R D O'neill

List of Publications by Year
in descending order

79 papers	4,001 citations	76322 40 h-index	118840 62 g-index
81 all docs	81 docs citations	81 times ranked	2084 citing authors

#	Article	IF	Citations
1	Microvoltammetric techniques and sensors for monitoring neurochemical dynamics in vivo. A review. Analyst, The, 1994, 119, 767.	3.5	270
2	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.	6.5	181
3	In vivo voltammetryâ€"Present electrodes and methods. Neuroscience, 1988, 25, 389-400.	2.3	145
4	Linear sweep voltammetry with carbon paste electrodes in the rat striatum. Neuroscience, 1982, 7, 1945-1954.	2.3	136
5	Biosensor for Neurotransmitter L-Glutamic Acid Designed for Efficient Use of L-Glutamate Oxidase and Effective Rejection of Interference. Analyst, The, 1997, 122, 1419-1424.	3.5	122
6	Comparisons of platinum, gold, palladium and glassy carbon as electrode materials in the design of biosensors for glutamate. Biosensors and Bioelectronics, 2004, 19, 1521-1528.	10.1	122
7	Voltammetrically monitored brain ascorbate as an index of excitatory amino acid release in the unrestrained rat. Neuroscience Letters, 1984, 52, 227-233.	2.1	113
8	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.	2.5	103
9	Continuous Monitoring of Extracellular Glucose Concentrations in the Striatum of Freely Moving Rats with an Implanted Glucose Biosensor. Journal of Neurochemistry, 1998, 70, 391-396.	3.9	100
10	Monitoring Brain Chemistry In Vivo: Voltammetric Techniques, Sensors, and Behavioral Applications. Critical Reviews in Neurobiology, 1998, 12, 69-127.	3.1	99
11	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, 135-142.	2.5	94
12	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.	2.3	90
13	Control of the Oxygen Dependence of an Implantable Polymer/Enzyme Composite Biosensor for Glutamate. Analytical Chemistry, 2006, 78, 2352-2359.	6.5	79
14	Simultaneous Telemetric Monitoring of Brain Glucose and Lactate and Motion in Freely Moving Rats. Analytical Chemistry, 2013, 85, 10282-10288.	6.5	73
15	Partial characterization in vitro of glucose oxidase-modified poly(phenylenediamine)-coated electrodes for neurochemical analysis in vivo. Electroanalysis, 1994, 6, 369-379.	2.9	70
16	Homogeneous mechanism of ascorbic acid interference in hydrogen peroxide detection at enzyme-modified electrodes. Analytical Chemistry, 1992, 64, 453-456.	6.5	69
17	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, 105-110.	2.1	68
18	Oxygen tolerance of an implantable polymer/enzyme composite glutamate biosensor displaying polycation-enhanced substrate sensitivity. Biosensors and Bioelectronics, 2007, 22, 1466-1473.	10.1	68

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19	Modifications of Poly(o-phenylenediamine) Permselective Layer on Pt-Ir for Biosensor Application in Neurochemical Monitoring. Sensors, 2007, 7, 420-437.	3.8	61
20	Real-Time Monitoring of Brain Tissue Oxygen Using a Miniaturized Biotelemetric Device Implanted in Freely Moving Rats. Analytical Chemistry, 2009, 81, 2235-2241.	6.5	60
21	The oxidation of ascorbic acid at carbon paste electrodes. Journal of Electroanalytical Chemistry and Interfacial Electrochemistry, 1990, 279, 109-121.	0.1	59
22	Polymerâ˜Enzyme Composite Biosensor with High Glutamate Sensitivity and Low Oxygen Dependence. Analytical Chemistry, 2005, 77, 1196-1199.	6.5	59
23	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, 2917-2926.	3.6	57
24	Enzyme Immobilization Strategies and Electropolymerization Conditions to Control Sensitivity and Selectivity Parameters of a Polymer-Enzyme Composite Glucose Biosensor. Sensors, 2010, 10, 6439-6462.	3.8	57
25	The monitoring of ascorbate and monoamine transmitter metabolites in the striatum of unanaesthetised rats using microprocessor-based voltammetry. Neuroscience, 1983, 9, 87-93.	2.3	55
26	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.	2.1	55
27	Circadian changes in homovanillic acid and ascorbate levels in the rat striatum using microprocessor-controlled voltammetry. Neuroscience Letters, 1982, 34, 189-193.	2.1	54
28	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.	3.5	53
29	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.	3.5	49
30	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 platinumâ€"iridium disk electrode. Biosensors and Bioelectronics, 2010, 25, 1454-1459.	10.1	47
31	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.	3.8	47
32	Strategies for decreasing ascorbate interference at glucose oxidase-modified poly(o-phenylenediamine)-coated electrodes. Analyst, The, 1996, 121, 773.	3.5	46
33	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, 180-189.	5.0	46
34	Biotelemetric Monitoring of Brain Neurochemistry in Conscious Rats Using Microsensors and Biosensors. Sensors, 2009, 9, 2511-2523.	3.8	44
35	Circadian changes in extracellular ascorbate in rat cortex, accumbens, striatum and hippocampus: Correlations with motor activity. Neuroscience Letters, 1985, 60, 331-336.	2.1	42
36	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.	2.9	42

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37	Anomalously High Concentrations of Brain Extracellular Uric Acid Detected with Chronically Implanted Probes: Implications for In Vivo Sampling Techniques. Journal of Neurochemistry, 1991, 57, 22-29.	3.9	42
38	Development and Characterization of an Implantable Biosensor for Telemetric Monitoring of Ethanol in the Brain of Freely Moving Rats. Analytical Chemistry, 2012, 84, 7072-7079.	6.5	42
39	Detection of homovanillic acid in vivo using microcomputer-controlled voltammetry: Simultaneous monitoring of rat motor activity and striatal dopamine release. Neuroscience, 1985, 14, 753-763.	2.3	41
40	Development and characterization in vitro of a catalase-based biosensor for hydrogen peroxide monitoring. Biosensors and Bioelectronics, 2007, 22, 2994-3000.	10.1	41
41	Comparison of simple aromatic amines for electrosynthesis of permselective polymers in biosensor fabrication. Analyst, The, 2003, 128, 905.	3.5	40
42	The origin of circadian and amphetamine-induced changes in the extracellular concentration of brain ascorbate. Neurochemistry International, 1983, 5, 773-778.	3.8	39
43	Fixed Versus Removable Microdialysis Probes for In Vivo Neurochemical Analysis: Implications for Behavioral Studies. Journal of Neurochemistry, 1994, 63, 1407-1415.	3.9	39
44	Behaviourally induced changes in extracellular levels of brain glutamate monitored at 1 s resolution with an implanted biosensor. Analytical Communications, 1998, 35, 87-89.	2.2	38
45	The development of linear sweep voltammetry with carbon paste electrodes in vivo. Journal of Neuroscience Methods, 1983, 8, 263-273.	2.5	37
46	Sensorâ€"tissue interactions in neurochemical analysis with carbon paste electrodes in vivo. Analyst, The, 1993, 118, 433-438.	3.5	36
47	Effect of Probe Size on the Concentration of Brain Extracellular Uric Acid Monitored with Carbon Paste Electrodes. Journal of Neurochemistry, 1994, 62, 1496-1502.	3.9	36
48	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, 748-753.	10.1	36
49	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, 2347-2351.	6.5	35
50	Adenosine modulation of striatal neurotransmitter release monitored in vivo using voltammetry. Neuroscience Letters, 1986, 63, 11-16.	2.1	31
51	On the significance of brain extracellular uric acid detected with in-vivo monitoring techniques: a review. Behavioural Brain Research, 1995, 71, 33-49.	2.2	31
52	Contributions by a Novel Edge Effect to the Permselectivity of an Electrosynthesized Polymer for Microbiosensor Applications. Analytical Chemistry, 2009, 81, 3911-3918.	6.5	31
53	Uric acid levels and dopamine transmission in rat striatum: diurnal changes and effects of drugs. Brain Research, 1990, 507, 267-272.	2.2	28
54	Strategies for reducing ascorbate interference at glucose oxidase modified conducting organic salt electrodes. Journal of Electroanalytical Chemistry, 1992, 334, 183-194.	3.8	28

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55	The selectivity of electrosynthesised polymer membranes depends on the electrode dimensions: implications for biosensor applications. Chemical Communications, 2004, , 2128.	4.1	27
56	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.	4.7	25
57	Selectivity of stearate-modified carbon paste electrodes for dopamine and ascorbic acid. Analytical Chemistry, 1989, 61, 2323-2324.	6.5	24
58	In vivo characterisation of a NafionÂ®-modified Pt electrode for real-time nitric oxide monitoring in brain extracellular fluid. Analytical Methods, 2012, 4, 550.	2.7	24
59	Altered response of carbon paste electrodes after contact with brain tissue. Journal of Electroanalytical Chemistry and Interfacial Electrochemistry, 1989, 261, 463-469.	0.1	23
60	Dopamine in the basal ganglia and benzodiazepine-induced sedation. Neuropharmacology, 1988, 27, 589-595.	4.1	22
61	Effects of intranigral injection of taurine and GABA on striatal dopamine release monitored voltammetrically in the unanaesthetized rat. Brain Research, 1986, 382, 28-32.	2.2	21
62	Low electro-synthesis potentials improve permselectivity of polymerized natural phenols in biosensor applications. Talanta, 2017, 162, 151-158.	5.5	21
63	Major differences in the behaviour of carbon paste and carbon fibre electrodes in a proteinâ€"lipid matrix: implications for voltammetry in vivo. Analyst, The, 1998, 123, 2899-2903.	3.5	20
64	Further In-vitro Characterization of an Implantable Biosensor for Ethanol Monitoring in the Brain. Sensors, 2013, 13, 9522-9535.	3.8	20
65	Characterization of Biosensors Based on Recombinant Glutamate Oxidase: Comparison of Crosslinking Agents in Terms of Enzyme Loading and Efficiency Parameters. Sensors, 2016, 16, 1565.	3.8	20
66	Novel integrated microdialysisâ€"amperometric system for in vitro detection of dopamine secreted from PC12 cells: Design, construction, and validation. Analytical Biochemistry, 2008, 380, 323-330.	2.4	18
67	Electropolymerized phenol derivatives as permselective polymers for biosensor applications. Analyst, The, 2015, 140, 3607-3615.	3.5	18
68	The compartment model for chronically implanted voltammetric electrodes in the rat brain. Neuroscience Letters, 1983, 38, 175-180.	2.1	17
69	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.	5.2	16
70	Washburn numbers. Part 5.â€"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.	1.0	15
71	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.	2.8	14
72	Washburn numbers. Part 4.â€"The Erdey-GrÃºz 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.	1.0	13

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73	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.	3.5	13
74	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, 509-514.	4.1	12
75	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.	2.0	11
76	Amperometric microbiosensor as an alternative tool for investigation of d-serine in brain. Amino Acids, 2012, 43, 1887-1894.	2.7	10
77	Microcomputer-Controlled Voltammetry in the Analysis of Transmitter Release in Rat Brain. Annals of the New York Academy of Sciences, 1986, 473, 337-348.	3.8	5
78	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.	2.0	2
79	REPLY FROM R. D. O'NEILL. Journal of Neurochemistry, 1992, 59, 785-786.	3.9	1