Gregory George Wildgoose

List of Publications by Year
in descending order

95 papers	7,293 citations	71061 41 h-index	54882 84 g-index
102 all docs	102 docs citations	102 times ranked	8198 citing authors

#	Article	IF	Citations
1	Metal Nanoparticles and Related Materials Supported on Carbon Nanotubes: Methods and Applications. Small, 2006, 2, 182-193.	5.2	972
2	Electrocatalysis at graphite and carbon nanotube modified electrodes: edge-plane sites and tube ends are the reactive sites. Chemical Communications, 2005, , 829.	2.2	922
3	Cyclic voltammetry on electrode surfaces covered with porous layers: An analysis of electron transfer kinetics at single-walled carbon nanotube modified electrodes. Sensors and Actuators B: Chemical, 2008, 133, 462-466.	4.0	399
4	Chemically Modified Carbon Nanotubes for Use in Electroanalysis. Mikrochimica Acta, 2006, 152, 187-214.	2.5	336
5	Sensitive adsorptive stripping voltammetric determination of paracetamol at multiwalled carbon nanotube modified basal plane pyrolytic graphite electrode. Analytica Chimica Acta, 2008, 618, 54-60.	2.6	255
6	Sensitive electrochemical detection of arsenic (III) using gold nanoparticle modified carbon nanotubes via anodic stripping voltammetry. Analytica Chimica Acta, 2008, 620, 44-49.	2.6	194
7	Electroanalysis Using Macro-, Micro-, and Nanochemical Architectures on Electrode Surfaces. Bulk Surface Modification of Glassy Carbon Microspheres with Gold Nanoparticles and Their Electrical Wiring Using Carbon Nanotubes. Analytical Chemistry, 2006, 78, 6102-6108.	3.2	185
8	The use of copper(II) oxide nanorod bundles for the non-enzymatic voltammetric sensing of carbohydrates and hydrogen peroxide. Sensors and Actuators B: Chemical, 2008, 135, 230-235.	4.0	183
9	Copper oxide nanoparticle impurities are responsible for the electroanalytical detection of glucose seen using multiwalled carbon nanotubes. Sensors and Actuators B: Chemical, 2008, 132, 356-360.	4.0	161
10	Separating Electrophilicity and Lewis Acidity: The Synthesis, Characterization, and Electrochemistry of the Electron Deficient Tris(aryl)boranes B(C₆F₅)_{3â€“n}(C₆Cl₅)_n (n = 1â€“3). Journal of the American Chemical Society, 2011, 133, 14727-14740.	6.6	153
11	Carbon nanotube-based electrochemical sensors for quantifying the â€˜heatâ€™ of chilli peppers: the adsorptive stripping voltammetric determination of capsaicin. Analyst, The, 2008, 133, 888.	1.7	152
12	Nickel(ii) tetra-aminophthalocyanine modified MWCNTs as potential nanocomposite materials for the development of supercapacitors. Energy and Environmental Science, 2010, 3, 228-236.	15.6	148
13	Apparent â€˜electrocatalyticâ€™ activity of multiwalled carbon nanotubes in the detection of the anaesthetic halothane: occluded copper nanoparticles. Analyst, The, 2006, 131, 901-906.	1.7	135
14	Design, fabrication, characterisation and application of nanoelectrode arrays. Chemical Physics Letters, 2008, 459, 1-17.	1.2	118
15	Facile Protocol for Water-Tolerant â€œFrustrated Lewis Pairâ€•Catalyzed Hydrogenation. ACS Catalysis, 2015, 5, 5540-5544.	5.5	110
16	The influence of edge-plane defects and oxygen-containing surface groups on the voltammetry of acid-treated, annealed and â€œsuper-annealedâ€•multiwalled carbon nanotubes. Journal of Solid State Electrochemistry, 2008, 12, 1337-1348.	1.2	105
17	Anthraquinone-derivatised carbon powder: reagentless voltammetric pH electrodes. Talanta, 2003, 60, 887-893.	2.9	100
18	The Formazanate Ligand as an Electron Reservoir: Bis(Formazanate) Zinc Complexes Isolated in Three Redox States. Angewandte Chemie - International Edition, 2014, 53, 4118-4122.	7.2	92

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19	Derivatised carbon powder electrodes: reagentless pH sensors. Talanta, 2004, 63, 1039-1051.	2.9	91
20	Homoleptic Permethylpentalene Complexes: â€œDouble Metallocenesâ€•of the First-Row Transition Metals. Journal of the American Chemical Society, 2008, 130, 15662-15677.	6.6	88
21	Chemical Derivatisation of Multiwalled Carbon Nanotubes Using Diazonium Salts. ChemPhysChem, 2004, 5, 1794-1799.	1.0	86
22	Unusual Voltammetry of the Reduction of O₂ in [C₄dmim][N(Tf)₂] Reveals a Strong Interaction of O₂^{â€¢â^'} with the [C₄dmim]⁺ Cation. Journal of Physical Chemistry C, 2008, 112, 13709-13715.	1.5	85
23	The physicochemical aspects of DNA sensing using electrochemical methods. Biosensors and Bioelectronics, 2009, 24, 3183-3190.	5.3	81
24	Characterising chemical functionality on carbon surfaces. Journal of Materials Chemistry, 2009, 19, 4875.	6.7	79
25	Electrochemical ESR and Voltammetric Studies of Lithium Ion Pairing with Electrogenerated 9,10-Anthraquinone Radical Anions Either Free in Acetonitrile Solution or Covalently Bound to Multiwalled Carbon Nanotubes. Journal of Physical Chemistry B, 2005, 109, 3971-3978.	1.2	75
26	Exploring the origins of the apparent â€œelectrocatalysisâ€•observed at C60 film-modified electrodes. Sensors and Actuators B: Chemical, 2009, 138, 524-531.	4.0	70
27	Exploring the fate of the tris(pentafluorophenyl)borane radical anion in weakly coordinating solvents. Dalton Transactions, 2013, 42, 782-789.	1.6	64
28	Voltammetric and X-ray photoelectron spectroscopic fingerprinting of carboxylic acid groups on the surface of carbon nanotubes via derivatisation with arylnitro labels. Journal of Materials Chemistry, 2007, 17, 3515.	6.7	63
29	Using multiwalled carbon nanotube modified electrodes for the adsorptive striping voltammetric determination of hesperidin. Electrochimica Acta, 2009, 54, 5030-5034.	2.6	63
30	A mechanistic investigation into the covalent chemical derivatisation of graphite and glassy carbon surfaces using aryldiazonium salts. Journal of Physical Organic Chemistry, 2008, 21, 433-439.	0.9	58
31	An Electrochemical Study of Frustrated Lewis Pairs: A Metal-Free Route to Hydrogen Oxidation. Journal of the American Chemical Society, 2014, 136, 6031-6036.	6.6	56
32	Investigating the Thermodynamic Causes Behind the Anomalously Large Shifts in pKa Values of Benzoic Acid-Modified Graphite and Glassy Carbon Surfaces. Langmuir, 2007, 23, 7847-7852.	1.6	54
33	Investigating the reactive sites and the anomalously large changes in surface pKa values of chemically modified carbon nanotubes of different morphologies. Journal of Materials Chemistry, 2007, 17, 2616.	6.7	52
34	Differentiating between ortho- and para-Quinone Surface Groups on Graphite, Glassy Carbon, and Carbon Nanotubes Using Organic and Inorganic Voltammetric and X-ray Photoelectron Spectroscopy Labels. Chemistry of Materials, 2007, 19, 4964-4974.	3.2	52
35	Graphite Powder and Multiwalled Carbon Nanotubes Chemically Modified with 4-Nitrobenzylamine. ChemPhysChem, 2005, 6, 352-362.	1.0	51
36	Graphite powder derivatised with poly-l-cysteine using â€œbuilding-blockâ€•chemistryâ€”a novel material for the extraction of heavy metal ions. Journal of Materials Chemistry, 2005, 15, 2375.	6.7	51

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37	Electrochemical Opening of Single-Walled Carbon Nanotubes Filled with Metal Halides and with Closed Ends. Journal of Physical Chemistry C, 2008, 112, 10389-10397.	1.5	49
38	Designer electrode interfaces simultaneously comprising three different metal nanoparticle (Au, Ag,) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5 electrochemistry. Analyst, The, 2006, 131, 1241.	1.7	43
39	Abrasively Immobilised Multiwalled Carbon Nanotube Agglomerates: A Novel Electrode Material Approach for the Analytical Sensing of pH. ChemPhysChem, 2004, 5, 669-677.	1.0	42
40	A facile method of modifying graphite powder with aminophenyl groups in bulk quantities. Journal of Materials Chemistry, 2007, 17, 3008.	6.7	42
41	Identifying quinone-like species on the surface of graphitic carbon and multi-walled carbon nanotubes using reactions with 2,4-dinitrophenylhydrazine to provide a voltammetric fingerprint. New Journal of Chemistry, 2007, 31, 958.	1.4	42
42	Cysteine methyl ester modified glassy carbon spheres for removal of toxic heavy metals from aqueous media. Chemical Communications, 2005, , 3694.	2.2	41
43	An electrochemical comparison of manganese dioxide microparticles versus Î± and Î² manganese dioxide nanorods: mechanistic and electrocatalytic behaviour. New Journal of Chemistry, 2008, 32, 1195.	1.4	41
44	Teaching old compounds new tricks: efficient N₂ fixation by simple Fe(N₂)(diphosphine)₂ complexes. Dalton Transactions, 2016, 45, 7550-7554.	1.6	41
45	A sensitive reagentless pH probe with a ca. 120ï¿½mV/pH unit response. Journal of Solid State Electrochemistry, 2004, 8, 718.	1.2	40
46	Novel B(Arâ€²)₂(Arâ€²â€²) hetero-tri(aryl)boranes: a systematic study of Lewis acidity. Dalton Transactions, 2016, 45, 6032-6043.	1.6	40
47	X-Ray photoelectron spectroscopy studies of graphite powder and multiwalled carbon nanotubes covalently modified with Fast Black K: evidence for a chemical release mechanism via electrochemical reduction. Journal of Materials Chemistry, 2005, 15, 953.	6.7	38
48	The electroreduction of â€œC60â€•films in aqueous electrolyte does not lead to alkali metal ion insertionâ€”Evidence for the involvement of adventitious poly-epoxidated C60 (C60On). Sensors and Actuators B: Chemical, 2009, 138, 397-401.	4.0	37
49	3-Aryl-3-(trifluoromethyl)diazirines as Versatile Photoactivated â€œLinkerâ€•Molecules for the Improved Covalent Modification of Graphitic and Carbon Nanotube Surfaces. Chemistry of Materials, 2011, 23, 3740-3751.	3.2	32
50	Electrochemistry of AuI and AuIII pincer complexes: determination of the AuIIâ€“AuI bond energy. Chemical Communications, 2013, 49, 10169.	2.2	31
51	Metalâ€Free Dihydrogen Oxidation by a Borenium Cation: A Combined Electrochemical/Frustrated Lewis Pair Approach. Angewandte Chemie - International Edition, 2014, 53, 9922-9925.	7.2	31
52	Exploring structural and electronic effects in three isomers of tris{bis(trifluoromethyl)phenyl}borane: towards the combined electrochemical-frustrated Lewis pair activation of H₂. Dalton Transactions, 2016, 45, 6023-6031.	1.6	31
53	The thermodynamics of sequestration of toxic copper(ii) metal ion pollutants from aqueous media by l-cysteine methyl ester modified glassy carbon spheres. Journal of Materials Chemistry, 2006, 16, 970.	6.7	29
54	Synthesis, Photochemical, and Redox Properties of Gold(I) and Gold(III) Pincer Complexes Incorporating a 2,2â€²:6â€²,2â€³-Terpyridine Ligand Framework. Inorganic Chemistry, 2015, 54, 10667-10677.	1.9	29

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55	Multiwalled Carbon Nanotubes with Molybdenum Dioxide Nanoplugsâ€"New Chemical Nanoarchitectures by Electrochemical Modification. Small, 2006, 2, 95-98.	5.2	28
56	Metal-free electrocatalytic hydrogen oxidation using frustrated Lewis pairs and carbon-based Lewis acids. Chemical Science, 2016, 7, 2537-2543.	3.7	28
57	Removal of Toxic Metal-Ion Pollutants from Water by Using Chemically Modified Carbon Powders. Chemistry - an Asian Journal, 2006, 1, 614-622.	1.7	26
58	Investigating the voltammetric reduction of methylviologen at gold and carbon based electrode materials. Evidence for a surface bound adsorption mechanism leading to electrode â€˜protectionâ€™ using multi-walled carbon nanotubes. New Journal of Chemistry, 2008, 32, 1628.	1.4	26
59	The expansion/contraction of gold microparticles during voltammetrically induced amalgamation leads to mechanical instability. New Journal of Chemistry, 2007, 31, 2071.	1.4	25
60	Direct electrochemistry of horseradish peroxidase immobilized in a chitosanâ€"[C4mim][BF4] film: Determination of electrode kinetic parameters. Bioelectrochemistry, 2008, 74, 183-187.	2.4	25
61	4-Nitrobenzylamine Partially Intercalated into Graphite Powder and Multiwalled Carbon Nanotubes:Â Characterization Using X-ray Photoelectron Spectroscopy and in Situ Atomic Force Microscopy. Langmuir, 2005, 21, 4584-4591.	1.6	24
62	Fabricating random arrays of boron doped diamond nano-disc electrodes: Towards achieving maximum Faradaic current with minimum capacitive charging. Sensors and Actuators B: Chemical, 2008, 133, 118-127.	4.0	23
63	Evaluation of a novel pad printing technique for the fabrication of disposable electrode assemblies. Sensors and Actuators B: Chemical, 2005, 107, 491-496.	4.0	22
64	Contrasting pK_a of Protonated Bis(3â€aminopropyl)â€Terminated Polyethylene Glycol â€œJeffamineâ€•and the Associated Thermodynamic Parameters in Solution and Covalently Attached to Graphite Surfaces. Chemistry - A European Journal, 2007, 13, 9663-9667.	1.7	22
65	Multiwalled Carbon Nanotubes Covalently Modified with Fast Black K. ChemPhysChem, 2005, 6, 590-595.	1.0	21
66	Bis(permethylpentalene)uranium. Dalton Transactions, 2010, 39, 6789.	1.6	21
67	â€œJanusâ€•Calixarenes: Double-Sided Molecular Linkers for Facile, Multianchor Point, Multifunctional, Surface Modification. Langmuir, 2016, 32, 7806-7813.	1.6	21
68	The Theory of Non-Cottrellian Diffusion on the Surface of a Sphere or Truncated Sphere. ChemPhysChem, 2006, 7, 1328-1336.	1.0	19
69	A New Mode of Chemical Reactivity for Metalâ€Free Hydrogen Activation by Lewis Acidic Boranes. Angewandte Chemie - International Edition, 2019, 58, 8362-8366.	7.2	19
70	Gold Nanoparticle-Modified Carbon Nanotubes-Modified Electrodes. Using Voltammetry to Measure the Total Length of the Nanotubes. Journal of Physical Chemistry C, 2008, 112, 1933-1937.	1.5	18
71	The influence of substrate effects when investigating new nanoparticle modified electrodes exemplified by the electroanalytical determination of aspirin on NiO nanoparticles supported on graphite. Electrochemistry Communications, 2008, 10, 1129-1131.	2.3	17
72	The contrasting behaviour of polycrystalline bulk gold and gold nanoparticle modified electrodes towards the underpotential deposition of thallium. New Journal of Chemistry, 2008, 32, 941.	1.4	17

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73	Metallic Nanoparticles Deposited on Carbon Microspheres: Novel Materials for Combinatorial Electrochemistry and Electroanalysis. Journal of Nanoscience and Nanotechnology, 2009, 9, 2274-2282.	0.9	17
74	Building Block Syntheses of Gallic Acid Monomers and Tris-(O-gallyl)-gallic Acid Dendrimers Chemically Attached to Graphite Powder: A Comparative Study of Their Uptake of Al(III) Ions. Langmuir, 2010, 26, 1776-1785.	1.6	17
75	Cymantreneâ€"Triazole â€œClickâ€•Products: Structural Characterization and Electrochemical Properties. Organometallics, 2014, 33, 4687-4696.	1.1	17
76	H₂ activation using the first 1â€‰:â€‰1â€‰:â€‰1 hetero-tri(aryl)borane. RSC Advances, 2016, 6, 42421-42427.	1.7	17
77	Generator/Collector Experiments with a Single Electrode: Introduction and Application to Exploring the Oxidation Mechanism of Serotonin. Journal of Physical Chemistry C, 2009, 113, 14285-14289.	1.5	16
78	Developing Random Network Theory for Carbon Nanotube Modified Electrode Voltammetry: Introduction and Application to Estimating the Potential Drop between MWCNTâ^'MWCNT Contacts. Journal of Physical Chemistry C, 2008, 112, 13729-13738.	1.5	15
79	A Combined â€œElectrochemicalâ€"Frustrated Lewis Pairâ€•Approach to Hydrogen Activation: Surface Catalytic Effects at Platinum Electrodes. Chemistry - A European Journal, 2015, 21, 900-906.	1.7	15
80	A New Method of Studying Ion Transfer at Liquid|Liquid Phase Boundaries Using a Carbon Nanotube Paste Electrode with a Redox Active Binder. Journal of Physical Chemistry C, 2007, 111, 18353-18360.	1.5	13
81	Removal of palladium ions from aqueous systems by chemically modified cysteine carbon powder. Journal of Materials Chemistry, 2008, 18, 3948.	6.7	13
82	Synthesis and characterization of carbon nanotubes covalently functionalized with amphiphilic polymer coated superparamagnetic nanocrystals. Journal of Colloid and Interface Science, 2012, 383, 110-117.	5.0	13
83	Generatorâ^'Collector Experiments at a Single Electrode: Exploring the General Applicability of This Approach by Comparing the Performance of Surface Immobilized versus Solution Phase Sensing Molecules. Langmuir, 2010, 26, 1340-1346.	1.6	12
84	The voltammetric determination of peroxynitrite at a mercury film electrode. New Journal of Chemistry, 2007, 31, 394.	1.4	9
85	Enabling electrochemical studies of chemically-modified carbon nanotubes in non-aqueous electrolytes using superparamagnetic nanoparticle-nanotube composites co-modified by diazirine molecular â€œtethersâ€• Electrochemistry Communications, 2011, 13, 1139-1142.	2.3	9
86	Electrocatalysis at Graphite and Carbon Nanotube Modified Electrodes: Edge-Plane Sites and Tube Ends Are the Reactive Sites. ChemInform, 2005, 36, no.	0.1	7
87	Adsorption of bismuth ions on graphite chemically modified with gallic acid. Physical Chemistry Chemical Physics, 2012, 14, 10027.	1.3	7
88	Investigations into the Speciation of Inorganic Arsenic in Weakly Alkaline Medium by Voltammetry. Electroanalysis, 2015, 27, 890-901.	1.5	7
89	A New Mode of Chemical Reactivity for Metalâ€Free Hydrogen Activation by Lewis Acidic Boranes. Angewandte Chemie, 2019, 131, 8450-8454.	1.6	7
90	Characterisation and application of a novel cell for mechanistic electrochemistry at elevated temperatures. Physical Chemistry Chemical Physics, 2003, 5, 4219.	1.3	6

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91	Synthesis and characterization of redox active cyrhetreneâ€“triazole click products. Journal of Organometallic Chemistry, 2014, 770, 29-34.	0.8	6
92	Designer interfaces: diffusional protection of electrodes using chemical architectures. Journal of Materials Chemistry, 2006, 16, 4103.	6.7	5
93	Mathematical Modelling and Simulation of Adsorption Processes at Spherical Microparticles. ChemPhysChem, 2006, 7, 697-703.	1.0	5
94	Carbon Nanotubeâ€“Based Sensors and Biosensors. , 0, , 1-37.		0
95	InnenrÃ¼cktitelbild: The Formazanate Ligand as an Electron Reservoir: Bis(Formazanate) Zinc Complexes Isolated in Three Redox States (Angew. Chem. 16/2014). Angewandte Chemie, 2014, 126, 4335-4335.	1.6	0