

Debbie S Silvester

List of Publications by Citations

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94 papers	3,391 citations	28 h-index	56 g-index
100 ext. papers	3,722 ext. citations	4.8 avg, IF	5.62 L-index

#	Paper	IF	Citations
94	Effect of Water on the Electrochemical Window and Potential Limits of Room-Temperature Ionic Liquids. <i>Journal of Chemical & Engineering Data</i> , 2008 , 53, 2884-2891	2.8	421
93	Electrochemistry in Room Temperature Ionic Liquids: A Review and Some Possible Applications. <i>Zeitschrift Fur Physikalische Chemie</i> , 2006 , 220, 1247-1274	3.1	261
92	Voltammetry in room temperature ionic liquids: comparisons and contrasts with conventional electrochemical solvents. <i>Chemistry - an Asian Journal</i> , 2010 , 5, 202-30	4.5	259
91	Voltammetric Characterization of the Ferrocene Ferrocenium and Cobaltocenium Cobaltocene Redox Couples in RTILs. <i>Journal of Physical Chemistry C</i> , 2008 , 112, 2729-2735	3.8	210
90	Recent advances in the use of ionic liquids for electrochemical sensing. <i>Analyst, The</i> , 2011 , 136, 4871-82	5	199
89	Dynamic and static quenching of fluorescence by 1-4 nm diameter gold monolayer-protected clusters. <i>Journal of Physical Chemistry B</i> , 2006 , 110, 4637-44	3.4	116
88	Electrochemical reduction of nitrobenzene and 4-nitrophenol in the room temperature ionic liquid [C4dmim][N(Tf)2]. <i>Journal of Electroanalytical Chemistry</i> , 2006 , 596, 131-140	4.1	100
87	An electrochemical study of the oxidation of hydrogen at platinum electrodes in several room temperature ionic liquids. <i>Journal of Physical Chemistry B</i> , 2007 , 111, 5000-7	3.4	95
86	Electrochemical studies of gold and chloride in ionic liquids. <i>New Journal of Chemistry</i> , 2006 , 30, 1576-1583	3.8	91
85	The electrochemical oxidation of hydrogen at activated platinum electrodes in room temperature ionic liquids as solvents. <i>Journal of Electroanalytical Chemistry</i> , 2008 , 618, 53-60	4.1	73
84	Electrochemical oxidation of nitrite and the oxidation and reduction of NO ₂ in the room temperature ionic liquid [C2mim][NTf ₂]. <i>Journal of Physical Chemistry B</i> , 2007 , 111, 7778-85	3.4	63
83	Voltammetric Studies of Gold, Protons, and [HCl ₂] ⁻ in Ionic Liquids. <i>Journal of Physical Chemistry C</i> , 2007 , 111, 8496-8503	3.8	59
82	Electrochemical Kinetics of Ag Ag ⁺ and TMPD TMPD ⁺ in the Room-Temperature Ionic Liquid [C4mpyr][NTf ₂]; toward Optimizing Reference Electrodes for Voltammetry in RTILs. <i>Journal of Physical Chemistry C</i> , 2007 , 111, 13957-13966	3.8	59
81	Electrode Kinetic Studies of the Hydroquinone/Benzoquinone System and the Reaction between Hydroquinone and Ammonia in Propylene Carbonate: Application to the Indirect Electroanalytical Sensing of Ammonia. <i>Journal of Physical Chemistry C</i> , 2007 , 111, 1496-1504	3.8	50
80	Oxygen reduction voltammetry on platinum macrodisk and screen-printed electrodes in ionic liquids: Reaction of the electrogenerated superoxide species with compounds used in the paste of Pt screen-printed electrodes?. <i>Electrochimica Acta</i> , 2013 , 101, 158-168	6.7	47
79	Recent developments in the electrochemical detection of explosives: Towards field-deployable devices for forensic science. <i>TrAC - Trends in Analytical Chemistry</i> , 2017 , 97, 374-384	14.6	45
78	Electrooxidation of the Iodides [C4mim]I, LiI, NaI, KI, RbI, and CsI in the Room Temperature Ionic Liquid [C4mim][NTf ₂]. <i>Journal of Physical Chemistry C</i> , 2008 , 112, 6551-6557	3.8	45

77	Comparative study of screen printed electrodes for ammonia gas sensing in ionic liquids. <i>Electrochemistry Communications</i> , 2011 , 13, 1435-1438	5.1	44
76	Electroreduction of Sulfur Dioxide in Some Room-Temperature Ionic Liquids. <i>Journal of Physical Chemistry C</i> , 2008 , 112, 3398-3404	3.8	42
75	Using XPS to determine solute solubility in room temperature ionic liquids. <i>Analyst, The</i> , 2007 , 132, 196-8	3.8	42
74	The Electrochemical Reduction of Hydrogen Sulfide on Platinum in Several Room Temperature Ionic Liquids. <i>Journal of Physical Chemistry C</i> , 2008 , 112, 7725-7730	3.8	40
73	Electrochemical Ammonia Gas Sensing in Nonaqueous Systems: A Comparison of Propylene Carbonate with Room Temperature Ionic Liquids. <i>Electroanalysis</i> , 2007 , 19, 2194-2201	3	40
72	Coulometry on the Voltammetric Timescale: Microdisk Potential-Step Chronoamperometry in Aprotic Solvents Reliably Measures the Number of Electrons Transferred in an Electrode Process Simultaneously with the Diffusion Coefficients of the Electroactive Species. <i>Electroanalysis</i> , 2007 , 19, 11-22	3	39
71	Mechanistic Studies of the Electro-oxidation Pathway of Ammonia in Several Room-Temperature Ionic Liquids. <i>Journal of Physical Chemistry C</i> , 2007 , 111, 9562-9572	3.8	38
70	Detection of 2,4,6-Trinitrotoluene Using a Miniaturized, Disposable Electrochemical Sensor with an Ionic Liquid Gel-Polymer Electrolyte Film. <i>Analytical Chemistry</i> , 2017 , 89, 4729-4736	7.8	36
69	Electrochemical Reduction of Benzoic Acid and Substituted Benzoic Acids in Some Room Temperature Ionic Liquids. <i>Journal of Physical Chemistry C</i> , 2008 , 112, 12966-12973	3.8	34
68	The electrochemistry of simple inorganic molecules in room temperature ionic liquids. <i>Journal of the Brazilian Chemical Society</i> , 2008 , 19, 611-620	1.5	30
67	Oxidation of Several p-Phenylenediamines in Room Temperature Ionic Liquids: Estimation of Transport and Electrode Kinetic Parameters. <i>Journal of Physical Chemistry C</i> , 2008 , 112, 6993-7000	3.8	29
66	Mechanical polishing as an improved surface treatment for platinum screen-printed electrodes. <i>Sensing and Bio-Sensing Research</i> , 2016 , 9, 38-44	3.3	28
65	Towards improving the robustness of electrochemical gas sensors: impact of PMMA addition on the sensing of oxygen in an ionic liquid. <i>Analytical Methods</i> , 2015 , 7, 7327-7335	3.2	28
64	Synthesis, Photophysical and Electrochemical Investigation of Dinuclear Tetrazolato-Bridged Rhenium Complexes. <i>Organometallics</i> , 2012 , 31, 7566-7578	3.8	28
63	Synchrotron radiation/Fourier transform-infrared microspectroscopy study of undesirable water inclusions in solid-contact polymeric ion-selective electrodes. <i>Analytical Chemistry</i> , 2010 , 82, 6203-7	7.8	27
62	Ligand-Induced Structural, Photophysical, and Electrochemical Variations in Tricarbonyl Rhenium(I) Tetrazolato Complexes. <i>Organometallics</i> , 2013 , 32, 3728-3737	3.8	26
61	Array of water room temperature ionic liquid micro-interfaces. <i>Electrochemistry Communications</i> , 2011 , 13, 477-479	5.1	25
60	Achievement of Prolonged Oxygen Detection in Room-Temperature Ionic Liquids on Mechanically Polished Platinum Screen-Printed Electrodes. <i>Analytical Chemistry</i> , 2016 , 88, 5104-11	7.8	25

59	Fast responding hydrogen gas sensors using platinum nanoparticle modified microchannels and ionic liquids. <i>Analytica Chimica Acta</i> , 2019 , 1072, 35-45	6.6	23
58	Electroreduction of Chlorine Gas at Platinum Electrodes in Several Room Temperature Ionic Liquids: Evidence of Strong Adsorption on the Electrode Surface Revealed by Unusual Voltammetry in Which Currents Decrease with Increasing Voltage Scan Rates. <i>Journal of Physical Chemistry C</i> , 2008 , 112, 19477-19483	3.8	23
57	Direct electrochemistry of horseradish peroxidase immobilized in a chitosan-[C4mim][BF4] film: determination of electrode kinetic parameters. <i>Bioelectrochemistry</i> , 2008 , 74, 183-7	5.6	23
56	New innovations in ionic liquid-based miniaturised amperometric gas sensors. <i>Current Opinion in Electrochemistry</i> , 2019 , 15, 7-17	7.2	22
55	An electrochemical study of PCl ₃ and POCl ₃ in the room temperature ionic liquid [C4mpyr][N(Tf) ₂]. <i>Journal of Physical Chemistry B</i> , 2006 , 110, 22035-42	3.4	22
54	Detection of sub-ppm Concentrations of Ammonia in an Ionic Liquid: Enhanced Current Density Using "Filled" Recessed Microarrays. <i>Analytical Chemistry</i> , 2016 , 88, 12453-12460	7.8	21
53	Chronoamperometric response at nanoscale liquid-liquid interface arrays. <i>Electrochimica Acta</i> , 2013 , 101, 177-185	6.7	20
52	Electrochemical Behavior of Chlorine on Platinum Microdisk and Screen-Printed Electrodes in a Room Temperature Ionic Liquid. <i>Journal of Physical Chemistry C</i> , 2015 , 119, 23572-23579	3.8	19
51	A lithium iron phosphate reference electrode for ionic liquid electrolytes. <i>Electrochemistry Communications</i> , 2018 , 93, 148-151	5.1	19
50	Electrochemical Oxidation and Sensing of Methylamine Gas in Room Temperature Ionic Liquids. <i>Journal of Physical Chemistry C</i> , 2014 , 118, 19232-19237	3.8	19
49	Electrochemical Characterization of an Oleyl-coated Magnetite Nanoparticle-Modified Electrode. <i>ChemElectroChem</i> , 2014 , 1, 1211-1218	4.3	19
48	Redox Properties of a Rhenium Tetrazolato Complex in Room Temperature Ionic Liquids: Assessing the Applicability of the Stokes-Einstein Equation for a Metal Complex in Ionic Liquids. <i>Journal of Physical Chemistry C</i> , 2012 , 116, 7327-7333	3.8	19
47	The electrochemical oxidation and reduction of nitrate ions in the room temperature ionic liquid [C2mim][NTf ₂]; the latter behaves as a θ elt rather than an θ rganic solvent. <i>New Journal of Chemistry</i> , 2007 , 31, 966-972	3.6	19
46	Low-cost microarray thin-film electrodes with ionic liquid gel-polymer electrolytes for miniaturised oxygen sensing. <i>Analyst, The</i> , 2016 , 141, 3705-13	5	19
45	Comparison of Voltammetric Techniques for Ammonia Sensing in Ionic Liquids. <i>Electroanalysis</i> , 2018 , 30, 75-83	3	19
44	One-step assembly of Re(I) tricarbonyl 2-pyridyltetrazolato metallacalix[3]arene with aqua emission and reversible three-electron oxidation. <i>Dalton Transactions</i> , 2013 , 42, 8188-91	4.3	17
43	Sensors for highly toxic gases: methylamine and hydrogen chloride detection at low concentrations in an ionic liquid on Pt screen printed electrodes. <i>Sensors</i> , 2015 , 15, 26866-76	3.8	16
42	Electroreduction of 2,4,6-Trinitrotoluene in Room Temperature Ionic Liquids: Evidence of an EC ₂ Mechanism. <i>Journal of Physical Chemistry C</i> , 2016 , 120, 10997-11005	3.8	16

4 ¹	The Electrochemistry of Vitamin B12 in Ionic Liquids and Its Use in the Electrocatalytic Reduction of Vicinal Dibromoalkanes. <i>Electroanalysis</i> , 2006 , 18, 2263-2268	3	13
4 ⁰	Electrical Double Layer Structure in Ionic Liquids and Its Importance for Supercapacitor, Battery, Sensing, and Lubrication Applications. <i>Journal of Physical Chemistry C</i> , 2021 , 125, 13707-13720	3.8	13
39	Screen-Printed Graphite Electrodes as Low-Cost Devices for Oxygen Gas Detection in Room-Temperature Ionic Liquids. <i>Sensors</i> , 2017 , 17,	3.8	12
38	Electrodeposited Metal Organic Framework toward Excellent Hydrogen Sensing in an Ionic Liquid. <i>ACS Applied Nano Materials</i> , 2020 , 3, 4376-4385	5.6	11
37	Electrochemical studies of hydrogen chloride gas in several room temperature ionic liquids: mechanism and sensing. <i>Physical Chemistry Chemical Physics</i> , 2016 , 18, 2488-94	3.6	11
36	Preparation of platinum-based 'cauliflower microarrays' for enhanced ammonia gas sensing. <i>Analytica Chimica Acta</i> , 2019 , 1048, 12-21	6.6	11
35	Measuring the solubility of benzoic acid in room temperature ionic liquids using chronoamperometric techniques. <i>Journal of Physical Organic Chemistry</i> , 2009 , 22, 69-76	2.1	10
34	Effect of Humidity and Impurities on the Electrochemical Window of Ionic Liquids and Its Implications for Electroanalysis. <i>Journal of Physical Chemistry C</i> , 2020 , 124, 20309-20319	3.8	10
33	Thin films of poly(vinylidene fluoride-co-hexafluoropropylene)-ionic liquid mixtures as amperometric gas sensing materials for oxygen and ammonia. <i>Analyst, The</i> , 2020 , 145, 1915-1924	5	9
32	Macroporous platinum electrodes for hydrogen oxidation in ionic liquids. <i>Electrochemistry Communications</i> , 2018 , 86, 43-47	5.1	9
3 ¹	Electrochemical Synthesis of Highly Ordered Porous Al Scaffolds Melt-Infiltrated with LiBH ₄ for Hydrogen Storage. <i>Journal of the Electrochemical Society</i> , 2018 , 165, D37-D42	3.9	8
3 ⁰	Modification of Microelectrode Arrays with High Surface Area Dendritic Platinum 3D Structures: Enhanced Sensitivity for Oxygen Detection in Ionic Liquids. <i>Nanomaterials</i> , 2018 , 8,	5.4	8
29	Formation of 3-Dimensional Gold, Copper and Palladium Microelectrode Arrays for Enhanced Electrochemical Sensing Applications. <i>Nanomaterials</i> , 2019 , 9,	5.4	7
28	Effect of Ionic Liquid Structure on the Oxygen Reduction Reaction Under Humidified Conditions. <i>Journal of Physical Chemistry C</i> , 2019 , 123, 10727-10737	3.8	7
27	Molten metal closo-borate solvates. <i>Chemical Communications</i> , 2019 , 55, 3410-3413	5.8	7
26	Void-Assisted Ion-Paired Proton Transfer at Water-Ionic Liquid Interfaces. <i>Angewandte Chemie - International Edition</i> , 2015 , 54, 14903-6	16.4	7
25	Experimental Evidence of Long-Lived Electric Fields of Ionic Liquid Bilayers. <i>Journal of the American Chemical Society</i> , 2021 , 143, 17431-17440	16.4	7
24	Ionic Liquid-based Microchannels for Highly Sensitive and Fast Amperometric Detection of Toxic Gases. <i>Electroanalysis</i> , 2019 , 31, 66-74	3	7

23	Diverse morphologies of zinc oxide nanoparticles and their electrocatalytic performance in hydrogen production. <i>Journal of Energy Chemistry</i> , 2021 , 56, 162-170	12	7
22	Electrochemical Reduction of 2,4-Dinitrotoluene in Room Temperature Ionic Liquids: A Mechanistic Investigation. <i>Australian Journal of Chemistry</i> , 2018 , 71, 818	1.2	7
21	Highly efficient re-cycle/generation of LiCoO cathode assisted by 2-naphthalenesulfonic acid. <i>Journal of Hazardous Materials</i> , 2021 , 416, 126114	12.8	7
20	A methodology to detect explosive residues using a gelled ionic liquid based field-deployable electrochemical device. <i>Journal of Electroanalytical Chemistry</i> , 2020 , 872, 114046	4.1	6
19	Behavior of lysozyme at the electrified water/room temperature ionic liquid interface. <i>Chemistry - an Asian Journal</i> , 2012 , 7, 2559-61	4.5	6
18	Electrochemical Detection of Explosive Compounds in an Ionic Liquid in Mixed Environments: Influence of Oxygen, Moisture, and Other Nitroaromatics on the Sensing Response. <i>Australian Journal of Chemistry</i> , 2019 , 72, 122	1.2	6
17	Detection of sulfur dioxide at low parts-per-million concentrations using low-cost planar electrodes with ionic liquid electrolytes. <i>Analytica Chimica Acta</i> , 2020 , 1124, 156-165	6.6	5
16	Zinc Oxide Nanoparticles as Antifouling Materials for the Electrochemical Detection of Methylparaben. <i>ChemElectroChem</i> , 2021 , 8, 187-194	4.3	4
15	Assessing ion-exchange properties and purity of lipophilic electrolytes by potentiometry and spectrophotometry. <i>Electrochemistry Communications</i> , 2010 , 12, 110-113	5.1	3
14	Emerging Ionic Polymers for CO ₂ Conversion to Cyclic Carbonates: An Overview of Recent Developments*. <i>Australian Journal of Chemistry</i> , 2021 ,	1.2	3
13	Interrogation of the Effect of Polymorphism of a Metal-Organic Framework Host on the Structure of Embedded Pd Guest Nanoparticles. <i>ChemPhysChem</i> , 2019 , 20, 745-751	3.2	3
12	Technical Aspects	287-351	3
11	Potentiometric determination of coextraction constants of potassium salts in ion-selective electrodes utilizing a nitrobenzene liquid membrane phase. <i>Analytica Chimica Acta</i> , 2010 , 683, 92-5	6.6	2
10	Ionic liquid/poly(ionic liquid) membranes as non-flowing, conductive materials for electrochemical gas sensing.. <i>Analytica Chimica Acta</i> , 2022 , 1195, 339414	6.6	2
9	Chapter 10:Electrochemical Detection Using Ionic Liquids. <i>RSC Detection Science</i> , 2015 , 341-386	0.4	2
8	Phase-Controllable Cobalt Phosphides Induced through Hydrogel for Higher Lithium Storages. <i>Inorganic Chemistry</i> , 2020 , 59, 6471-6480	5.1	2
7	Liquid Alloying Na-K for Sodium Metal Anodes. <i>Journal of Physical Chemistry Letters</i> , 2021 , 12, 9321-9327	6.4	2
6	Ionophore-Assisted Electrochemistry of Neutral Molecules: Oxidation of Hydrogen in an Ionic Liquid Electrolyte. <i>Journal of Physical Chemistry Letters</i> , 2019 , 10, 6910-6914	6.4	1

5	Void-Assisted Ion-Paired Proton Transfer at Water/Ionic Liquid Interfaces. <i>Angewandte Chemie</i> , 2015 , 127, 15116-15119	3.6	1
4	Effect of microelectrode array spacing on the growth of platinum electrodeposits and its implications for oxygen sensing in ionic liquids. <i>Electrochimica Acta</i> , 2021 , 384, 138412	6.7	1
3	Ionic liquid Gel Polymer Electrolytes for Flexible Supercapacitors: Challenges and Prospects. <i>Current Opinion in Electrochemistry</i> , 2022 , 101046	7.2	1
2	Nanostructure, electrochemistry and potential-dependent lubricity of the catanionic surface-active ionic liquid [P] [AOT]. <i>Journal of Colloid and Interface Science</i> , 2021 , 608, 2120-2130	9.3	0
1	Comparison of Hydrothermally-Grown vs Electrodeposited Cobalt Sulfide Nanostructures as Modified Electrodes for Oxygen Evolution and Electrochemical Sensing Applications. <i>Journal of the Electrochemical Society</i> , 2022 , 169, 056505	3.9	