# Edmund J F Dickinson

List of Publications by Year
in descending order



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|---|---|---|---|
| 46 papers | 2,426 citations | 257101 24 h-index | 223531 46 g-index |
| 49 all docs | 49 docs citations | 49 times ranked | 2445 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | COMSOL MultiphysicsÂ®: Finite element software for electrochemical analysis. A mini-review. Electrochemistry Communications, 2014, 40, 71-74. | 2.3 | 268 |
| 2 | Voltammetric selectivity conferred by the modification of electrodes using conductive porous layers or films: The oxidation of dopamine on glassy carbon electrodes modified with multiwalled carbon nanotubes. Sensors and Actuators B: Chemical, 2010, 145, 417-427. | 4.0 | 217 |
| 3 | Effects of thin-layer diffusion in the electrochemical detection of nicotine on basal plane pyrolytic graphite (BPPG) electrodes modified with layers of multi-walled carbon nanotubes (MWCNT-BPPG). Sensors and Actuators B: Chemical, 2010, 144, 153-158. | 4.0 | 158 |
| 4 | How Much Supporting Electrolyte Is Required to Make a Cyclic Voltammetry Experiment Quantitatively â€œDiffusionalâ€? A Theoretical and Experimental Investigation. Journal of Physical Chemistry C, 2009, 113, 11157-11171. | 1.5 | 155 |
| 5 | The Butler-Volmer equation in electrochemical theory: Origins, value, and practical application. Journal of Electroanalytical Chemistry, 2020, 872, 114145. | 1.9 | 136 |
| 6 | Investigating the Mechanism and Electrode Kinetics of the Oxygen\|Superoxide (O<sub>2</sub>\|O<sub>2</sub><sup>â€¢â^’</sup>) Couple in Various Room-Temperature Ionic Liquids at Gold and Platinum Electrodes in the Temperature Range 298â^’318 K. Journal of Physical Chemistry C, 2009, 113, 17811-17823. | 1.5 | 91 |
| 7 | Influence of the diffuse double layer on steady-state voltammetry. Journal of Electroanalytical Chemistry, 2011, 661, 198-212. | 1.9 | 69 |
| 8 | Diffuse Double Layer at Nanoelectrodes. Journal of Physical Chemistry C, 2009, 113, 17585-17589. | 1.5 | 66 |
| 9 | New Electrochemical Methods. Analytical Chemistry, 2012, 84, 669-684. | 3.2 | 66 |
| 10 | The electroneutrality approximation in electrochemistry. Journal of Solid State Electrochemistry, 2011, 15, 1335-1345. | 1.2 | 62 |
| 11 | Nanoparticle-modified electrodes. Physical Chemistry Chemical Physics, 2010, 12, 11208. | 1.3 | 60 |
| 12 | Analysis of commercial general engineering finite element software in electrochemical simulations. Journal of Electroanalytical Chemistry, 2010, 638, 76-83. | 1.9 | 55 |
| 13 | 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 |
| 14 | Theory of Chronoamperometry at Cylindrical Microelectrodes and Their Arrays. Journal of Physical Chemistry C, 2008, 112, 11637-11644. | 1.5 | 47 |
| 15 | Modelling the Proton-Conductive Membrane in Practical Polymer Electrolyte Membrane Fuel Cell (PEMFC) Simulation: A Review. Membranes, 2020, 10, 310. | 1.4 | 46 |
| 16 | The Butler-Volmer Equation for Polymer Electrolyte Membrane Fuel Cell (PEMFC) Electrode Kinetics: A Critical Discussion. Journal of the Electrochemical Society, 2019, 166, F221-F231. | 1.3 | 44 |
| 17 | Cyclic Voltammetry in the Absence of Excess Supporting Electrolyte Offers Extra Kinetic and Mechanistic Insights: Comproportionation of Anthraquinone and the Anthraquinone Dianion in Acetonitrile. Angewandte Chemie - International Edition, 2010, 49, 9242-9245. | 7.2 | 43 |
| 18 | Chronoamperometry and Cyclic Voltammetry at Conical Electrodes, Microelectrodes, and Electrode Arrays:â€‰ Theory. Journal of Physical Chemistry B, 2008, 112, 4059-4066. | 1.2 | 42 |

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|---|---|---|---|
| 19 | On the estimation of the diffuse double layer of carbon nanotubes using classical theory: Curvature effects on the Gouyâ€“Chapman limit. Chemical Physics Letters, 2010, 485, 167-170. | 1.2 | 40 |
| 20 | Diffusional Cyclic Voltammetry at Electrodes Modified with Random Distributions of Electrocatalytic Nanoparticles: Theory. Journal of Physical Chemistry C, 2009, 113, 11149-11156. | 1.5 | 38 |
| 21 | Quantitative Voltammetry in Weakly Supported Media. Chronoamperometric Studies on Diverse One Electron Redox Couples Containing Various Charged Species: Dissecting Diffusional and Migrational Contributions and Assessing the Breakdown of Electroneutrality. Journal of Physical Chemistry C, 2010, 114, 2227-2236. | 1.5 | 37 |
| 22 | Dynamic Theory of Liquid Junction Potentials. Journal of Physical Chemistry B, 2010, 114, 187-197. | 1.2 | 33 |
| 23 | Nanoparticleâ€“electrode collision studies: Brownian motion and the timescale of nanoparticle oxidation. Chemical Physics Letters, 2012, 528, 44-48. | 1.2 | 33 |
| 24 | Electrochemical random-walk theory. Journal of Electroanalytical Chemistry, 2011, 655, 1-8. | 1.9 | 28 |
| 25 | Electrochemical Oxidation of Hydrogen Sulfide at Platinum Electrodes in Room Temperature Ionic Liquids: Evidence for Significant Accumulation of H2S at the Pt/1-Butyl-3-methylimidazolium Trifluoromethylsulfonate Interface. Journal of Physical Chemistry C, 2009, 113, 10997-11002. | 1.5 | 23 |
| 26 | How well does simple RC circuit analysis describe diffuse double layer capacitance at smooth micro- and nanoelectrodes?. Journal of Electroanalytical Chemistry, 2011, 655, 23-31. | 1.9 | 22 |
| 27 | Modeling Diffusion Effects for a Stepwise Two-Electron Reduction Process at a Microelectrode: Study of the Reduction of <i>para</i>-Quaterphenyl in Tetrahydrofuran and Inference of Fast Comproportionation of the Dianion with the Neutral Parent Molecule. Journal of Physical Chemistry C, 2009, 113, 16042-16050. | 1.5 | 21 |
| 28 | Volatilisation of ferrocene from ionic liquids: kinetics and mechanism. Chemical Communications, 2011, 47, 7083. | 2.2 | 21 |
| 29 | Cyclic voltammetry in weakly supported media: The reduction of the cobaltocenium cation in acetonitrile â€“ Comparison between theory and experiment. Journal of Electroanalytical Chemistry, 2010, 650, 135-142. | 1.9 | 20 |
| 30 | Influence of H2S on the pitting corrosion of 316L stainless steel in oilfield brine. Corrosion Science, 2021, 182, 109265. | 3.0 | 20 |
| 31 | Dynamics of Ion Transfer Potentials at Liquidâ€“Liquid Interfaces. Journal of Physical Chemistry B, 2011, 115, 6909-6921. | 1.2 | 18 |
| 32 | The zero-field approximation for weakly supported voltammetry: A critical evaluation. Chemical Physics Letters, 2010, 497, 178-183. | 1.2 | 17 |
| 33 | Dynamic Theory of Type 3 Liquid Junction Potentials: Formation of Multilayer Liquid Junctions. Journal of Physical Chemistry B, 2010, 114, 4521-4528. | 1.2 | 17 |
| 34 | The Kinetics of Ferrocene Volatilisation from an Ionic Liquid. ChemPhysChem, 2011, 12, 1708-1713. | 1.0 | 16 |
| 35 | Dynamic Theory of Membrane Potentials. Journal of Physical Chemistry B, 2010, 114, 10763-10773. | 1.2 | 14 |
| 36 | Quantitative Voltammetry in Weakly Supported Media. Two Electron Transfer, Chronoamperometry of Electrodeposition and Stripping for Cadmium at Microhemispherical Mercury Electrodes. Journal of Physical Chemistry C, 2009, 113, 15320-15325. | 1.5 | 13 |

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|---|---|---|---|
| 37 | Assessing potential profiles in water electrolysers to minimise titanium use. Energy and Environmental Science, 2022, 15, 2508-2518. | 15.6 | 13 |
| 38 | Voltammetry Involving Amalgam Formation and Anodic Stripping in Weakly Supported Media: Theory and Experiment. Journal of Physical Chemistry C, 2010, 114, 7120-7127. | 1.5 | 12 |
| 39 | Dynamics of Ion Transfer Potentials at Liquidâ€“Liquid Interfaces: The Case of Multiple Species. Journal of Physical Chemistry B, 2011, 115, 12429-12440. | 1.2 | 10 |
| 40 | Comparison of methodologies to estimate state-of-health of commercial Li-ion cells from electrochemical frequency response data. Journal of Power Sources, 2022, 542, 231814. | 4.0 | 10 |
| 41 | Theory of diffusion to an â€œannular microbandâ€•electrode. Journal of Electroanalytical Chemistry, 2009, 625, 40-46. | 1.9 | 7 |
| 42 | Volatilisation of substituted ferrocene compounds of different sizes from room temperature ionic liquids: a kinetic and mechanistic study. New Journal of Chemistry, 2012, 36, 774. | 1.4 | 7 |
| 43 | Improved Operando Raman Cell Configuration for Commercially-Sourced Electrodes in Alkali-Ion Batteries. Journal of the Electrochemical Society, 2021, 168, 070541. | 1.3 | 5 |
| 44 | Dynamic simulation of the moving boundary method for measuring transference numbers. Chemical Physics Letters, 2011, 513, 136-138. | 1.2 | 1 |
| 45 | Impact of hydroxide ionâ€“chloride ion concentration ratio on crack electrochemistry. Corrosion Engineering Science and Technology, 2020, 55, 574-578. | 0.7 | 1 |
| 46 | Nanoscale characteristics of electrochemical systems. Frontiers of Nanoscience, 2021, 18, 1-48. | 0.3 | 0 |