Darren A Walsh

List of Publications by Year
in descending order

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81 papers	3,372 citations	126907 33 h-index	144013 57 g-index
88 all docs	88 docs citations	88 times ranked	4576 citing authors

#	Article	IF	Citations
1	Thermodynamic Guidelines for the Design of Bimetallic Catalysts for Oxygen Electroreduction and Rapid Screening by Scanning Electrochemical Microscopy. Mâ''Co (M:Â Pd, Ag, Au). Journal of the American Chemical Society, 2005, 127, 357-365.	13.7	587
2	Biomass-derived activated carbon with simultaneously enhanced CO₂ uptake for both pre and post combustion capture applications. Journal of Materials Chemistry A, 2016, 4, 280-289.	10.3	251
3	Green One-Step Synthesis of Catalytically Active Palladium Nanoparticles Supported on Cellulose Nanocrystals. ACS Sustainable Chemistry and Engineering, 2014, 2, 1241-1250.	6.7	115
4	Synergistic Catalystâ€"Support Interactions in a Grapheneâ€"Mn₃O₄Electrocatalyst for Vanadium Redox Flow Batteries. ACS Catalysis, 2015, 5, 7122-7130.	11.2	112
5	Electrochemical Capacitance of Nanocomposite Polypyrrole/Cellulose Films. Journal of Physical Chemistry C, 2010, 114, 17926-17933.	3.1	109
6	Permselective nanostructured membranes based on cellulose nanowhiskers. Green Chemistry, 2009, 11, 531.	9.0	100
7	Synthesis of platinum nanoparticles using cellulosic reducing agents. Green Chemistry, 2010, 12, 220-222.	9.0	89
8	Synthesis of carbon-supported Pt nanoparticle electrocatalysts using nanocrystalline cellulose as reducing agent. Green Chemistry, 2011, 13, 1686.	9.0	87
9	Hostâ€"Guest Hybrid Redox Materials Selfâ€Assembled from Polyoxometalates and Singleâ€Walled Carbon Nanotubes. Advanced Materials, 2019, 31, e1904182.	21.0	77
10	2021 roadmap on lithium sulfur batteries. JPhys Energy, 2021, 3, 031501.	5.3	74
11	Ultramicroelectrode voltammetry and scanning electrochemical microscopy in room-temperature ionic liquid electrolytes. Chemical Society Reviews, 2010, 39, 4185.	38.1	68
12	Modulating the Redox Properties of an Osmium-Containing Metallopolymer through the Supporting Electrolyte and Cross-Linking. Langmuir, 2004, 20, 862-868.	3.5	60
13	Rapid Screening of Bimetallic Electrocatalysts for Oxygen Reduction in Acidic Media by Scanning Electrochemical Microscopy. Journal of the Electrochemical Society, 2006, 153, E99.	2.9	58
14	Extremely Stable Platinumâ€Amorphous Carbon Electrocatalyst within Hollow Graphitized Carbon Nanofibers for the Oxygen Reduction Reaction. Advanced Materials, 2016, 28, 9103-9108.	21.0	58
15	Heterogeneous Electron Transfer Kinetics at the Ionic Liquid/Metal Interface Studied Using Cyclic Voltammetry and Scanning Electrochemical Microscopy. Journal of Physical Chemistry B, 2008, 112, 13292-13299.	2.6	57
16	Closed Bipolar Electrodes for Spatial Separation of H₂ and O₂ Evolution during Water Electrolysis and the Development of High-Voltage Fuel Cells. ACS Applied Materials & Interfaces, 2017, 9, 23654-23661.	8.0	53
17	Molecular redox species for next-generation batteries. Chemical Society Reviews, 2021, 50, 5863-5883.	38.1	53
18	Effect of Viscosity on Steady-State Voltammetry and Scanning Electrochemical Microscopy in Room Temperature Ionic Liquids. Journal of Physical Chemistry B, 2010, 114, 4442-4450.	2.6	51

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19	Electrolyte Jet Machining of Titanium Alloys Using Novel Electrolyte Solutions. Procedia CIRP, 2016, 42, 367-372.	1.9	50
20	Hydrogen Oxidation and Oxygen Reduction at Platinum in Protic Ionic Liquids. Journal of Physical Chemistry C, 2012, 116, 18048-18056.	3.1	49
21	Room temperature ionic liquid electrolytes for redox flow batteries. Electrochemistry Communications, 2015, 54, 55-59.	4.7	49
22	High total-electrode and mass-specific capacitance cellulose nanocrystal-polypyrrole nanocomposites for supercapacitors. RSC Advances, 2013, 3, 9158.	3.6	48
23	Comparison of electrochemical, electrophoretic and spectrophotometric methods for creatinine determination in biological fluids. Analytica Chimica Acta, 2002, 459, 187-198.	5.4	47
24	Scanning Electrochemical Microscopy. 55. Fabrication and Characterization of Micropipet Probes. Analytical Chemistry, 2005, 77, 5182-5188.	6.5	47
25	Iodide/triiodide electrochemistry in ionic liquids: Effect of viscosity on mass transport, voltammetry and scanning electrochemical microscopy. Electrochimica Acta, 2011, 56, 10313-10320.	5.2	47
26	Bridging the performance gap between electric double-layer capacitors and batteries with high-energy/high-power carbon nanotube-based electrodes. Journal of Materials Chemistry A, 2016, 4, 14586-14594.	10.3	44
27	Sulfonylative and Azidosulfonylative Cyclizations by Visibleâ€Lightâ€Photosensitization of Sulfonyl Azides in THF. Chemistry - A European Journal, 2017, 23, 17598-17604.	3.3	44
28	Kinetics and mechanism of oxygen reduction in a protic ionic liquid. Physical Chemistry Chemical Physics, 2013, 15, 7548.	2.8	43
29	The Nature of Proton Shuttling in Protic Ionic Liquid Fuel Cells. Advanced Energy Materials, 2019, 9, 1900744.	19.5	42
30	On the diffusion of ferrocenemethanol in room-temperature ionic liquids: an electrochemical study. Physical Chemistry Chemical Physics, 2011, 13, 10155.	2.8	41
31	The Role of Adsorbed Ions during Electrocatalysis in Ionic Liquids. Journal of Physical Chemistry C, 2014, 118, 7414-7422.	3.1	40
32	Visualisation of the local electrochemical activity of thermal sprayed anti-corrosion coatings using scanning electrochemical microscopy. Electrochimica Acta, 2009, 54, 4647-4654.	5.2	37
33	Stabilization of Polyoxometalate Charge Carriers via Redoxâ€Driven Nanoconfinement in Singleâ€Walled Carbon Nanotubes. Angewandte Chemie - International Edition, 2022, 61, e202115619.	13.8	35
34	Nanocomposite oxygen reduction electrocatalysts formed using bioderived reducing agents. Journal of Materials Chemistry, 2010, 20, 1737.	6.7	33
35	Palladiumâ€“vanadium alloy electrocatalysts for oxygen reduction: Effect of heat treatment on electrocatalytic activity and stability. Applied Catalysis B: Environmental, 2010, 98, 49-56.	20.2	32
36	Formal synthesis of kingianin A based upon a novel electrochemically-induced radical cation Dielsâ€“Alder reaction. Chemical Communications, 2014, 50, 12523-12525.	4.1	30

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37	Gelâ€“Polymer Electrolytes Based on Poly(Ionic Liquid)/Ionic Liquid Networks. ACS Applied Polymer Materials, 2021, 3, 200-208.	4.4	30
38	Polyaniline- and poly(ethylenedioxythiophene)-cellulose nanocomposite electrodes for supercapacitors. Journal of Solid State Electrochemistry, 2014, 18, 3307-3315.	2.5	29
39	Electrocatalytic oxidation of methanol and carbon monoxide at platinum in protic ionic liquids. Electrochemistry Communications, 2012, 23, 122-124.	4.7	26
40	Valorization of lignin waste: high electrochemical capacitance of lignin-derived carbons in aqueous and ionic liquid electrolytes. Journal of Materials Chemistry A, 2018, 6, 18701-18711.	10.3	26
41	Redoxâ€Active Hybrid Polyoxometalateâ€Stabilised Gold Nanoparticles. Angewandte Chemie - International Edition, 2020, 59, 14331-14335.	13.8	25
42	Best Practice for Evaluating Electrocatalysts for Hydrogen Economy. ACS Applied Materials & Interfaces, 2020, 12, 20500-20506.	8.0	25
43	Tuning percolation speed in layer-by-layer assembled polyanilineâ€“nanocellulose composite films. Journal of Solid State Electrochemistry, 2011, 15, 2675-2681.	2.5	24
44	Tip generationâ€“substrate collectionâ€“tip collection mode scanning electrochemical microscopy of oxygen reduction electrocatalysts. Journal of Electroanalytical Chemistry, 2012, 682, 45-52.	3.8	24
45	Electroanalysis of Neutral Precursors in Protic Ionic Liquids and Synthesis of High-Ionicity Ionic Liquids. Langmuir, 2017, 33, 8436-8446.	3.5	24
46	Carbon Nanofiber Electrodes and Controlled Nanogaps for Scanning Electrochemical Microscopy Experiments. Analytical Chemistry, 2006, 78, 6959-6966.	6.5	22
47	Formation and Growth of Oxide Layers at Platinum and Gold Nano- and Microelectrodes. Analytical Chemistry, 2010, 82, 7135-7140.	6.5	21
48	Tuning the Reactivity of TEMPO during Electrocatalytic Alcohol Oxidations in Room-Temperature Ionic Liquids. ACS Sustainable Chemistry and Engineering, 2019, 7, 11691-11699.	6.7	21
49	Electrochemistry of redox-active molecules confined within narrow carbon nanotubes. Chemical Society Reviews, 2021, 50, 10895-10916.	38.1	20
50	Efficient Electrocatalytic CO₂Reduction Driven by Ionic Liquid Bufferâ€Like Solutions. ChemSusChem, 2019, 12, 4170-4175.	6.8	19
51	Organicâ€“Inorganic Hybrid Polyoxotungstates As Configurable Charge Carriers for High Energy Redox Flow Batteries. ACS Applied Energy Materials, 2021, 4, 8765-8773.	5.1	17
52	The Formation and Role of Oxide Layers on Pt during Hydrazine Oxidation in Protic Ionic Liquids. ChemElectroChem, 2014, 1, 281-288.	3.4	16
53	Effects of chain length on the size, stability, and electronic structure of redox-active organicâ€“inorganic hybrid polyoxometalate micelles. Molecular Systems Design and Engineering, 2019, 4, 995-999.	3.4	16
54	Sustainability of Battery Technologies: Today and Tomorrow. ACS Sustainable Chemistry and Engineering, 2021, 9, 6507-6509.	6.7	16

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55	Highly stable platinum electrocatalysts for oxygen reduction formed using supercritical fluid impregnation. Journal of Power Sources, 2010, 195, 2557-2563.	7.8	15
56	Deposition of silver nanobowl arrays using polystyrene nanospheres both as reagents and as the templating material. Journal of Materials Chemistry, 2011, 21, 7555.	6.7	13
57	Developing energy efficient lignin biomass processing â€“ towards understanding mediator behaviour in ionic liquids. Faraday Discussions, 2016, 190, 127-145.	3.2	13
58	Physical and Electrochemical Modulation of Polyoxometalate Ionic Liquids via Organic Functionalization. European Journal of Inorganic Chemistry, 2019, 2019, 456-460.	2.0	12
59	Scanning electrochemical microscopy at thermal sprayed anti-corrosion coatings: Effect of thermal spraying on heterogeneous electron transfer kinetics. Journal of Electroanalytical Chemistry, 2011, 657, 46-53.	3.8	11
60	Cellulose Nanowhiskers in Electrochemical Applications. ACS Symposium Series, 2012, , 75-106.	0.5	11
61	Diethylmethylammonium trifluoromethanesulfonate protic ionic liquid electrolytes for water electrolysis. Journal of Power Sources, 2020, 449, 227602.	7.8	11
62	The contrasting effects of diethylmethylamine during reduction of protons and oxidation of formic acid in diethylmethylammonium-based protic ionic liquids. Journal of Electroanalytical Chemistry, 2018, 819, 187-192.	3.8	10
63	Facile cation electro-insertion into layer-by-layer assembled iron phytate films. Electrochemistry Communications, 2010, 12, 1722-1726.	4.7	8
64	Redox switching in solid deposits:. Journal of Electroanalytical Chemistry, 2002, 538-539, 75-85.	3.8	7
65	Functionalization of Carbon Surfaces Tunes the Redox Stability of Polyoxometalate@Carbon Electrodes. ACS Applied Energy Materials, 2020, 3, 12308-12315.	5.1	6
66	Redoxâ€Active Hybrid Polyoxometalateâ€Stabilised Gold Nanoparticles. Angewandte Chemie, 2020, 132, 14437-14441.	2.0	6
67	Electrochemical Oscillatory Baffled Reactors Fabricated with Additive Manufacturing for Efficient Continuous-Flow Oxidations. ACS Sustainable Chemistry and Engineering, 2022, 10, 2388-2396.	6.7	6
68	Impact of ion solvation on charge transport through [Os(bpy)2 (H2tzt) Cl]+ in the solid state. Physical Chemistry Chemical Physics, 2004, 6, 3551.	2.8	5
69	Hydrogen Electrooxidation under Conditions of High Mass Transport in Room-Temperature Ionic Liquids and the Role of Underpotential-Deposited Hydrogen. Journal of Physical Chemistry C, 2016, 120, 11498-11507.	3.1	5
70	Electrocatalysis in Room Temperature Ionic Liquids. , 2015, , 483-506.		3
71	Conducting Polymer Nanocomposite-Based Supercapacitors. Springer Series on Polymer and Composite Materials, 2017, , 269-304.	0.7	2
72	An ultra-high vacuum electrochemical/mass spectrometry study of anodic decomposition of a protic ionic liquid. Electrochemistry Communications, 2018, 90, 111-115.	4.7	2

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73	Electrochemical reactivity of atomic and molecular species under solid-state confinement. Current Opinion in Electrochemistry, 2022, 34, 101014.	4.8	2
74	Ultramicroelectrode Voltammetry and Scanning Electrochemical Microscopy in Room Temperature Ionic Liquids. , 2015, , 113-141.		1
75	Electrocatalysis: Extremely Stable Platinumâ€Amorphous Carbon Electrocatalyst within Hollow Graphitized Carbon Nanofibers for the Oxygen Reduction Reaction (Adv. Mater. 41/2016). Advanced Materials, 2016, 28, 9231-9231.	21.0	1
76	Stabilization of Polyoxometalate Charge Carriers via Redoxâ€Driven Nanoconfinement in Singleâ€Walled Carbon Nanotubes. Angewandte Chemie, 2022, 134, .	2.0	1
77	Redox-active hierarchical assemblies of hybrid polyoxometalate nanostructures at carbon surfaces. Inorganic Chemistry Frontiers, 2022, 9, 1777-1784.	6.0	1
78	Understanding the Mg Cycling Mechanism on a MgTFSI-Glyme Electrolyte. ECS Meeting Abstracts, 2022, MA2022-01, 574-574.	0.0	1
79	Oxygen Reduction Pathways in the Li-O2 Battery: Understanding Solvent-Water Interactions. ECS Meeting Abstracts, 2020, MA2020-02, 492-492.	0.0	0
80	Best Practice for Evaluating Electrocatalysts for the Hydrogen Economy. ECS Meeting Abstracts, 2020, MA2020-02, 3677-3677.	0.0	0
81	Charge Carriers for Next-Generation Redox Flow Batteries. , 0, , .		0