Eduardo Laborda

List of Publications by Year
in descending order

118 papers	2,604 citations	218381 26 h-index	253896 43 g-index
121 all docs	121 docs citations	121 times ranked	2282 citing authors

#	Article	IF	Citations
1	Marcusâ€“Hushâ€“Chidsey theory of electron transfer applied to voltammetry: A review. Electrochimica Acta, 2012, 84, 12-20.	2.6	150
2	Recent Advances in Voltammetry. ChemistryOpen, 2015, 4, 224-260.	0.9	130
3	Electrochemical and Electrostatic Cleavage of Alkoxyamines. Journal of the American Chemical Society, 2018, 140, 766-774.	6.6	129
4	Asymmetric Marcusâ€“Hush theory for voltammetry. Chemical Society Reviews, 2013, 42, 4894.	18.7	109
5	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.	5.8	78
6	New Approach to Electrode Kinetic Measurements in Square-Wave Voltammetry: Amplitude-Based Quasireversible Maximum. Analytical Chemistry, 2013, 85, 5586-5594.	3.2	76
7	Electrochemical oxidation of nitrite: Kinetic, mechanistic and analytical study by square wave voltammetry. Journal of Electroanalytical Chemistry, 2012, 670, 56-61.	1.9	60
8	Recent advances on the theory of pulse techniques: A mini review. Electrochemistry Communications, 2014, 43, 25-30.	2.3	56
9	Redox systems obeying Marcusâ€“Hushâ€“Chidsey electrode kinetics do not obey the Randlesâ€“ÅevÄÃk equation for linear sweep voltammetry. Journal of Electroanalytical Chemistry, 2012, 664, 73-79.	1.9	48
10	Asymmetric Marcus theory: Application to electrode kinetics. Journal of Electroanalytical Chemistry, 2012, 667, 48-53.	1.9	46
11	Surface oxidation of gold nanoparticles supported on a glassy carbon electrode in sulphuric acid medium: contrasts with the behaviour of â€˜macroâ€™ gold. Physical Chemistry Chemical Physics, 2013, 15, 3133.	1.3	43
12	Electrochemistry of single droplets of inverse (water-in-oil) emulsions. Physical Chemistry Chemical Physics, 2017, 19, 15662-15666.	1.3	43
13	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.	1.9	40
14	Analytical theory of the catalytic mechanism in square wave voltammetry at disc electrodes. Physical Chemistry Chemical Physics, 2011, 13, 16748.	1.3	39
15	Comparison between double pulse and multipulse differential techniques. Journal of Electroanalytical Chemistry, 2011, 659, 12-24.	1.9	39
16	Giving physical insight into the Butlerâ€“Volmer model of electrode kinetics: Application of asymmetric Marcusâ€“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.	1.9	39
17	An experimental comparison of the Marcusâ€“Hush and Butlerâ€“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.	1.2	36
18	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.	2.8	36

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19	Single Fusion Events at Polarized Liquidâ€"Liquid Interfaces. Angewandte Chemie - International Edition, 2017, 56, 782-785.	7.2	36
20	A Joint Experimental and Computational Search for Authentic Nanoâ€electrocatalytic Effects: Electrooxidation of Nitrite and Lâ€Ascorbate on Gold Nanoparticleâ€Modified Glassy Carbon Electrodes. Small, 2013, 9, 478-486.	5.2	35
21	The use of differential pulse voltammetries to discriminate between the Butlerâ€"Volmer and the simple Marcusâ€"Hush models for heterogeneous electron transfer: The electro-reduction of europium (III) in aqueous solution. Journal of Electroanalytical Chemistry, 2012, 668, 7-12.	1.9	33
22	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.	1.2	31
23	On the meaning of the diffusion layer thickness for slow electrode reactions. Physical Chemistry Chemical Physics, 2013, 15, 2381.	1.3	30
24	Strong negative nanocatalysis: oxygen reduction and hydrogen evolution at very small (2 nm) gold nanoparticles. Nanoscale, 2014, 6, 11024-11030.	2.8	29
25	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.	1.9	29
26	Characterization of slow charge transfer processes in differential pulse voltammetry at spherical electrodes and microelectrodes. Electrochimica Acta, 2010, 55, 5163-5172.	2.6	28
27	Electrochemical digital simulations with an exponentially expanding grid: General expressions for higher order approximations to spatial derivatives. Electrochimica Acta, 2009, 54, 1042-1055.	2.6	27
28	A comparison of Marcusâ€"Hush vs. Butlerâ€"Volmer electrode kinetics using potential pulse voltammetric techniques. Journal of Electroanalytical Chemistry, 2011, 660, 169-177.	1.9	26
29	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.	1.5	26
30	Asymmetric Marcusâ€"Hush model of electron transfer kinetics: Application to the voltammetry of surface-bound redox systems. Journal of Electroanalytical Chemistry, 2012, 674, 90-96.	1.9	26
31	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.	1.3	26
32	Experimental comparison of the Butlerâ€"Volmer and Marcusâ€"Hushâ€"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.	1.9	25
33	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.	2.6	25
34	Reply to comments contained in â€œAre the reactions of quinones on graphite adiabatic?â€, by N.B. Luque, W. Schmickler [Electrochim. Acta xx (2012) yyy]. Electrochimica Acta, 2013, 88, 895-898.	2.6	24
35	Potentiostatic voltammetry at spherical electrodes and microelectrodes in the presence of product. Journal of Electroanalytical Chemistry, 2008, 617, 14-26.	1.9	23
36	Theory for double potential step chronoamperometry for any potential values at spherical electrodes. Electrochimica Acta, 2009, 54, 2320-2328.	2.6	22

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37	Electrochemical digital simulation with highly expanding grid four point discretization: Can Crankâ€“Nicolson uncouple diffusion and homogeneous chemical reactions?. Electrochimica Acta, 2011, 56, 5707-5716.	2.6	22
38	Mathematical modeling of nonlinear reactionâ€“diffusion processes in enzymatic biofuel cells. Current Opinion in Electrochemistry, 2017, 1, 121-132.	2.5	22
39	Catalytic mechanism in cyclic voltammetry at disc electrodes: an analytical solution. Physical Chemistry Chemical Physics, 2011, 13, 14694.	1.3	21
40	Square wave voltammetry at disc microelectrodes for characterization of two electron redox processes. Physical Chemistry Chemical Physics, 2012, 14, 8319.	1.3	21
41	Electrical double layer effects on ion transfer reactions. Physical Chemistry Chemical Physics, 2016, 18, 9829-9837.	1.3	20
42	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.	1.9	19
43	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.	1.3	19
44	The strong catalytic effect of Pb(ii) on the oxygen reduction reaction on 5 nm gold nanoparticles. Physical Chemistry Chemical Physics, 2014, 16, 3200.	1.3	19
45	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.	2.3	19
46	Single Fusion Events at Polarized Liquidâ€“Liquid Interfaces. Angewandte Chemie, 2017, 129, 800-803.	1.6	19
47	Individual Detection and Characterization of Nonâ€Electrocatalytic, Redoxâ€Inactive Particles in Solution by using Electrochemistry. ChemElectroChem, 2018, 5, 410-417.	1.7	19
48	Mass transport at electrodes of arbitrary geometry. Reversible charge transfer reactions in square wave voltammetry. Russian Journal of Electrochemistry, 2012, 48, 600-609.	0.3	18
49	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.	1.9	17
50	Study of Electrochemical Processes with Coupled Homogeneous Chemical Reaction in Differential Pulse Voltammetry at Spherical Electrodes and Microhemispheres. Electroanalysis, 2010, 22, 1857-1866.	1.5	17
51	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.	1.7	17
52	The transient and stationary behaviour of first-order catalytic mechanisms at disc and hemisphere electrodes. Electrochimica Acta, 2011, 56, 7404-7410.	2.6	16
53	Molecular insights into electron transfer processes via variable temperature cyclic voltammetry. Application of the asymmetric Marcusâ€“Hush model. Journal of Electroanalytical Chemistry, 2012, 685, 53-62.	1.9	16
54	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.	2.6	15

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55	Lability of metal complexes at spherical sensors. Dynamic voltammetric measurements. Physical Chemistry Chemical Physics, 2010, 12, 5396.	1.3	15
56	Tafelâ€“Volmer Electrode Reactions: The Influence of Electron-Transfer Kinetics. Journal of Physical Chemistry C, 2015, 119, 22415-22424.	1.5	15
57	Comparative evaluation of the symmetric and asymmetric Marcusâ€“Hush formalisms of electrode kinetics â€“ The one-electron oxidation of tetraphenylethylene in dichloromethane on platinum microdisk electrodes. Journal of Electroanalytical Chemistry, 2012, 677-680, 120-126.	1.9	14
58	Cyclic and Square-Wave Voltammetry at Diffusionally Asymmetric Microscopic and Nanoscopic Liquidâ€“Liquid Interfaces: A Simple Theoretical Approach. Journal of Physical Chemistry C, 2014, 118, 18249-18256.	1.5	14
59	Application of Voltammetric Techniques at Microelectrodes to the Study of the Chemical Stability of Highly Reactive Species. Analytical Chemistry, 2015, 87, 1676-1684.	3.2	14
60	New Insights into Fundamental Electron Transfer from Single Nanoparticle Voltammetry. Journal of Physical Chemistry Letters, 2016, 7, 1554-1558.	2.1	14
61	Electrochemical and Computational Study of Ion Association in the Electroreduction of PW₁₂O₄₀^{3â€“}. Journal of Physical Chemistry C, 2017, 121, 26751-26763.	1.5	14
62	General Explicit Mathematical Solution for the Voltammetry of Nonunity Stoichiometry Electrode Reactions: Diagnosis Criteria in Cyclic Voltammetry. Analytical Chemistry, 2020, 92, 3728-3734.	3.2	14
63	Application of double pulse theory for hemispherical microelectrodes to the experimental study of slow charge transfer processes. Electrochimica Acta, 2010, 55, 6577-6585.	2.6	13
64	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.	1.9	13
65	Carbon Support Effects and Mechanistic Details of the Electrocatalytic Activity of Polyoxometalates Investigated via Square Wave Voltacoulometry. ACS Catalysis, 2017, 7, 1501-1511.	5.5	13
66	Giving physical insight into the Butlerâ€“Volmer model of electrode kinetics: Part 2 â€“ Nonlinear solvation effects on the voltammetry of heterogeneous electron transfer processes. Journal of Electroanalytical Chemistry, 2012, 681, 96-102.	1.9	12
67	A Comprehensive Voltammetric Characterisation of ECE Processes. Electrochimica Acta, 2016, 195, 230-245.	2.6	12
68	Impact experiments at the Interface between Two Immiscible Electrolyte Solutions (ITIES). Current Opinion in Electrochemistry, 2021, 26, 100664.	2.5	12
69	Double potential step chronoamperometry at spherical electrodes and microelectrodes. Electrochemistry Communications, 2008, 10, 376-381.	2.3	11
70	Additive Differential Pulse Voltammetry for the Study of Slow Charge Transfer Processes at Spherical Electrodes. Electroanalysis, 2010, 22, 2784-2793.	1.5	11
71	Electrocatalysis at Modified Microelectrodes: A Theoretical Approach to Cyclic Voltammetry. Journal of Physical Chemistry C, 2010, 114, 14542-14551.	1.5	11
72	Aqueous Voltammetry in the Near Absence of Electrolyte. Chemistry - A European Journal, 2017, 23, 15222-15226.	1.7	11

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73	Study of homogeneous chemical reactions at spherical electrodes and microelectrodes in Additive Differential Pulse Voltammetry. Electrochimica Acta, 2011, 56, 5335-5342.	2.6	10
74	Characterization of the Electrocatalytic Response of Monolayer-Modified Electrodes with Square-Wave Voltammetry. Journal of Physical Chemistry C, 2012, 116, 11206-11215.	1.5	10
75	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.	1.9	10
76	An approximate theoretical treatment of ion transfer processes at asymmetric microscopic and nanoscopic liquidâ€"liquid interfaces: Single and double potential pulse techniques. Chemical Physics Letters, 2014, 597, 126-133.	1.2	10
77	Analytical theory for ion transferâ€"electron transfer coupled reactions at redox layerâ€"modified/thick filmâ€"modified electrodes. Current Opinion in Electrochemistry, 2020, 19, 78-87.	2.5	10
78	A simple transient approach to dynamic metal speciation: Can independent of time complex voltammetric lability criteria be used?. Electrochemistry Communications, 2009, 11, 562-567.	2.3	9
79	Uptake of Molecular Species by Spherical Droplets and Particles Monitored Voltammetrically. Journal of Physical Chemistry C, 2009, 113, 17215-17222.	1.5	9
80	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 Marcusâ€"Hush model. Electrochimica Acta, 2013, 110, 772-779.	2.6	9
81	Voltammetric speciation studies of systems where the species diffusivities differ significantly. Journal of Solid State Electrochemistry, 2015, 19, 549-561.	1.2	9
82	Effects of Unequal Diffusion Coefficients and Coupled Chemical Equilibria on Square Wave Voltammetry at Disc and Hemispherical Microelectrodes. Electrochimica Acta, 2015, 176, 1044-1053.	2.6	9
83	Electrochemical Behavior of Two-Electron Redox Processes by Differential Pulse Techniques at Microelectrodes. Journal of Physical Chemistry C, 2012, 116, 1070-1079.	1.5	8
84	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.	1.9	8
85	Characterization of follow-up chemical reactions by reverse pulse voltammetry. An analytical solution for spherical electrodes and microelectrodes. Electrochimica Acta, 2013, 87, 416-424.	2.6	8
86	Catalaseâ€Modified Carbon Electrodes: Persuading Oxygen To Accept Four Electrons Rather Than Two. Chemistry - A European Journal, 2016, 22, 5904-5908.	1.7	8
87	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.	1.9	8
88	Unified theoretical treatment of the Eirrev, CE, EC and CEC mechanisms under voltammetric conditions. Electrochemistry Communications, 2018, 92, 48-55.	2.3	8
89	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.	1.3	7
90	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, 10158-10172.	1.3	7

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91	Spectroscopy takes electrochemistry beyond the interface: A compact analytical solution for the reversible first-order catalytic mechanism. Electrochimica Acta, 2018, 284, 721-732.	2.6	7
92	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.	1.3	6
93	Linear Sweep and Cyclic Voltammetries of Reversible Ion Transfer Processes at Macroâ€•and Microcapillaries under Transient Regime. Electroanalysis, 2015, 27, 93-100.	1.5	6
94	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.	2.6	6
95	Voltammetry of the aqueous complexationâ€"dissociation coupled to transfer (ACDT) mechanism with charged ligands. Physical Chemistry Chemical Physics, 2016, 18, 17091-17104.	1.3	6
96	Brute force (or not so brute) digital simulation in electrochemistry revisited. Chemical Physics Letters, 2016, 643, 71-76.	1.2	6
97	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.	1.3	6
98	Characterization of inclusion complexes of organic ions with hydrophilic hosts by ion transfer voltammetry with solvent polymeric membranes. Talanta, 2017, 164, 636-644.	2.9	6
99	Theoretical Treatment of Ion Transfers in Two Polarizable Interface Systems When the Analyte Has Access to Both Interfaces. Analytical Chemistry, 2018, 90, 2088-2094.	3.2	6
100	Detailed theoretical treatment of homogeneous chemical reactions coupled to interfacial charge transfers. Electrochimica Acta, 2018, 286, 374-396.	2.6	6
101	Guidelines for the Voltammetric Study of Electrode Reactions with Coupled Chemical Kinetics at an Arbitrary Electrode Geometry. Analytical Chemistry, 2019, 91, 6072-6079.	3.2	6
102	Quantitative analysis of the electrochemical performance of multi-redox molecular electrocatalysts. A mechanistic study of chlorate electrocatalytic reduction in presence of a molybdenum polyoxometalate. Journal of Catalysis, 2022, 413, 467-477.	3.1	6
103	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.	1.2	5
104	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.	4.0	5
105	Cyclic square wave voltammetry of electrode reactions with nonunity stoichiometry. Journal of Electroanalytical Chemistry, 2020, 873, 114421.	1.9	5
106	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.	1.9	4
107	Heterogeneous Catalysis of Multipleâ€Electronâ€Transfer Reactions at Nanoparticleâ€Modified Electrodes. ChemElectroChem, 2014, 1, 909-916.	1.7	4
108	Normal Pulse Voltammetry and Steady State Voltammetry of the Square Mechanism at Spherical Microelectrodes. Electroanalysis, 2015, 27, 970-979.	1.5	4

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109	Voltammetry at microelectrodes of reversible electrode reactions with complex stoichiometry: A general analytical theoretical framework. Journal of Electroanalytical Chemistry, 2020, 872, 113932.	1.9	4
110	Spectroelectrochemistry for the study of reversible electrode reactions with complex stoichiometries. Electrochemistry Communications, 2021, 123, 106915.	2.3	4
111	Differential double pulse voltammetry at spherical microelectrodes for the characterization of the square mechanism. Journal of Electroanalytical Chemistry, 2015, 741, 140-148.	1.9	3
112	Theoretical-experimental synergy towards better understanding of interfacial electron transfer kinetics. Current Opinion in Electrochemistry, 2022, 34, 101028.	2.5	3
113	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.	2.6	2
114	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.	3.2	2
115	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.	1.2	2
116	Reprint of â€œAnalytical theoretical approach to the transient and steady state voltammetric response of reaction mechanisms. Linear diffusion and reaction layers at micro- and submicroelectrodes of arbitrary geometryâ€• Journal of Electroanalytical Chemistry, 2017, 793, 104-112.	1.9	1
117	Analytical Modelling of Electronâ€coupled Ion Transfers with Immobilized vs Soluble Redox Transducer at Thick Filmâ€modified Electrodes. Electroanalysis, 2021, 33, 2267.	1.5	1
118	Insights into the Voltammetry of Cavity Microelectrodes Filled with Metal Powders: The Value of Square Wave Voltammetry. ChemElectroChem, 2021, 8, 735-744.	1.7	0