

Debbie S Silvester

List of Publications by Year in descending order

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papers

4,091
citations

147801

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h-index

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100
all docs

100
docs citations

100
times ranked

4272
citing authors

#	ARTICLE	IF	CITATIONS
1	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.	1.9	486
2	Electrochemistry in Room Temperature Ionic Liquids: A Review and Some Possible Applications. <i>Zeitschrift Fur Physikalische Chemie</i> , 2006, 220, 1247-1274.	2.8	286
3	Voltammetry in Room Temperature Ionic Liquids: Comparisons and Contrasts with Conventional Electrochemical Solvents.. <i>Chemistry - an Asian Journal</i> , 2010, 5, 202-230.	3.3	280
4	Recent advances in the use of ionic liquids for electrochemical sensing. <i>Analyst, The</i> , 2011, 136, 4871.	3.5	241
5	Voltammetric Characterization of the Ferrocene Ferrocenium and Cobaltocenium Cobaltocene Redox Couples in RTILs. <i>Journal of Physical Chemistry C</i> , 2008, 112, 2729-2735.	3.1	228
6	Dynamic and Static Quenching of Fluorescence by 1 μ m Diameter Gold Monolayer-Protected Clusters. <i>Journal of Physical Chemistry B</i> , 2006, 110, 4637-4644.	2.6	118
7	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.	3.8	111
8	Electrochemical studies of gold and chloride in ionic liquids. <i>New Journal of Chemistry</i> , 2006, 30, 1576-1583.	2.8	103
9	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, 5000-5007.	2.6	102
10	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.	3.8	82
11	Electrochemical Oxidation of Nitrite and the Oxidation and Reduction of NO ₂ in the Room Temperature Ionic Liquid [C2mim][NTf2]. <i>Journal of Physical Chemistry B</i> , 2007, 111, 7778-7785.	2.6	72
12	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.	11.4	65
13	Voltammetric Studies of Gold, Protons, and [HCl ₂]-in Ionic Liquids. <i>Journal of Physical Chemistry C</i> , 2007, 111, 8496-8503.	3.1	63
14	Electrochemical Kinetics of Ag Ag ⁺ and TMPD TMPD+ in the Room-Temperature Ionic Liquid [C4mpyr][NTf2]; toward Optimizing Reference Electrodes for Voltammetry in RTILs. <i>Journal of Physical Chemistry C</i> , 2007, 111, 13957-13966.	3.1	62
15	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.	3.1	57
16	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.	3.1	56
17	Comparative study of screen printed electrodes for ammonia gas sensing in ionic liquids. <i>Electrochemistry Communications</i> , 2011, 13, 1435-1438.	4.7	53
18	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.	5.2	53

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19	Electrooxidation of the Iodides [C ₄ mim], Lil, Nal, Kl, Rbl, and Csl in the Room Temperature Ionic Liquid [C ₄ mim][NTf ₂]. Journal of Physical Chemistry C, 2008, 112, 6551-6557.	3.1	50
20	Electrochemical Ammonia Gas Sensing in Nonaqueous Systems: A Comparison of Propylene Carbonate with Room Temperature Ionic Liquids. Electroanalysis, 2007, 19, 2194-2201.	2.9	48
21	Electroreduction of Sulfur Dioxide in Some Room-Temperature Ionic Liquids. Journal of Physical Chemistry C, 2008, 112, 3398-3404.	3.1	47
22	The Electrochemical Reduction of Hydrogen Sulfide on Platinum in Several Room Temperature Ionic Liquids. Journal of Physical Chemistry C, 2008, 112, 7725-7730.	3.1	46
23	Using XPS to determine solute solubility in room temperature ionic liquids. Analyst, The, 2007, 132, 196.	3.5	45
24	Detection of 2,4,6-Trinitrotoluene Using a Miniaturized, Disposable Electrochemical Sensor with an Ionic Liquid Gel-Polymer Electrolyte Film. Analytical Chemistry, 2017, 89, 4729-4736.	6.5	45
25	Mechanistic Studies of the Electro-oxidation Pathway of Ammonia in Several Room-Temperature Ionic Liquids. Journal of Physical Chemistry C, 2007, 111, 9562-9572.	3.1	39
26	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. Electroanalysis, 2007, 19, 11-22.	2.9	39
27	New innovations in ionic liquid-based miniaturised amperometric gas sensors. Current Opinion in Electrochemistry, 2019, 15, 7-17.	4.8	39
28	Electrochemical Reduction of Benzoic Acid and Substituted Benzoic Acids in Some Room Temperature Ionic Liquids. Journal of Physical Chemistry C, 2008, 112, 12966-12973.	3.1	38
29	Mechanical polishing as an improved surface treatment for platinum screen-printed electrodes. Sensing and Bio-Sensing Research, 2016, 9, 38-44.	4.2	37
30	The electrochemistry of simple inorganic molecules in room temperature ionic liquids. Journal of the Brazilian Chemical Society, 2008, 19, 611-620.	0.6	34
31	Oxidation of Several p-Phenylenediamines in Room Temperature Ionic Liquids: Estimation of Transport and Electrode Kinetic Parameters. Journal of Physical Chemistry C, 2008, 112, 6993-7000.	3.1	32
32	Towards improving the robustness of electrochemical gas sensors: impact of PMMA addition on the sensing of oxygen in an ionic liquid. Analytical Methods, 2015, 7, 7327-7335.	2.7	32
33	Synthesis, Photophysical and Electrochemical Investigation of Dinuclear Tetrazolato-Bridged Rhenium Complexes. Organometallics, 2012, 31, 7566-7578.	2.3	31
34	Detection of sub-ppm Concentrations of Ammonia in an Ionic Liquid: Enhanced Current Density Using Filled-Recessed Microarrays. Analytical Chemistry, 2016, 88, 12453-12460.	6.5	31
35	Comparison of Voltammetric Techniques for Ammonia Sensing in Ionic Liquids. Electroanalysis, 2018, 30, 75-83.	2.9	31
36	Fast responding hydrogen gas sensors using platinum nanoparticle modified microchannels and ionic liquids. Analytica Chimica Acta, 2019, 1072, 35-45.	5.4	31

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37	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.	3.1	31
38	Experimental Evidence of Long-Lived Electric Fields of Ionic Liquid Bilayers. <i>Journal of the American Chemical Society</i> , 2021, 143, 17431-17440.	13.7	31
39	Ligand-Induced Structural, Photophysical, and Electrochemical Variations in Tricarbonyl Rhenium(I) Tetrazolato Complexes. <i>Organometallics</i> , 2013, 32, 3728-3737.	2.3	29
40	Achievement of Prolonged Oxygen Detection in Room-Temperature Ionic Liquids on Mechanically Polished Platinum Screen-Printed Electrodes. <i>Analytical Chemistry</i> , 2016, 88, 5104-5111.	6.5	29
41	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.	3.1	28
42	Synchrotron Radiation/Fourier Transform-Infrared Microspectroscopy Study of Undesirable Water Inclusions in Solid-Contact Polymeric Ion-Selective Electrodes. <i>Analytical Chemistry</i> , 2010, 82, 6203-6207.	6.5	27
43	Array of water room temperature ionic liquid micro-interfaces. <i>Electrochemistry Communications</i> , 2011, 13, 477-479.	4.7	27
44	A lithium iron phosphate reference electrode for ionic liquid electrolytes. <i>Electrochemistry Communications</i> , 2018, 93, 148-151.	4.7	26
45	The electrochemical oxidation and reduction of nitrate ions in the room temperature ionic liquid [C2mim][NTf2]; the latter behaves as a "melt" rather than an "organic solvent". <i>New Journal of Chemistry</i> , 2007, 31, 966-972.	2.8	25
46	Direct electrochemistry of horseradish peroxidase immobilized in a chitosan/[C4mim][BF4] film: Determination of electrode kinetic parameters. <i>Bioelectrochemistry</i> , 2008, 74, 183-187.	4.6	25
47	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.	3.1	25
48	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, 26866-26876.	3.8	24
49	Electrodeposited Metal Organic Framework toward Excellent Hydrogen Sensing in an Ionic Liquid. <i>ACS Applied Nano Materials</i> , 2020, 3, 4376-4385.	5.0	24
50	An Electrochemical Study of PCl3 and POCl3 in the Room Temperature Ionic Liquid [C4mpyr][N(Tf)2]. <i>Journal of Physical Chemistry B</i> , 2006, 110, 22035-22042.	2.6	23
51	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.	3.1	23
52	Low-cost microarray thin-film electrodes with ionic liquid gel-polymer electrolytes for miniaturised oxygen sensing. <i>Analyst</i> , 2016, 141, 3705-3713.	3.5	23
53	Electrochemical Oxidation and Sensing of Methylamine Gas in Room Temperature Ionic Liquids. <i>Journal of Physical Chemistry C</i> , 2014, 118, 19232-19237.	3.1	22
54	Electrochemical Characterization of an Oleyl-coated Magnetite Nanoparticle-Modified Electrode. <i>ChemElectroChem</i> , 2014, 1, 1211-1218.	3.4	22

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55	Ionic liquid gel polymer electrolytes for flexible supercapacitors: Challenges and prospects. <i>Current Opinion in Electrochemistry</i> , 2022, 35, 101046.	4.8	22
56	Chronoamperometric response at nanoscale liquid-liquid interface arrays. <i>Electrochimica Acta</i> , 2013, 101, 177-185.	5.2	21
57	Electroreduction of 2,4,6-Trinitrotoluene in Room Temperature Ionic Liquids: Evidence of an EC Mechanism. <i>Journal of Physical Chemistry C</i> , 2016, 120, 10997-11005.	3.1	21
58	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.	3.3	19
59	Diverse morphologies of zinc oxide nanoparticles and their electrocatalytic performance in hydrogen production. <i>Journal of Energy Chemistry</i> , 2021, 56, 162-170.	12.9	18
60	Thin films of poly(vinylidene fluoride-co-hexafluoropropylene)-ionic liquid mixtures as amperometric gas sensing materials for oxygen and ammonia. <i>Analyst</i> , 2020, 145, 1915-1924.	3.5	17
61	Zinc Oxide Nanoparticles as Antifouling Materials for the Electrochemical Detection of Methylparaben. <i>ChemElectroChem</i> , 2021, 8, 187-194.	3.4	17
62	Preparation of platinum-based 'cauliflower microarrays'™ for enhanced ammonia gas sensing. <i>Analytica Chimica Acta</i> , 2019, 1048, 12-21.	5.4	16
63	Highly efficient re-cycle/generation of LiCoO ₂ cathode assisted by 2-naphthalenesulfonic acid. <i>Journal of Hazardous Materials</i> , 2021, 416, 126114.	12.4	16
64	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.	2.9	15
65	Screen-Printed Graphite Electrodes as Low-Cost Devices for Oxygen Gas Detection in Room-Temperature Ionic Liquids. <i>Sensors</i> , 2017, 17, 2734.	3.8	15
66	Molten metal borate solvates. <i>Chemical Communications</i> , 2019, 55, 3410-3413.	4.1	12
67	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.	1.9	11
68	Electrochemical studies of hydrogen chloride gas in several room temperature ionic liquids: mechanism and sensing. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 2488-2494.	2.8	11
69	Macroporous platinum electrodes for hydrogen oxidation in ionic liquids. <i>Electrochemistry Communications</i> , 2018, 86, 43-47.	4.7	11
70	Effect of Ionic Liquid Structure on the Oxygen Reduction Reaction Under Humidified Conditions. <i>Journal of Physical Chemistry C</i> , 2019, 123, 10727-10737.	3.1	11
71	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.	5.4	11
72	Emerging Ionic Polymers for CO. <i>Australian Journal of Chemistry</i> , 2021, 74, 767-777.	0.9	11

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73	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, 735.	4.1	10
74	Ionic Liquid-based Microchannels for Highly Sensitive and Fast Amperometric Detection of Toxic Gases. <i>Electroanalysis</i> , 2019, 31, 66-74.	2.9	10
75	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.	3.8	10
76	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.	2.9	9
77	Formation of 3-Dimensional Gold, Copper and Palladium Microelectrode Arrays for Enhanced Electrochemical Sensing Applications. <i>Nanomaterials</i> , 2019, 9, 1170.	4.1	9
78	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.	0.9	9
79	Liquid Alloying Na-K for Sodium Metal Anodes. <i>Journal of Physical Chemistry Letters</i> , 2021, 12, 9321-9327.	4.6	9
80	Void-Assisted Ion-Paired Proton Transfer at Water-Ionic Liquid Interfaces. <i>Angewandte Chemie - International Edition</i> , 2015, 54, 14903-14906.	13.8	8
81	Electrochemical Reduction of 2,4-Dinitrotoluene in Room Temperature Ionic Liquids: A Mechanistic Investigation. <i>Australian Journal of Chemistry</i> , 2018, 71, 818.	0.9	8
82	Nanostructure, electrochemistry and potential-dependent lubricity of the catanionic surface-active ionic liquid [P6,6,6,14] [AOT]. <i>Journal of Colloid and Interface Science</i> , 2022, 608, 2120-2130.	9.4	8
83	Behavior of Lysozyme at the Electrified Water/Room Temperature Ionic Liquid Interface. <i>Chemistry - an Asian Journal</i> , 2012, 7, 2559-2561.	3.3	6
84	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.	2.1	6
85	Ionic liquid/poly(ionic liquid) membranes as non-flowing, conductive materials for electrochemical gas sensing. <i>Analytica Chimica Acta</i> , 2022, 1195, 339414.	5.4	6
86	Examining the Electrochemical Nature of an Ionogel Based on the Ionic Liquid [P66614][TFSI] and TiO_2 : Synthesis, Characterization, and Quantum Chemical Calculations. <i>Industrial & Engineering Chemistry Research</i> , 2022, 61, 8763-8774.	3.7	5
87	Phase-Controllable Cobalt Phosphides Induced through Hydrogel for Higher Lithium Storages. <i>Inorganic Chemistry</i> , 2020, 59, 6471-6480.	4.0	4
88	Assessing ion-exchange properties and purity of lipophilic electrolytes by potentiometry and spectrophotometry. <i>Electrochemistry Communications</i> , 2010, 12, 110-113.	4.7	3
89	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, 92-95.	5.4	3
90	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.	5.2	3

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91	Technical Aspects. , 0, , 287-351.		3
92	Electrochemical Properties of a Verdazyl Radical in Room Temperature Ionic Liquids. Australian Journal of Chemistry, 2020, , .	0.9	3
93	Hydrogen-Bonding 2D Coordination Polymer for Enzyme-Free Electrochemical Glucose Sensing. CrystEngComm, 0, , .	2.6	3
94	Electrochemical Detection Using Ionic Liquids. RSC Detection Science, 2015, , 341-386.	0.0	2
95	Void-Assisted Ion-Paired Proton Transfer at Water-Ionic Liquid Interfaces. Angewandte Chemie, 2015, 127, 15116-15119.	2.0	1
96	Ionophore-Assisted Electrochemistry of Neutral Molecules: Oxidation of Hydrogen in an Ionic Liquid Electrolyte. Journal of Physical Chemistry Letters, 2019, 10, 6910-6914.	4.6	1
97	Comparison of Hydrothermally-Grown vs Electrodeposited Cobalt Sulfide Nanostructures as Modified Electrodes for Oxygen Evolution and Electrochemical Sensing Applications. Journal of the Electrochemical Society, 2022, 169, 056505.	2.9	0