Alison Downard

List of Publications by Year
in descending order

80 papers	3,526 citations	136950 32 h-index	138484 58 g-index
93 all docs	93 docs citations	93 times ranked	2745 citing authors

#	Article	IF	Citations
1	Electrochemically Assisted Covalent Modification of Carbon Electrodes. Electroanalysis, 2000, 12, 1085-1096.	2.9	458
2	Electrochemical and Atomic Force Microscopy Study of Carbon Surface Modification via Diazonium Reduction in Aqueous and Acetonitrile Solutions. Langmuir, 2004, 20, 5038-5045.	3.5	382
3	Covalent modification of graphitic carbon substrates by non-electrochemical methods. Journal of Solid State Electrochemistry, 2008, 12, 1231-1244.	2.5	155
4	An Electrochemical and XPS Study of Reduction of Nitrophenyl Films Covalently Grafted to Planar Carbon Surfaces. Langmuir, 2007, 23, 11074-11082.	3.5	132
5	Multilayer Nitroazobenzene Films Covalently Attached to Carbon. An AFM and Electrochemical Study. Journal of Physical Chemistry B, 2005, 109, 8791-8798.	2.6	126
6	Barrier Properties of Organic Monolayers on Glassy Carbon Electrodes. Langmuir, 2001, 17, 5581-5586.	3.5	98
7	Potential-Dependence of Self-Limited Films Formed by Reduction of Aryldiazonium Salts at Glassy Carbon Electrodes. Langmuir, 2000, 16, 9680-9682.	3.5	96
8	Electrografting via Diazonium Chemistry: The Key Role of the Aryl Substituent in the Layer Growth Mechanism. Journal of Physical Chemistry C, 2016, 120, 4423-4429.	3.1	87
9	Protein adsorption at glassy carbon electrodes: The effect of covalently bound surface groups. Electroanalysis, 1995, 7, 376-378.	2.9	85
10	Grafting Aryl Diazonium Cations to Polycrystalline Gold:â€‰ Insights into Film Structure Using Gold Oxide Reduction, Redox Probe Electrochemistry, and Contact Angle Behavior. Journal of Physical Chemistry C, 2007, 111, 7808-7815.	3.1	84
11	Electrochemical detection of intracellular and cell membrane redox systems in Saccharomyces cerevisiae. Scientific Reports, 2014, 4, 5216.	3.3	76
12	Nanoscale Patterning of Flat Carbon Surfaces by Scanning Probe Lithography and Electrochemistry. Langmuir, 2005, 21, 1672-1675.	3.5	72
13	Reaction of Gold Substrates with Diazonium Salts in Acidic Solution at Open-Circuit Potential. Langmuir, 2009, 25, 13503-13509.	3.5	72
14	Microcontact Printing Using the Spontaneous Reduction of Aryldiazonium Salts. Journal of the American Chemical Society, 2007, 129, 15456-15457.	13.7	69
15	Improved stability of redox enzyme layers on glassy carbon electrodes via covalent grafting. Electrochemistry Communications, 2008, 10, 835-838.	4.7	65
16	Microscale Patterning of Organic Films on Carbon Surfaces Using Electrochemistry and Soft Lithography. Langmuir, 2006, 22, 10739-10746.	3.5	62
17	Evidence of monolayer formation via diazonium grafting with a radical scavenger: electrochemical, AFM and XPS monitoring. Physical Chemistry Chemical Physics, 2015, 17, 13137-13142.	2.8	60
18	Effect of Applied Potential on Arylmethyl Films Oxidatively Grafted to Carbon Surfaces. Langmuir, 2005, 21, 11304-11311.	3.5	56

#	Article	IF	Citations
19	Spontaneous Grafting of Nitrophenyl Groups to Planar Glassy Carbon Substrates: Evidence for Two Mechanisms. Journal of Physical Chemistry C, 2011, 115, 6629-6634.	3.1	55
20	Are redox probes a useful indicator of film stability? An electrochemical, AFM and XPS study of electrografted amine films on carbon. Electrochemistry Communications, 2007, 9, 1456-1462.	4.7	49
21	Design of Robust Binary Film onto Carbon Surface Using Diazonium Electrochemistry. Langmuir, 2011, 27, 11222-11228.	3.5	47
22	Amine-Terminated Monolayers on Carbon: Preparation, Characterization, and Coupling Reactions. Langmuir, 2015, 31, 5071-5077.	3.5	47
23	Controlled assembly of gold nanoparticles on carbon surfaces. New Journal of Chemistry, 2006, 30, 1283.	2.8	46
24	Patterning of Metal, Carbon, and Semiconductor Substrates with Thin Organic Films by Microcontact Printing with Aryldiazonium Salt Inks. Analytical Chemistry, 2010, 82, 7027-7034.	6.5	46
25	Photochemical Grafting and Activation of Organic Layers on Glassy Carbon and Pyrolyzed Photoresist Films. Langmuir, 2007, 23, 4662-4668.	3.5	40
26	Robust Forests of Vertically Aligned Carbon Nanotubes Chemically Assembled on Carbon Substrates. Langmuir, 2010, 26, 1848-1854.	3.5	40
27	Controlling Grafting from Aryldiazonium Salts: A Review of Methods for the Preparation of Monolayers. Australian Journal of Chemistry, 2017, 70, 960.	0.9	39
28	Direct growth of vertically aligned carbon nanotubes on a planar carbon substrate by thermal chemical vapour deposition. Carbon, 2009, 47, 500-506.	10.3	38
29	Stability Constants for Aluminum(III) Complexes with the 1,2-Dihydroxyaryl Ligands Caffeic Acid, Chlorogenic Acid, DHB, and DASA in Aqueous Solution. Journal of Chemical & Engineering Data, 2002, 47, 289-296.	1.9	37
30	Covalently Anchored Carboxyphenyl Monolayer via Aryldiazonium Ion Grafting: A Well-Defined Reactive Tether Layer for On-Surface Chemistry. Langmuir, 2014, 30, 7104-7111.	3.5	37
31	Electrografting of 4-Nitrobenzenediazonium Ion at Carbon Electrodes: Catalyzed and Uncatalyzed Reduction Processes. Langmuir, 2016, 32, 468-476.	3.5	35
32	Evidence for covalent bonding of aryl groups to MnO₂ nanorods from diazonium-based grafting. Chemical Communications, 2014, 50, 13687-13690.	4.1	33
33	Selective Simultaneous Determination of Paracetamol and Uric Acid Using a Glassy Carbon Electrode Modified with Multiwalled Carbon Nanotube/Chitosan Composite. Electroanalysis, 2011, 23, 417-423.	2.9	32
34	Electrochemical stability of citrate-capped gold nanoparticles electrostatically assembled on amine-modified glassy carbon. Electrochimica Acta, 2009, 54, 5566-5570.	5.2	29
35	Nickel (II) tetraphenylporphyrin modified surfaces via electrografting of an aryldiazonium salt. Electrochemistry Communications, 2011, 13, 1236-1239.	4.7	29
36	Mixed Monolayer Organic Films via Sequential Electrografting from Aryldiazonium Ion and Arylhydrazine Solutions. Langmuir, 2013, 29, 3133-3139.	3.5	29

#	Article	IF	Citations
37	Scanning Tunneling and Atomic Force Microscopy Evidence for Covalent and Noncovalent Interactions between Aryl Films and Highly Ordered Pyrolytic Graphite. Journal of Physical Chemistry C, 2014, 118, 5820-5826.	3.1	28
38	Quantum Capacitance of Aryldiazonium Modified Large Area Few-Layer Graphene Electrodes. Journal of Physical Chemistry C, 2015, 119, 25778-25785.	3.1	25
39	Tuning the Band Bending and Controlling the Surface Reactivity at Polar and Nonpolar Surfaces of ZnO through Phosphonic Acid Binding. ACS Applied Materials & Interfaces, 2016, 8, 31392-31402.	8.0	23
40	Multifunctional and Stable Monolayers on Carbon: A Simple and Reliable Method for Backfilling Sparse Layers Grafted from Protected Aryldiazonium Ions. Langmuir, 2016, 32, 2626-2637.	3.5	23
41	Controlling the selectivity of glassy carbon flow detectors using covalently attached monolayers. Electroanalysis, 1997, 9, 693-698.	2.9	22
42	Exploration of variables in the fabrication of pyrolysed photoresist. Journal of Solid State Electrochemistry, 2008, 12, 1357-1365.	2.5	22
43	Synchrotron X-ray Photoelectron Spectroscopy Study of Electronic Changes at the ZnO Surface Following Aryldiazonium Ion Grafting: A Metal-to-Insulator Transition. Journal of Physical Chemistry C, 2018, 122, 12681-12693.	3.1	22
44	Fluorescence Microscopy Study of Protein Adsorption at Modified Glassy Carbon Surfaces. Australian Journal of Chemistry, 2005, 58, 275.	0.9	21
45	Chemically immobilised carbon nanotubes on silicon: Stable surfaces for aqueous electrochemistry. Electrochimica Acta, 2010, 55, 3995-4001.	5.2	21
46	Two-Component Mixed and Patterned Films on Carbon Surfaces through the Photografting of Arylazides. Langmuir, 2010, 26, 7285-7292.	3.5	21
47	Diazonium salt derivatives of osmium bipyridine complexes: Electrochemical grafting and characterisation of modified surfaces. Electrochimica Acta, 2011, 56, 2213-2220.	5.2	21
48	The stability of diazonium ion terminated films on glassy carbon and gold electrodes. Electrochemistry Communications, 2012, 19, 67-69.	4.7	21
49	Surface Patterning Using Twoâ€Phase Laminar Flow and Inâ€…Situ Formation of Aryldiazonium Salts. Angewandte Chemie - International Edition, 2013, 52, 10261-10264.	13.8	21
50	Building Tailored Interfaces through Covalent Coupling Reactions at Layers Grafted from Aryldiazonium Salts. ACS Applied Materials & Interfaces, 2021, 13, 11545-11570.	8.0	21
51	Spontaneous Modification of Free-Floating Few-Layer Graphene by Aryldiazonium Ions: Electrochemistry, Atomic Force Microscopy, and Infrared Spectroscopy from Grafted Films. Journal of Physical Chemistry C, 2016, 120, 7543-7552.	3.1	17
52	Relationship between the hydroxyl termination and band bending at <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mo>(</mml:mo><mml:mrow><mml:mover) Tj ETQq0 0 0 rgB mathvariant="normal">G</mml:mi><mml:msub><mml:mi mathvariant="normal">a</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:msub><mml:mi mathvariant="normal">O</mml:mi>. Physical Review B, 2020, 102, .	3.2	16
53	Voltammetric and Electrochemical Impedance Study of Ferrocenyl Containing Î²-Peptide Monolayers on Gold. Journal of Physical Chemistry C, 2011, 115, 7516-7526.	3.1	15
54	Formation of Thick Aminophenyl Films from Aminobenzenediazonium Ion in the Absence of a Reduction Source. Langmuir, 2014, 30, 4989-4996.	3.5	15

#	Article	IF	Citations
55	Electrowetting on conductors: anatomy of the phenomenon. Faraday Discussions, 2017, 199, 49-61.	3.2	15
56	Dynamic Behavior of Organic Thin Films Attached to Carbon Surfaces. E-Journal of Surface Science and Nanotechnology, 2005, 3, 294-298.	0.4	15
57	HKUST-1 growth on glassy carbon. Journal of Materials Chemistry, 2011, 21, 19207.	6.7	14
58	Dependence of catalytic activity and long-term stability of enzyme hydrogel films on curing time. Bioelectrochemistry, 2010, 79, 142-146.	4.6	13
59	SECM imaging of micropatterned organic films on carbon surfaces. Electrochemistry Communications, 2007, 9, 2387-2392.	4.7	11
60	Nanoscale films covalently attached to conducting substrates: structure and dynamic behaviour of the layers. International Journal of Nanotechnology, 2009, 6, 233.	0.2	11
61	Reproducible Fabrication of Robust, Renewable Vertically Aligned Multiwalled Carbon Nanotube/Epoxy Composite Electrodes. Analytical Chemistry, 2011, 83, 8347-8351.	6.5	11
62	The effect of covalently bonded aryl layers on the band bending and electron density of SnO₂ surfaces probed by synchrotron X-ray photoelectron spectroscopy. Physical Chemistry Chemical Physics, 2019, 21, 17913-17922.	2.8	11
63	Reduction of Nitrophenyl Films in Aqueous Solutions: How Many Electrons?. ChemElectroChem, 2016, 3, 2021-2026.	3.4	10
64	Carbon nanotube diameter control via catalytic Co nanoparticles electrodeposited in porous alumina membranes. RSC Advances, 2015, 5, 25747-25754.	3.6	9
65	Dielsâ€“Alder Reaction of Anthranilic Acids: A Versatile Route to Dense Monolayers on Flat Edge and Basal Plane Graphitic Carbon Substrates. ACS Applied Materials & Interfaces, 2016, 8, 23389-23395.	8.0	8
66	Electrochemical detection of oestrogen binding protein interaction with oestrogen in Candida albicans cell lysate. Biosensors and Bioelectronics, 2011, 26, 3737-3741.	10.1	7
67	Controlled Spacing of Few-Layer Graphene Sheets Using Molecular Spacers: Capacitance That Scales with Sheet Number. ACS Applied Nano Materials, 2018, 1, 1420-1429.	5.0	7
68	Preparation of ferrocene-terminated layers by direct reaction with glassy carbon: a comparison of methods. Journal of Solid State Electrochemistry, 2014, 18, 3369-3378.	2.5	6
69	Boronâ€Doped Diamond Dualâ€Plate Deepâ€Microtrench Device for Generatorâ€Collector Sulfide Sensing. Electroanalysis, 2015, 27, 2645-2653.	2.9	6
70	Simultaneous Electroâ€Click and Electrochemically Mediated Polymerization Reactions for Oneâ€Pot Grafting from a Controlled Density of Anchor Sites. ChemElectroChem, 2019, 6, 5149-5154.	3.4	6
71	Measuring the Capacitance at Few- and Many-Layered Graphene Electrodes in Aqueous Acidic Solutions. Journal of Physical Chemistry C, 2018, 122, 6103-6108.	3.1	5
72	Size-controlled, high optical quality ZnO nanowires grown using colloidal Au nanoparticles and ultra-small cluster catalysts. APL Materials, 2019, 7, 022518.	5.1	5

#	Article	IF	Citations
73	Electrochemically Assisted Covalent Modification of Carbon Electrodes. , 2000, 12, 1085.		4
74	Bidirectional Control of the Band Bending at the (2Ì…01) and (010) Surfaces of Î²-Ga₂O₃ Using Aryldiazonium Ion and Phosphonic Acid Grafting. ACS Applied Electronic Materials, 2021, 3, 5608-5620.	4.3	4
75	Surface Patterning Using Twoâ€Phase Laminar Flow and Inâ€…Situ Formation of Aryldiazonium Salts. Angewandte Chemie, 2013, 125, 10451-10454.	2.0	3
76	Electroreduction of Aryldiazonium Ion at the Polar and Nonâ€Polar Faces of ZnO: Characterisation of the Grafted Films and Their Influence on Nearâ€Surface Band Bending. ChemPhysChem, 2021, 22, 1344-1351.	2.1	3
77	<i>Para</i>-Fluoro-Thiol Reaction on Anchor Layers Grafted from an Aryldiazonium Salt: A Tool for Surface Functionalization with Thiols. Langmuir, 2021, 37, 11397-11405.	3.5	3
78	Immobilisation of Iron Porphyrin from an Equilibrium Solution with Diazoniumâ€Functionalised Axial Ligand: Dependence of Film Composition on Grafting Potential. ChemElectroChem, 2021, 8, 3105-3112.	3.4	1
79	Development and application of diffusive gradients in thin films for determining inorganic arsenic concentrations in natural waters. Diqiu Huaxue, 2006, 25, 206-206.	0.5	0
80	Growth of Carbon Nanotubes on Mesoporous Silica Coated Planar and Three-Dimensional Surfaces. Materials Research Society Symposia Proceedings, 2013, 1505, 1.	0.1	0