Karl S Ryder

List of Publications by Year in Descending Order

140 papers	10,140 citations	43 h-index	100 g-index
154 ext. papers	12,025 ext. citations	5.5 avg, IF	6.61 L-index

#	Paper	IF	Citations
140	Catalytic dissolution of metals from printed circuit boards using a calcium chloride based deep eutectic solvent. *Green Chemistry*, **2022**, 24, 3023-3034	10	1
139	A comparative study of the formation, and ion and solvent transport of polyaniline in protic liquid-based deep eutectic solvents and aqueous solutions using EQCM. *Electrochimica Acta*, **2022**, 140348	6.7	2
138	Lithium ion battery recycling using high-intensity ultrasonication. *Green Chemistry*, **2021**, 23, 4710-4715	10	13
137	Amidine-based ionic liquid analogues with AlCl: a credible new electrolyte for rechargeable Al batteries. *Chemical Communications*, **2021**, 57, 9834-9837	5.8	1
136	Effect of solute polarity on extraction efficiency using deep eutectic solvents. *Green Chemistry*, **2021**, 23, 5097-5105	10	14
135	Highly Efficient Defluoridation of Water through Reusable poly(aniline-co-o-aminophenol) Copolymer Modified Electrode Using Electrochemical Quartz Crystal Microbalance. *Journal of the Electrochemical Society*, **2021**, 168, 022502	3.9	2
134	Electrogravimetric analysis of poly(aniline-co-o-toluidine) copolymer films in the presence of fluoride ions. *Journal of Electroanalytical Chemistry*, **2021**, 895, 115519	4.1	
133	Influence of different concentrations of nicotinic acid on the electrochemical fabrication of copper film from an ionic liquid based on the complexation of choline chloride-ethylene glycol. *Journal of Electroanalytical Chemistry*, **2021**, 897, 115581	4.1	1
132	Corrosion of iron, nickel and aluminium in deep eutectic solvents. *Electrochimica Acta*, **2021**, 397, 139284	6.7	3
131	Experimental Visualization of Commercial Lithium Ion Battery Cathodes: Distinguishing Between the Microstructure Components Using Atomic Force Microscopy. *Journal of Physical Chemistry C*, **2020**, 124, 14622-14631	3.8	4
130	Evidence supporting an emulsion polymerisation mechanism for the formation of polyaniline. *Electrochimica Acta*, **2020**, 354, 136737	6.7	11
129	Gamma-phase Zn-Ni alloy deposition by pulse-electroplating from a modified deep eutectic solution. *Surface and Coatings Technology*, **2020**, 403, 126434	4.4	4
128	The importance of design in lithium ion battery recycling – a critical review. *Green Chemistry*, **2020**, 22, 7585-7603	10	62
127	Effects of additives on the electrodeposition of ZnSn alloys from choline chloride/ethylene glycol-based deep eutectic solvent. *Journal of Electroanalytical Chemistry*, **2020**, 874, 114517	4.1	8
126	Separation of iron(iii), zinc(ii) and lead(ii) from a choline chloride-ethylene glycol deep eutectic solvent by solvent extraction.. *RSC Advances*, **2020**, 10, 33161-33170	3.7	12
125	Influence of additives on the electrodeposition of zinc from a deep eutectic solvent. *Electrochimica Acta*, **2019**, 304, 118-130	6.7	47
124	Effect of water on the electrodeposition of copper on nickel in deep eutectic solvents. *Transactions of the Institute of Metal Finishing*, **2019**, 97, 321-329	1.3	16

123	Chapter 10:Environmentally Sustainable Solvent-based Process Chemistry for Metals in Printed Circuit Boards. *Issues in Environmental Science and Technology*, **2019**, 278-312	0.7	1
122	Recycling lithium-ion batteries from electric vehicles. *Nature*, **2019**, 575, 75-86	50.4	735
121	Shifting Desulfurization Equilibria in Ionic Liquid/Oil Mixtures. *Energy & Fuels*, **2019**, 33, 1106-1113	4.1	6
120	Effect of electrochemical control function on the internal structure and composition of electrodeposited polypyrrole films: A neutron reflectometry study. *Electrochimica Acta*, **2019**, 295, 978-988	6.7	5
119	Redox fusion of metal particles using deep eutectic solvents. *Chemical Communications*, **2018**, 54, 3049-3052	6.1	6
118	Electrochemical deposition of silver and copper from a deep eutectic solvent studied using time-resolved neutron reflectivity. *Journal of Electroanalytical Chemistry*, **2018**, 819, 511-523	4.1	10
117	Brønsted acidity in deep eutectic solvents and ionic liquids. *Faraday Discussions*, **2018**, 206, 365-377	3.6	47
116	Real-time in situ dynamic sub-surface imaging of multi-component electrodeposited films using event mode neutron reflectivity. *Faraday Discussions*, **2018**, 210, 429-449	3.6	5
115	Electropolishing of nickel and cobalt in deep eutectic solvents. *Transactions of the Institute of Metal Finishing*, **2018**, 96, 200-205	1.3	26
114	Study of silver electrodeposition in deep eutectic solvents using atomic force microscopy. *Transactions of the Institute of Metal Finishing*, **2018**, 96, 297-303	1.3	7
113	Bright metal coatings from sustainable electrolytes: the effect of molecular additives on electrodeposition of nickel from a deep eutectic solvent. *Physical Chemistry Chemical Physics*, **2017**, 19, 3219-3231	3.6	46
112	Plating Protocols **2017**, 469-482		
111	Technical Aspects **2017**, 401-468		1
110	Synthesis of Ionic Liquids **2017**, 17-53		2
109	Thermodynamics of phase transfer for polar molecules from alkanes to deep eutectic solvents. *Fluid Phase Equilibria*, **2017**, 448, 99-104	2.5	42
108	Liquid pharmaceuticals formulation by eutectic formation. *Fluid Phase Equilibria*, **2017**, 448, 2-8	2.5	64
107	Electropolishing and electrolytic etching of Ni-based HIP consolidated aerospace forms: a comparison between deep eutectic solvents and aqueous electrolytes. *Transactions of the Institute of Metal Finishing*, **2017**, 95, 137-146	1.3	15
106	Fundamental aspects of electrochemically controlled wetting of nanoscale composite materials. *Faraday Discussions*, **2017**, 199, 75-99	3.6	18

105	Lubrication studies of some type III deep eutectic solvents (DESs) **2017**,		7
104	Electrochemical deposition of bismuth telluride thick layers onto nickel. *Electrochemistry Communications*, **2016**, 66, 1-4	5.1	16
103	Quantitative, In Situ Visualization of Metal-Ion Dissolution and Transport Using 1H Magnetic Resonance Imaging. *Angewandte Chemie*, **2016**, 128, 9540-9543	3.6	1
102	Quantitative, In Situ Visualization of Metal-Ion Dissolution and Transport Using (1) H Magnetic Resonance Imaging. *Angewandte Chemie - International Edition*, **2016**, 55, 9394-7	16.4	25
101	Electrodeposition of copper□in alloys using deep eutectic solvents. *Transactions of the Institute of Metal Finishing*, **2016**, 94, 104-113	1.3	40
100	A Comparative Study of Nickel Electrodeposition Using Deep Eutectic Solvents and Aqueous Solutions. *Electrochimica Acta*, **2015**, 176, 718-726	6.7	106
99	Electrochemistry and speciation of Au(+) in a deep eutectic solvent: growth and morphology of galvanic immersion coatings. *Physical Chemistry Chemical Physics*, **2015**, 17, 30540-50	3.6	17
98	Anodic dissolution of metals in ionic liquids. *Progress in Natural Science: Materials International*, **2015**, 25, 595-602	3.6	77
97	Pyridine imines as ligands in luminescent iridium complexes. *Dalton Transactions*, **2014**, 43, 4026-39	4.3	19
96	Aluminium electrodeposition under ambient conditions. *Physical Chemistry Chemical Physics*, **2014**, 16, 14675-81	3.6	108
95	Speciation, physical and electrolytic properties of eutectic mixtures based on CrCl□6H□O and urea. *Physical Chemistry Chemical Physics*, **2014**, 16, 9047-55	3.6	91
94	Deep eutectic solvents (DESs) and their applications. *Chemical Reviews*, **2014**, 114, 11060-82	68.1	2938
93	Evaluating water miscible deep eutectic solvents (DESs) and ionic liquids as potential lubricants. *Green Chemistry*, **2014**, 16, 4156-4161	10	105
92	EXAFS study into the speciation of metal salts dissolved in ionic liquids and deep eutectic solvents. *Inorganic Chemistry*, **2014**, 53, 6280-8	5.1	119
91	Removal of casting defects from CMSX-4□ and CMSX-10□ alloys by electropolishing in a novel electrolyte; Deep Eutectic Solvent. *MATEC Web of Conferences*, **2014**, 14, 13007	0.3	2
90	Electrochemical and transport properties of ethaline containing copper and tin chloride. *Transactions of the Institute of Metal Finishing*, **2014**, 92, 41-46	1.3	19
89	High cycling stability of zinc-anode/conducting polymer rechargeable battery with non-aqueous electrolyte. *Journal of Power Sources*, **2014**, 248, 1099-1104	8.9	72
88	Application of the combined electrochemical quartz crystal microbalance and probe beam deflection technique in deep eutectic solvents. *Electrochimica Acta*, **2014**, 135, 42-51	6.7	25

87	Nanoscale control of interfacial processes for latent fingerprint enhancement. *Faraday Discussions*, **2013**, 164, 391-410	3.6	14
86	Ion transfer dynamics of poly(3,4-ethylenedioxythiophene) films in deep eutectic solvents. *Electrochimica Acta*, **2013**, 110, 418-427	6.7	11
85	Electroplating Using Ionic Liquids. *Annual Review of Materials Research*, **2013**, 43, 335-358	12.8	186
84	In situ electrochemical digital holographic microscopy; a study of metal electrodeposition in deep eutectic solvents. *Analytical Chemistry*, **2013**, 85, 6653-60	7.8	32
83	Ligand exchange in ionic systems and its effect on silver nucleation and growth. *Physical Chemistry Chemical Physics*, **2013**, 15, 17314-23	3.6	25
82	Mechanism for Formation of Surface Scale during Directional Solidification of Ni-Base Superalloys. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2012**, 43, 1288-1302	2.3	21
81	The electrodeposition of silver composites using deep eutectic solvents. *Physical Chemistry Chemical Physics*, **2012**, 14, 2443-9	3.6	129
80	Salt modified starch: sustainable, recyclable plastics. *Green Chemistry*, **2012**, 14, 1302	10	55
79	Advanced surface protection for improved reliability PCB systems (ASPIS). *Circuit World*, **2012**, 38, 21-29	0.7	10
78	Ion Transfer Mechanisms Accompanying p-Doping of Poly(3,4-Ethylenedioxythiophene) Films in Deep Eutectic Solvents. *Zeitschrift Fur Physikalische Chemie*, **2012**, 226, 1049-1068	3.1	10
77	Electrolytic processing of superalloy aerospace castings using choline chloride-based ionic liquids. *Transactions of the Institute of Metal Finishing*, **2012**, 90, 9-14	1.3	25
76	Ionic Liquids: Potential Electrolytes for Electrochemical Applications. *International Journal of Electrochemistry*, **2012**, 2012, 1-2	2.4	3
75	Analysis of surface scale on the Ni-based superalloy CMSX-10N and proposed mechanism of formation. *IOP Conference Series: Materials Science and Engineering*, **2012**, 27, 012038	0.4	3
74	Glycerol eutectics as sustainable solvent systems. *Green Chemistry*, **2011**, 13, 82-90	10	539
73	Ionometallurgy: designer redox properties for metal processing. *Chemical Communications*, **2011**, 47, 10031-3	5.8	106
72	Processing of metals and metal oxides using ionic liquids. *Green Chemistry*, **2011**, 13, 471	10	247
71	Double layer effects on metal nucleation in deep eutectic solvents. *Physical Chemistry Chemical Physics*, **2011**, 13, 10224-31	3.6	113
70	Tuning emission wavelength and redox properties through position of the substituent in iridium(III) cyclometallated complexes. *Dalton Transactions*, **2011**, 40, 1028-30	4.3	53

69	Do all ionic liquids need organic cations? Characterisation of [AlCl2•nAmide]+ AlCl4(-) and comparison with imidazolium based systems. *Chemical Communications*, **2011**, 47, 3523-5	5.8	159
68	The effect of additives on zinc electrodeposition from deep eutectic solvents. *Electrochimica Acta*, **2011**, 56, 5272-5279	6.7	154
67	Pilot trials of immersion silver deposition using a choline chloride based ionic liquid. *Circuit World*, **2010**, 36, 3-9	0.7	18
66	Metal finishing with ionic liquids: scale-up and pilot plants from IONMET consortium. *Transactions of the Institute of Metal Finishing*, **2010**, 88, 285-293	1.3	26
65	Double layer, diluent and anode effects upon the electrodeposition of aluminium from chloroaluminate based ionic liquids. *Physical Chemistry Chemical Physics*, **2010**, 12, 1862-72	3.6	79
64	Structure and dynamics of phospholipid bilayer films under electrochemical control. *Faraday Discussions*, **2010**, 145, 357-379	3.6	22
63	Lubrication of Steel/Steel Contacts by Choline Chloride Ionic Liquids. *Tribology Letters*, **2010**, 37, 103-110	2.8	55
62	Electrolytic deposition of Zn coatings from ionic liquids based on choline chloride. *Transactions of the Institute of Metal Finishing*, **2009**, 87, 201-207	1.3	76
61	Metal chelation and spatial profiling of components in crown ether functionalised conducting copolymer films. *Electrochimica Acta*, **2009**, 55, 439-450	6.7	7
60	Electrolytic Metal Coatings and Metal Finishing Using Ionic Liquids. *ECS Transactions*, **2009**, 16, 47-63	1	17
59	Use of neutron reflectivity to measure the dynamics of solvation and structural changes in polyvinylferrocene films during electrochemically controlled redox cycling. *Langmuir*, **2009**, 25, 4093-103	4	27
58	Time resolved in situ liquid atomic force microscopy and simultaneous acoustic impedance electrochemical quartz crystal microbalance measurements: a study of Zn deposition. *Analytical Chemistry*, **2009**, 81, 8466-71	7.8	42
57	Nanogravimetric observation of unexpected ion exchange characteristics for polypyrrole film p-doping in a deep eutectic ionic liquid. *Chemical Communications*, **2009**, 935-7	5.8	26
56	Electrodeposition of copper composites from deep eutectic solvents based on choline chloride. *Physical Chemistry Chemical Physics*, **2009**, 11, 4269-77	3.6	257
55	Metal complexation in ionic liquids. *Annual Reports on the Progress of Chemistry Section A*, **2008**, 104, 21		56
54	Electrodeposition of nickel using eutectic based ionic liquids. *Transactions of the Institute of Metal Finishing*, **2008**, 86, 234-240	1.3	131
53	Electrofinishing of metals using eutectic based ionic liquids. *Transactions of the Institute of Metal Finishing*, **2008**, 86, 196-204	1.3	125
52	Sustained electroless deposition of metallic silver from a choline chloride-based ionic liquid. *Surface and Coatings Technology*, **2008**, 202, 2033-2039	4.4	85

51	Electroless deposition of metallic silver from a choline chloride-based ionic liquid: a study using acoustic impedance spectroscopy, SEM and atomic force microscopy. *Physical Chemistry Chemical Physics*, **2007**, 9, 3735-43	3.6	97
50	Determining compositional profiles within conducting polymer films following reaction with vapor phase reagents. *Journal of Physical Chemistry B*, **2007**, 111, 4043-53	3.4	6
49	Spectroelectrochemical responses of thin-film conducting copolymers prepared electrochemically from mixtures of 3,4-ethylenedioxythiophene and 2,2'-bithiophene. *Physical Chemistry Chemical Physics*, **2007**, 9, 6098-105	3.6	7
48	Eutectic-based ionic liquids with metal-containing anions and cations. *Chemistry - A European Journal*, **2007**, 13, 6495-501	4.8	383
47	Quartz crystal microbalance determination of trace metal ions in solution. *Journal of Electroanalytical Chemistry*, **2007**, 599, 275-287	4.1	20
46	Electrodeposition of zinc□in alloys from deep eutectic solvents based on choline chloride. *Journal of Electroanalytical Chemistry*, **2007**, 599, 288-294	4.1	344
45	Application of hole theory to define ionic liquids by their transport properties. *Journal of Physical Chemistry B*, **2007**, 111, 4910-3	3.4	321
44	Electropolishing and Electroplating of Metals Using Ionic Liquids Based on Choline Chloride. *ACS Symposium Series*, **2007**, 186-197	0.4	11
43	Voltammetric and impedance studies of the electropolishing of type 316 stainless steel in a choline chloride based ionic liquid. *Electrochimica Acta*, **2006**, 51, 4420-4425	6.7	156
42	Electropolishing of stainless steels in a choline chloride based ionic liquid: an electrochemical study with surface characterisation using SEM and atomic force microscopy. *Physical Chemistry Chemical Physics*, **2006**, 8, 4214-21	3.6	137
41	A Model for a Lipid Membrane Stabilized by C□H□□X Bonds: The Crystal Structure of the Paraffinic Ylide Trimethylammonion-Hexadecylsulfonamidate CH3(CH2)15SO2N(□)N(+)Me3. *Crystal Growth and Design*, **2005**, 5, 361-364	3.5	5
40	Evaluating the influence of deposition conditions on solvation of reactive conducting polymers with neutron reflectivity. *Journal of Physical Chemistry B*, **2005**, 109, 14335-43	3.4	14
39	Time-scale- and temperature-dependent mechanical properties of viscoelastic poly(3,4-ethylenedioxythiophene) films. *Journal of the American Chemical Society*, **2005**, 127, 16611-20	16.4	56
38	N-Benzyl-2,5-bis(2-thienyl)pyrrole. *Acta Crystallographica Section C: Crystal Structure Communications*, **2004**, 60, o166-8		7
37	?Activated? polypyrrole electrodes for high-power supercapacitor applications. *Solid State Ionics*, **2004**, 169, 51-57	3.3	76
36	□ladder-doped□polypyrrole: a possible electrode material for inclusion in electrochemical supercapacitors?. *Journal of Power Sources*, **2004**, 129, 107-112	8.9	50
35	The solid-state reaction of a functionalised polypyrrole; analysis using high resolution X-ray photoelectron spectroscopy. *Physical Chemistry Chemical Physics*, **2004**, 6, 2403	3.6	6
34	A topochemically active diynol. The effect of temperature on the crystal structure of 6-hydroxyhexadiynyl benzoate, PhC(O)OCH2CC□CCH2OH. *CrystEngComm*, **2004**, 6, 280-283	3.3	1

33	The chiral oxime of 13H-dibenzo(a,i)fluoren-13-one. *Canadian Journal of Chemistry*, **2004**, 82, 1625-1628	0.9	0
32	Dynamic in situ electrochemical neutron reflectivity measurements. *Journal of the American Chemical Society*, **2004**, 126, 15362-3	16.4	35
31	(2RS)-5,6:7,8-Dibenzobicyclo[2.2.2]octan-2-ol. *Acta Crystallographica Section C: Crystal Structure Communications*, **2003**, 59, o283-5		
30	1,1-bis(phenylsulfonyl)-1-(pyridinio)methanide. *Acta Crystallographica Section C: Crystal Structure Communications*, **2003**, 59, o376-7		
29	Self-recognition and hydrogen bonding by polycyclic bridgehead monoalcohols. *Organic and Biomolecular Chemistry*, **2003**, 1, 700-4	3.9	9
28	The low-temperature phase transition of 9-methylfluoren-9-ol: comparison of the crystal structures at 100 and 200 K. *Acta Crystallographica Section C: Crystal Structure Communications*, **2002**, 58, o615-8		
27	Synthesis, characterization and polymerization of a pyrrole-based chiral liquid crystal. *Journal of Materials Science Letters*, **2002**, 21, 595-597		6
26	Pyrrole and polypyrrole-based liquid crystals containing azobenzene mesogenic groups. *Journal of Materials Chemistry*, **2002**, 12, 579-585		31
25	XPS assaying of electrodeposited copolymer composition to optimise sensor materials. *Journal of Electron Spectroscopy and Related Phenomena*, **2001**, 121, 131-148	1.7	13
24	Unusual synthesis and crystal structure of 4-tricyclanol. *Tetrahedron Letters*, **2001**, 42, 319-322	2	5
23	Pyrrole- and polypyrrole-based liquid crystals. *Journal of Materials Chemistry*, **2001**, 11, 990-995		18
22	Temporal and spatial profiling of the modification of an electroactive polymeric interface using neutron reflectivity. *Analytical Chemistry*, **2001**, 73, 5596-606	7.8	20
21	13H-dibenzo. *Acta Crystallographica Section C: Crystal Structure Communications*, **2000**, 56 (Pt 5), 570-1		2
20	Strategies towards functionalised electronically conducting organic copolymers: Part 2. Copolymerisation. *Journal of Materials Chemistry*, **2000**, 10, 1785-1793		22
19	Strategies towards functionalised electronically conducting organic copolymers. *Journal of Materials Chemistry*, **2000**, 10, 107-114		39
18	Structure and conductivity in substituted polypyrroles. Part 1. Synthesis and electropolymerization of N-trimethylsilylethoxymethyl-3-methyl-4-pyrrole carboxylate ethyl ester. *Polymer International*, **1998**, 47, 43-49	3.3	9
17	13H-Dibenzo[a,g]fluoren-13-one. *Acta Crystallographica Section C: Crystal Structure Communications* , **1998**, 54, 1542-1544		1
16	A Sultone Derived from Racemic Camphene. *Acta Crystallographica Section C: Crystal Structure Communications*, **1998**, 54, 1546-1548		0

15	A Viable Route to exo-2-Benzyliminobornan-3-ol: A Key Intermediate in the Synthesis of a Chiral Auxiliary. *Synthesis*, **1997**, 1997, 620-622	2.9	5
14	Role of conducting polymeric interfaces in promoting biological electron transfer. *Biosensors and Bioelectronics*, **1997**, 12, 721-7	11.8	17
13	Tailored Polymers To Probe the Nature of the Bioelectrochemical Interface. *Langmuir*, **1996**, 12, 5681-5688	4	17
12	Functionalisation and characterisation of novel conducting polymer interfaces. *Journal of the Chemical Society Chemical Communications*, **1995**, 1471		16
11	A bio-electronic interface using functionalised conducting poly(pyrroles). *Journal of the Chemical Society Chemical Communications*, **1995**, 697		19
10	Bioinorganic reaction centres on electrodes. Modified electrodes possessing amino acid, peptide and ferredoxin-type groups on a poly(pyrrole) backbone. *Journal of the Chemical Society Dalton Transactions*, **1994**, 2181		28
9	Iron–sulfur clusters in ionic polymers on electrodes. *Journal of the Chemical Society Dalton Transactions*, **1993**, 3695-3703		12
8	Synthesis and anodic polymerisation of an L-cystine derivatised pyrrole; copolymerisation with a tetraalkylammonium pyrrole allows reduction of the cystinyl film to a cysteinyl state that binds electroactive {Fe4S4}2+ centres. *Journal of the Chemical Society Chemical Communications*, **1992**, 694		19
7	Poly(1-vinylimidazole-co-4-aminostyrene): steric stabilizer for polyaniline colloids. *Polymer*, **1991**, 32, 2456-2460	3.9	43
6	Electron-transfer reactions in nitrogen fixation. Part 2. The electrosynthesis of ammonia: identification and estimation of products. *Journal of the Chemical Society Dalton Transactions*, **1986**, 1453		62
5	Barrel electroplating of Zn-Ni alloy coatings from a modified deep eutectic solvent. *Transactions of the Institute of Metal Finishing*,1-9	1.3	
4	Technical Aspects287-351		3
3	Plating Protocols353-367		1
2	Synthesis of Ionic Liquids15-46		7
1	Electrodeposition of Metals83-123		13