R D O neill

List of Publications by Citations

80 papers	3,591 citations	38 h-index	57 g-index
81 ext. papers	3,721 ext. citations	5.3 avg, IF	4.92 L-index

#	Paper	IF	Citations
80	Microvoltammetric techniques and sensors for monitoring neurochemical dynamics in vivo. A review. *Analyst, The*, **1994**, 119, 767-79	5	235
79	Characterization of Glucose Oxidase-Modified Poly(phenylenediamine)-Coated Electrodes in vitro and in vivo: Homogeneous Interference by Ascorbic Acid in Hydrogen Peroxide Detection. *Analytical Chemistry*, **1994**, 66, 1754-1761	7.8	162
78	In vivo voltammetry--present electrodes and methods. *Neuroscience*, **1988**, 25, 389-400	3.9	133
77	Linear sweep voltammetry with carbon paste electrodes in the rat striatum. *Neuroscience*, **1982**, 7, 1945-54	3.9	123
76	Biosensor for neurotransmitter L-glutamic acid designed for efficient use of L-glutamate oxidase and effective rejection of interference. *Analyst, The*, **1997**, 122, 1419-24	5	111
75	Comparisons of platinum, gold, palladium and glassy carbon as electrode materials in the design of biosensors for glutamate. *Biosensors and Bioelectronics*, **2004**, 19, 1521-8	11.8	111
74	Voltammetrically monitored brain ascorbate as an index of excitatory amino acid release in the unrestrained rat. *Neuroscience Letters*, **1984**, 52, 227-33	3.3	106
73	Continuous monitoring of extracellular glucose concentrations in the striatum of freely moving rats with an implanted glucose biosensor. *Journal of Neurochemistry*, **1998**, 70, 391-6	6	94
72	An amperometric glucose-oxidase/poly(o-phenylenediamine) biosensor for monitoring brain extracellular glucose: in vivo characterisation in the striatum of freely-moving rats. *Journal of Neuroscience Methods*, **1998**, 79, 65-74	3	93
71	Characterization in vitro and in vivo of the oxygen dependence of an enzyme/polymer biosensor for monitoring brain glucose. *Journal of Neuroscience Methods*, **2002**, 119, 135-42	3	87
70	Simultaneous monitoring of dopamine release in rat frontal cortex, nucleus accumbens and striatum: effect of drugs, circadian changes and correlations with motor activity. *Neuroscience*, **1985**, 16, 49-55	3.9	86
69	Monitoring brain chemistry in vivo: voltammetric techniques, sensors, and behavioral applications. *Critical Reviews in Neurobiology*, **1998**, 12, 69-127		84
68	Control of the oxygen dependence of an implantable polymer/enzyme composite biosensor for glutamate. *Analytical Chemistry*, **2006**, 78, 2352-9	7.8	75
67	Simultaneous telemetric monitoring of brain glucose and lactate and motion in freely moving rats. *Analytical Chemistry*, **2013**, 85, 10282-8	7.8	68
66	The effect of unilateral cortical lesions on the circadian changes in rat striatal ascorbate and homovanillic acid levels measured in vivo using voltammetry. *Neuroscience Letters*, **1983**, 42, 105-10	3.3	67
65	Oxygen tolerance of an implantable polymer/enzyme composite glutamate biosensor displaying polycation-enhanced substrate sensitivity. *Biosensors and Bioelectronics*, **2007**, 22, 1466-73	11.8	64
64	Partial characterization in vitro of glucose oxidase-modified poly(phenylenediamine)-coated electrodes for neurochemical analysis in vivo. *Electroanalysis*, **1994**, 6, 369-379	3	64

63	Modifications of Poly(o-phenylenediamine) Permselective Layer on Pt-Ir for Biosensor Application in Neurochemical Monitoring. *Sensors*, **2007**, 7, 420-437	3.8	57
62	Real-time monitoring of brain tissue oxygen using a miniaturized biotelemetric device implanted in freely moving rats. *Analytical Chemistry*, **2009**, 81, 2235-41	7.8	54
61	Polymer-enzyme composite biosensor with high glutamate sensitivity and low oxygen dependence. *Analytical Chemistry*, **2005**, 77, 1196-9	7.8	53
60	Effects of an anxiogenic benzodiazepine receptor ligand on motor activity and dopamine release in nucleus accumbens and striatum in the rat. *Journal of Neuroscience*, **1987**, 7, 2917-26	6.6	53
59	Homogeneous mechanism of ascorbic acid interference in hydrogen peroxide detection at enzyme-modified electrodes. *Analytical Chemistry*, **1992**, 64, 453-6	7.8	51
58	Voltammetric carbon paste electrodes monitor uric acid and not 5-HIAA at the 5-hydroxyindole potential in the rat brain. *Neuroscience Letters*, **1984**, 45, 39-46	3.3	51
57	Characterization of carbon paste electrodes in vitro for simultaneous amperometric measurement of changes in oxygen and ascorbic acid concentrations in vivo. *Analyst, The*, **1996**, 121, 761-6	5	50
56	The oxidation of ascorbic acid at carbon paste electrodes. *Journal of Electroanalytical Chemistry and Interfacial Electrochemistry*, **1990**, 279, 109-121		49
55	Circadian changes in homovanillic acid and ascorbate levels in the rat striatum using microprocessor-controlled voltammetry. *Neuroscience Letters*, **1982**, 34, 189-93	3.3	49
54	Enzyme immobilization strategies and electropolymerization conditions to control sensitivity and selectivity parameters of a polymer-enzyme composite glucose biosensor. *Sensors*, **2010**, 10, 6439-62	3.8	48
53	The efficiency of immobilised glutamate oxidase decreases with surface enzyme loading: an electrostatic effect, and reversal by a polycation significantly enhances biosensor sensitivity. *Analyst, The*, **2006**, 131, 68-72	5	46
52	The monitoring of ascorbate and monoamine transmitter metabolites in the striatum of unanaesthetised rats using microprocessor-based voltammetry. *Neuroscience*, **1983**, 9, 87-93	3.9	46
51	Biotelemetric monitoring of brain neurochemistry in conscious rats using microsensors and biosensors. *Sensors*, **2009**, 9, 2511-23	3.8	44
50	Development of an implantable D-serine biosensor for in vivo monitoring using mammalian D-amino acid oxidase on a poly (o-phenylenediamine) and Nafion-modified platinum-iridium disk electrode. *Biosensors and Bioelectronics*, **2010**, 25, 1454-9	11.8	44
49	Improvement and characterization of surfactant-modified Prussian blue screen-printed carbon electrodes for selective H2O2 detection at low applied potentials. *Journal of Electroanalytical Chemistry*, **2012**, 674, 48-56	4.1	43
48	Strategies for decreasing ascorbate interference at glucose oxidase-modified poly(o-phenylenediamine)-coated electrodes. *Analyst, The*, **1996**, 121, 773	5	41
47	Anomalously high concentrations of brain extracellular uric acid detected with chronically implanted probes: implications for in vivo sampling techniques. *Journal of Neurochemistry*, **1991**, 57, 22-9	6	39
46	Circadian changes in extracellular ascorbate in rat cortex, accumbens, striatum and hippocampus: correlations with motor activity. *Neuroscience Letters*, **1985**, 60, 331-6	3.3	39

45	Fixed versus removable microdialysis probes for in vivo neurochemical analysis: implications for behavioral studies. *Journal of Neurochemistry*, **1994**, 63, 1407-15	6	38
44	Comparison of simple aromatic amines for electrosynthesis of permselective polymers in biosensor fabrication. *Analyst, The*, **2003**, 128, 905	5	38
43	Detection of homovanillic acid in vivo using microcomputer-controlled voltammetry: simultaneous monitoring of rat motor activity and striatal dopamine release. *Neuroscience*, **1985**, 14, 753-63	3.9	38
42	Behaviourally induced changes in extracellular levels of brain glutamate monitored at 1 s resolution with an implanted biosensor. *Analytical Communications*, **1998**, 35, 87-89		37
41	Surfactant-promoted Prussian Blue-modified carbon electrodes: enhancement of electro-deposition step, stabilization, electrochemical properties and application to lactate microbiosensors for the neurosciences. *Colloids and Surfaces B: Biointerfaces*, **2012**, 92, 180-9	6	36
40	Development and characterization in vitro of a catalase-based biosensor for hydrogen peroxide monitoring. *Biosensors and Bioelectronics*, **2007**, 22, 2994-3000	11.8	36
39	Effects of light reversal on the circadian pattern of motor activity and voltammetric signals recorded in rat forebrain. *Journal of Physiology*, **1986**, 374, 91-101	3.9	35
38	The development of linear sweep voltammetry with carbon paste electrodes in vivo. *Journal of Neuroscience Methods*, **1983**, 8, 263-73	3	34
37	The origin of circadian and amphetamine-induced changes in the extracellular concentration of brain ascorbate. *Neurochemistry International*, **1983**, 5, 773-8	4.4	34
36	Microbiosensors for glucose based on Prussian Blue modified carbon fiber electrodes for in vivo monitoring in the central nervous system. *Biosensors and Bioelectronics*, **2010**, 26, 748-53	11.8	33
35	Development and characterization of an implantable biosensor for telemetric monitoring of ethanol in the brain of freely moving rats. *Analytical Chemistry*, **2012**, 84, 7072-9	7.8	32
34	Effect of probe size on the concentration of brain extracellular uric acid monitored with carbon paste electrodes. *Journal of Neurochemistry*, **1994**, 62, 1496-502	6	32
33	Stearate-modified carbon paste electrodes for detecting dopamine in vivo: decrease in selectivity caused by lipids and other surface-active agents. *Analytical Chemistry*, **1990**, 62, 2347-51	7.8	31
32	Contributions by a novel edge effect to the permselectivity of an electrosynthesized polymer for microbiosensor applications. *Analytical Chemistry*, **2009**, 81, 3911-8	7.8	30
31	Adenosine modulation of striatal neurotransmitter release monitored in vivo using voltammetry. *Neuroscience Letters*, **1986**, 63, 11-6	3.3	30
30	On the significance of brain extracellular uric acid detected with in-vivo monitoring techniques: a review. *Behavioural Brain Research*, **1995**, 71, 33-49	3.4	29
29	Sensor-tissue interactions in neurochemical analysis with carbon paste electrodes in vivo. *Analyst, The*, **1993**, 118, 433-8	5	29
28	The selectivity of electrosynthesised polymer membranes depends on the electrode dimensions: implications for biosensor applications. *Chemical Communications*, **2004**, 2128-30	5.8	26

27	Strategies for reducing ascorbate interference at glucose oxidase modified conducting organic salt electrodes. *Journal of Electroanalytical Chemistry*, **1992**, 334, 183-194	4.1	26
26	Poly(o-phenylenediamine) electrosynthesized in the absence of added background electrolyte provides a new permselectivity benchmark for biosensor applications. *Electrochemistry Communications*, **2008**, 10, 1078-1081	5.1	23
25	Low electro-synthesis potentials improve permselectivity of polymerized natural phenols in biosensor applications. *Talanta*, **2017**, 162, 151-158	6.2	20
24	Uric acid levels and dopamine transmission in rat striatum: diurnal changes and effects of drugs. *Brain Research*, **1990**, 507, 267-72	3.7	20
23	Dopamine in the basal ganglia and benzodiazepine-induced sedation. *Neuropharmacology*, **1988**, 27, 589-95	3.5	20
22	Effects of intranigral injection of taurine and GABA on striatal dopamine release monitored voltammetrically in the unanaesthetized rat. *Brain Research*, **1986**, 382, 28-32	3.7	20
21	In vivo characterisation of a Nafion -modified Pt electrode for real-time nitric oxide monitoring in brain extracellular fluid. *Analytical Methods*, **2012**, 4, 550	3.2	19
20	Selectivity of stearate-modified carbon paste electrodes for dopamine and ascorbic acid. *Analytical Chemistry*, **1989**, 61, 2323-2324	7.8	19
19	Novel integrated microdialysis-amperometric system for in vitro detection of dopamine secreted from PC12 cells: design, construction, and validation. *Analytical Biochemistry*, **2008**, 380, 323-30	3.1	18
18	Major differences in the behaviour of carbon paste and carbon fibre electrodes in a protein-lipid matrix: implications for voltammetry in vivo. *Analyst, The*, **1998**, 123, 2899-903	5	18
17	Electropolymerized phenol derivatives as permselective polymers for biosensor applications. *Analyst, The*, **2015**, 140, 3607-15	5	16
16	The compartment model for chronically implanted voltammetric electrodes in the rat brain. *Neuroscience Letters*, **1983**, 38, 175-80	3.3	16
15	Further in-vitro characterization of an implantable biosensor for ethanol monitoring in the brain. *Sensors*, **2013**, 13, 9522-35	3.8	15
14	Altered response of carbon paste electrodes after contact with brain tissue. *Journal of Electroanalytical Chemistry and Interfacial Electrochemistry*, **1989**, 261, 463-469		14
13	Washburn numbers. Part 5.Relative solvent transport numbers for ion constituents in the dioxan + water and dimethylsulphoxide + water systems. *Journal of the Chemical Society Faraday Transactions I*, **1983**, 79, 2289		14
12	Characterization of Biosensors Based on Recombinant Glutamate Oxidase: Comparison of Crosslinking Agents in Terms of Enzyme Loading and Efficiency Parameters. *Sensors*, **2016**, 16,	3.8	14
11	Effects of applied potential on the mass of non-conducting poly(ortho-phenylenediamine) electro-deposited on EQCM electrodes: comparison with biosensor selectivity parameters. *Physical Chemistry Chemical Physics*, **2011**, 13, 5413-21	3.6	13
10	Development of a voltammetric technique for monitoring brain dopamine metabolism: compensation for interference caused by DOPAC electrogenerated during homovanillic acid detection. *Analyst, The*, **2009**, 134, 893-8	5	11

9	Characterisation in vitro of a naphthoquinone-mediated glucose oxidase-modified carbon paste electrode designed for neurochemical analysis in vivo. *Electrochimica Acta*, **1995**, 40, 2791-2797	6.7	11
8	Washburn numbers. Part 4. The Erdey-Grúz experiment. Relative solvent transport numbers for ion constituents in mixtures of water with raffinose, glycine, allyl alcohol, dimethylsulphoxide and dioxan. *Journal of the Chemical Society Faraday Transactions I*, **1982**, 78, 1431		11
7	Amperometric microbiosensor as an alternative tool for investigation of D-serine in brain. *Amino Acids*, **2012**, 43, 1887-94	3.5	9
6	Efficient glucose detection in anaerobic solutions using an enzyme-modified electrode designed to detect H2O2: implications for biomedical applications. *Journal of the Chemical Society Chemical Communications*, **1994**, 2483		8
5	The effects of anxiolytic and anxiogenic benzodiazepine receptor ligands on motor activity and levels of ascorbic acid in the nucleus accumbens and striatum of the rat. *Neuropharmacology*, **1989**, 28, 509-14	5.5	8
4	Microcomputer-controlled voltammetry in the analysis of transmitter release in rat brain. *Annals of the New York Academy of Sciences*, **1986**, 473, 337-48	6.5	4
3	Voltammetry In Vivo for Chemical Analysis of the Living Brain **2000**,		3
2	A new method for determining ionic solvent transport numbers and free energy of transfer of electrolytes from water to mixed aqueous solvents. *Journal of the Chemical Society Chemical Communications*, **1990**, 99		2
1	REPLY FROM R. D. O'NEILL. *Journal of Neurochemistry*, **1992**, 59, 785-786	6	1