Journal of Electroanalytical Chemistry*, **2008**, 617, 14-26	4.1	23
1	Double potential step chronoamperometry at spherical electrodes and microelectrodes. *Electrochemistry Communications*, **2008**, 10, 376-381	5.1	10