Edward P L Roberts

List of Publications by Year
in descending order

115	3,941	125106	162838
papers	citations	35 h-index	57 g-index

115	115	115	4803
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Investigation of electrode passivation during electrocoagulation treatment with aluminum electrodes for high silica content produced water. Water Science and Technology, 2022, 85, 925-942.	1.2	17
2	The effect of non-uniform compression on the performance of polymer electrolyte fuel cells. Journal of Power Sources, 2022, 521, 230973.	4.0	10
3	Effects of aluminum, iron, and manganese sulfate impurities on the vanadium redox flow battery. Journal of Power Sources, 2022, 529, 231271.	4.0	12
4	Prediction of diffusional conductance in extracted pore network models using convolutional neural networks. Computers and Geosciences, 2022, 162, 105086.	2.0	7
5	The impact of a magnetic field on electrode fouling during electrocoagulation. Chemosphere, 2022, 303, 135207.	4.2	4
6	Mixed-acid intercalation for synthesis of a high conductivity electrochemically exfoliated graphene. Carbon, 2021, 171, 130-141.	5.4	19
7	Novel Magnetic Flowable Electrode for Redox Flow Batteries: A Polysulfide/Iodide Case Study. Industrial & Engineering Chemistry Research, 2021, 60, 824-841.	1.8	8
8	Magnetic nanofluidic electrolyte for enhancing the performance of polysulfide/iodide redox flow batteries. Electrochimica Acta, 2021, 369, 137687.	2.6	15
9	Degradation of Carbon Electrodes in the Allâ€Vanadium Redox Flow Battery. ChemSusChem, 2021, 14, 2100-2111.	3.6	14
10	Exploring the impact of an NSERC CREATE program on job readiness among science and engineering graduate students and postdoctoral fellows. Education for Chemical Engineers, 2021, 36, 176-189.	2.8	3
11	Electrochemically Exfoliated Graphite Nanosheet Films for Electromagnetic Interference Shields. ACS Applied Nano Materials, 2021, 4, 7221-7233.	2.4	12
12	Influence of Flow Field Design on Zinc Deposition and Performance in a Zinc-Iodide Flow Battery. ACS Applied Materials & Interfaces, 2021, 13, 41563-41572.	4.0	18
13	Hybrid energy storage using nitrogen-doped graphene and layered-MXene (Ti3C2) for stable high-rate supercapacitors. Electrochimica Acta, 2021, 388, 138664.	2.6	22
14	How does periodic polarity reversal affect the faradaic efficiency and electrode fouling during iron electrocoagulation?. Water Research, 2021, 203, 117497.	5.3	18
15	Operando Studies of Iodine Species in an Advanced Oxidative Water Treatment Reactor. ACS ES&T Water, 2021, 1, 2293-2304.	2.3	5
16	A systematic diagnosis of state of the art in the use of electrocoagulation as a sustainable technology for pollutant treatment: An updated review. Sustainable Energy Technologies and Assessments, 2021, 47, 101353.	1.7	22
17	Synthesis of a high-temperature stable electrochemically exfoliated graphene. Carbon, 2020, 157, 681-692.	5.4	55
18	Anodic electrochemical regeneration of a graphene/titanium dioxide composite adsorbent loaded with an organic dye. Chemosphere, 2020, 241, 125020.	4.2	14

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19	Effect of electrochemical regeneration on the surface of a graphite adsorbent loaded with an organic contaminant. International Journal of Environmental Science and Technology, 2020, 17, 3131-3142.	1.8	2
20	Electrode passivation, faradaic efficiency, and performance enhancement strategies in electrocoagulationâ€"a review. Water Research, 2020, 187, 116433.	5.3	140
21	Modelling of redox flow battery electrode processes at a range of length scales: a review. Sustainable Energy and Fuels, 2020, 4, 5433-5468.	2.5	29
22	Transport and Electrochemical Interface Properties of Ionomers in Low-Pt Loading Catalyst Layers: Effect of Ionomer Equivalent Weight and Relative Humidity. Molecules, 2020, 25, 3387.	1.7	20
23	A stable TiO₂â€"graphene nanocomposite anode with high rate capability for lithium-ion batteries. RSC Advances, 2020, 10, 29975-29982.	1.7	24
24	Electrocoagulation Separation Processes. ACS Symposium Series, 2020, , 167-203.	0.5	13
25	Electrochemical Oxidation of an Organic Dye Adsorbed on Tin Oxide and Antimony Doped Tin Oxide Graphene Composites. Catalysts, 2020, 10, 263.	1.6	17
26	In situ chemical polymerization of conducting polymer nanocomposites: Effect of DNA-functionalized carbon nanotubes and nitrogen-doped graphene as catalytic molecular templates. Chemical Engineering Journal, 2020, 389, 124500.	6.6	21
27	Co-Doped Electrochemically Exfoliated Graphene/Polymer Nanocomposites with High Dielectric Constant and Low Dielectric Loss for Flexible Dielectrics and Charge Storage. ACS Applied Nano Materials, 2020, 3, 4512-4521.	2.4	20
28	Enhanced Sensitivity of Dopamine Biosensors: An Electrochemical Approach Based on Nanocomposite Electrodes Comprising Polyaniline, Nitrogen-Doped Graphene, and DNA-Functionalized Carbon Nanotubes. Journal of the Electrochemical Society, 2019, 166, B1415-B1425.	1.3	29
29	Inâ€Operando Mapping of pH Distribution in Electrochemical Processes. Angewandte Chemie - International Edition, 2019, 58, 16815-16819.	7.2	59
30	Inâ€Operando Mapping of pH Distribution in Electrochemical Processes. Angewandte Chemie, 2019, 131, 16971-16975.	1.6	14
31	Combined adsorption/regeneration process for the removal of trace emulsified hydrocarbon contaminants. Chemosphere, 2019, 230, 596-605.	4.2	10
32	Fabrication of a Dendriteâ€Free all Solidâ€State Li Metal Battery via Polymer Composite/Garnet/Polymer Composite Layered Electrolyte. Advanced Materials Interfaces, 2019, 6, 1900186.	1.9	58
33	Electrocatalytic Activity of Functionalized Carbon Paper Electrodes and Their Correlation to the Fermi Level Derived from Raman Spectra. ACS Applied Energy Materials, 2019, 2, 2324-2336.	2.5	47
34	Comparative adsorptionâ€"regeneration performance for newly developed carbonaceous adsorbent. Journal of Industrial and Engineering Chemistry, 2019, 69, 90-98.	2.9	14
35	Removal of tyrosol from water by adsorption on carbonaceous materials and electrochemical advanced oxidation processes. Chemosphere, 2018, 201, 807-815.	4.2	35
36	Electrocoagulation using an oscillating anode for kaolin removal. Journal of Environmental Chemical Engineering, 2018, 6, 2785-2793.	3.3	18

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37	Electrochemical regeneration of a reduced graphene oxide/magnetite composite adsorbent loaded with methylene blue. Water Research, 2017, 114, 237-245.	5.3	81
38	Thermochemical CO₂ splitting using double perovskite-type Ba₂Ca_{0.66}Nb_{1.34â^'x}Fe_xO_{6â^'Î´}. Journal of Materials Chemistry A, 2017, 5, 6874-6883.	5.2	23
39	Segregated Hybrid Poly(methyl methacrylate)/Graphene/Magnetite Nanocomposites for Electromagnetic Interference Shielding. ACS Applied Materials & Interfaces, 2017, 9, 14171-14179.	4.0	291
40	On the possibility of electrochemical unzipping of multiwalled carbon nanotubes to produce graphene nanoribbons. Materials Research Bulletin, 2016, 80, 243-248.	2.7	6
41	Electro-deoxidation modelling of titanium dioxide to titanium. Electrochimica Acta, 2016, 209, 95-101.	2.6	8
42	Disinfection performance of adsorption using graphite adsorbent coupled with electrochemical regeneration for various microorganisms present in water. Journal of Industrial and Engineering Chemistry, 2016, 44, 216-225.	2.9	13
43	Improvement of direct methanol fuel cell performance using a novel mordenite barrier layer. Journal of Materials Chemistry A, 2016, 4, 10850-10857.	5.2	42
44	Electrochemical regeneration of a graphite adsorbent loaded with Acid Violet 17 in a spouted bed reactor. Chemical Engineering Journal, 2016, 304, 1-9.	6.6	18
45	Nitrogen/sulfur co-doped helical graphene nanoribbons for efficient oxygen reduction in alkaline and acidic electrolytes. Carbon, 2016, 100, 99-108.	5.4	64
46	Solid state electrochemical synthesis of titanium carbide. Chemical Physics Letters, 2015, 621, 184-187.	1.2	11
47	Titanium production in rotationally symmetric electrochemical reactors. Electrochimica Acta, 2015, 164, 48-54.	2.6	6
48	Removal of Tartrazine From Water by Adsorption with Electrochemical Regeneration. Chemical Engineering Communications, 2015, 202, 1280-1288.	1.5	17
49	Potential Graphite Materials for the Synthesis of GICs. Chemical Engineering Communications, 2015, 202, 508-512.	1.5	9
50	Mercaptan's Removal from Aqueous Solution using Modified Graphite-Based Adsorbent through Batch-Wise Adsorptionâ€“Regeneration. Chemical Engineering Communications, 2015, 202, 1155-1160.	1.5	4
51	Free chlorine formation during electrochemical regeneration of a graphite intercalation compound adsorbent used for wastewater treatment. Journal of Applied Electrochemistry, 2015, 45, 611-621.	1.5	7
52	Chlorinated breakdown products formed during oxidation of adsorbed phenol by electrochemical regeneration of a graphite intercalation compound. Journal of Industrial and Engineering Chemistry, 2015, 30, 212-219.	2.9	8
53	Treatment of Thiols in a GAS Stream Using Adsorption with Electrochemical Regeneration. Chemical Engineering Communications, 2015, 202, 1018-1023.	1.5	1
54	Removal of organic compounds from water: life cycle environmental impacts and economic costs of the Arvia process compared to granulated activated carbon. Journal of Cleaner Production, 2015, 89, 203-213.	4.6	41

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55	Environmentally friendly preparation of exfoliated graphite. Journal of Industrial and Engineering Chemistry, 2014, 20, 1936-1941.	2.9	28
56	Synthesis of electrically conducting composite adsorbents for wastewater treatment using adsorption & electrochemical regeneration. Journal of Industrial and Engineering Chemistry, 2014, 20, 781-786.	2.9	6
57	Disinfection of water by adsorption combined with electrochemical treatment. Water Research, 2014, 54, 170-178.	5.3	32
58	Improved phenol adsorption from aqueous solution using electrically conducting adsorbents. Korean Journal of Chemical Engineering, 2014, 31, 834-840.	1.2	6
59	Electrochemically synthesized GIC-based adsorbents for water treatment through adsorption and electrochemical regeneration. Journal of Industrial and Engineering Chemistry, 2014, 20, 2200-2207.	2.9	7
60	The effects of anodic treatment on the surface chemistry of a Graphite Intercalation Compound. Electrochimica Acta, 2014, 135, 568-577.	2.6	12
61	Removal of humic acid from water using adsorption coupled with electrochemical regeneration. Korean Journal of Chemical Engineering, 2013, 30, 1415-1422.	1.2	8
62	Breakdown products formed due to oxidation of adsorbed phenol by electrochemical regeneration of a graphite adsorbent. Electrochimica Acta, 2013, 110, 550-559.	2.6	28
63	Oxidation of phenol and the adsorption of breakdown products using a graphite adsorbent with electrochemical regeneration. Electrochimica Acta, 2013, 92, 20-30.	2.6	61
64	On-site destruction of radioactive oily wastes using adsorption coupled with electrochemical regeneration. Chemical Engineering Research and Design, 2013, 91, 713-721.	2.7	7
65	Pre-treatment of adsorbents for waste water treatment using adsorption coupled-with electrochemical regeneration. Journal of Industrial and Engineering Chemistry, 2013, 19, 1689-1696.	2.9	26
66	The oxidation of aqueous thiols on a graphite intercalation compound adsorbent. Adsorption, 2013, 19, 989-996.	1.4	10
67	Combining adsorption with anodic oxidation as an innovative technique for removal and destruction of organics. Water Science and Technology, 2013, 68, 1216-1222.	1.2	6
68	Removal of mercaptans from a gas stream using continuous adsorption-regeneration. Water Science and Technology, 2012, 66, 1849-1855.	1.2	8
69	Wastewater treatment by adsorption with electrochemical regeneration using graphite-based adsorbents. Journal of Applied Electrochemistry, 2012, 42, 797-807.	1.5	27
70	Evaluation of porous carbon substrates as catalyst supports for the cathode of direct methanolfuel cells. RSC Advances, 2012, 2, 1669-1674.	1.7	29
71	The combination of adsorbent slurry sorption with adsorbent electrochemical regeneration for VOC removal. Chemical Engineering Journal, 2012, 198-199, 130-137.	6.6	9
72	Towards an odour control system combining slurry sorption and electrochemical regeneration. Chemical Engineering Science, 2012, 79, 219-227.	1.9	6

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73	Wastewater treatment by multi-stage batch adsorption and electrochemical regeneration. Journal of Electrochemical Science and Engineering, 2012, , .	1.6	3
74	All-Chromium Redox Flow Battery for Renewable Energy Storage. International Journal of Green Energy, 2011, 8, 248-264.	2.1	45
75	Continuous water treatment by adsorption and electrochemical regeneration. Water Research, 2011, 45, 3065-3074.	5.3	63
76	Ruthenium based redox flow battery for solar energy storage. Energy Conversion and Management, 2011, 52, 2501-2508.	4.4	78
77	NafionÂ®/mordenite composite membranes for improved direct methanol fuel cell performance. Journal of Membrane Science, 2011, 369, 367-374.	4.1	46
78	Determination of the local micromixing structure in laminar flows. Chemical Engineering Journal, 2010, 160, 267-276.	6.6	7
79	Numerical modelling of a bromideâ€“polysulphide redox flow battery. Journal of Power Sources, 2009, 189, 1220-1230.	4.0	74
80	Numerical modelling of a bromide-polysulphide redox flow battery. Part 2: Evaluation of a utility-scale system. Journal of Power Sources, 2009, 189, 1231-1239.	4.0	47
81	A review of metal separator plate materials suitable for automotive PEMfuel cells. Energy and Environmental Science, 2009, 2, 206-214.	15.6	112
82	A membrane free electrochemical cell using porous flow-through graphite felt electrodes. Journal of Applied Electrochemistry, 2008, 38, 637-644.	1.5	20
83	Functionalized zeolite Aâ€“nafion composite membranes for direct methanol fuel cells. Solid State Ionics, 2007, 178, 1248-1255.	1.3	90
84	Evaluation of electrolytes for redox flow battery applications. Electrochimica Acta, 2007, 52, 2189-2195.	2.6	216
85	Numerical simulation of the current, potential and concentration distributions along the cathode of a rotating cylinder Hull cell. Electrochimica Acta, 2007, 52, 3831-3840.	2.6	87
86	Electrochemical pre-treatment of effluents containing chlorinated compounds using an adsorbent. Journal of Applied Electrochemistry, 2007, 37, 1329-1335.	1.5	49
87	A novel porous carbon based on diatomaceous earth. Chemical Communications, 2006, , 2662.	2.2	44
88	Removal of Phenol from Contaminated Kaolin Using Electrokinetically Enhanced In Situ Chemical Oxidation. Environmental Science & Technology, 2006, 40, 6098-6103.	4.6	49
89	Evaluation of composite membranes for direct methanol fuel cells. Journal of Power Sources, 2006, 154, 115-123.	4.0	49
90	Electrokinetic removal of caesium from kaolin. Journal of Hazardous Materials, 2005, 122, 91-101.	6.5	25

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91	Encapsulation of metal particles within the wall structure of mesoporous carbons. Chemical Communications, 2005, , 1912.	2.2	24
92	Treatment of dyehouse effluents with a carbon-based adsorbent using anodic oxidation regeneration. Water Science and Technology, 2004, 49, 219-225.	1.2	15
93	Electrochemical quantification of high-affinity halide binding by a steroid-based receptor. Organic and Biomolecular Chemistry, 2004, 2, 2716.	1.5	28
94	Electrochemical regeneration of a carbon-based adsorbent loaded with crystal violet dye. Electrochimica Acta, 2004, 49, 3269-3281.	2.6	81
95	Structural and electrochemical characterisation of Pt and Pd nanoparticles electrodeposited at the liquid/liquid interface. Electrochimica Acta, 2004, 49, 3937-3945.	2.6	68
96	Atrazine removal using adsorption and electrochemical regeneration. Water Research, 2004, 38, 3067-3074.	5.3	97
97	Electrodeposition of palladium nanoparticles at the liquidâ€“liquid interface using porous alumina templates. Electrochimica Acta, 2003, 48, 3037-3046.	2.6	60
98	Voltammetry with Liquid/Liquid Microarrays:Â Characterization of Membrane Materials. Langmuir, 2003, 19, 8019-8025.	1.6	30
99	Hydrodynamic Study of Ion Transfer at the Liquid/Liquid Interface:Â the Channel Flow Cell. Analytical Chemistry, 2003, 75, 486-493.	3.2	28
100	Controlled deposition of nanoparticles at the liquidâ€“liquid interface. Chemical Communications, 2002, , 2324-2325.	2.2	46
101	Hydrodynamic voltammetry in microreactors: multiphase flow. Electrochemistry Communications, 2002, 4, 579-583.	2.3	30
102	Chromium redox couples for application to redox flow batteries. Electrochimica Acta, 2002, 48, 279-287.	2.6	104
103	Chromium removal using a porous carbon felt cathode. Journal of Applied Electrochemistry, 2002, 32, 1091-1099.	1.5	36
104	A new hydrodynamic strategy for studying liquidâˆ£liquid reactivity. Journal of Electroanalytical Chemistry, 2000, 483, 197-200.	1.9	2
105	The Influence of a Lamellar Structure upon the Yield of a Chemical Reaction. Chemical Engineering Research and Design, 2000, 78, 371-377.	2.7	10
106	Measuring striation widths. Physics Letters, Section A: General, Atomic and Solid State Physics, 1999, 260, 209-217.	0.9	9
107	Reaction and diffusion in a lamellar structure: the effect of the lamellar arrangement upon yield. Physica A: Statistical Mechanics and Its Applications, 1999, 262, 294-306.	1.2	23
108	Mass Transport and Residence Time Characteristics of an Oscillatory Flow Electrochemical Reactor. Chemical Engineering Research and Design, 1999, 77, 212-217.	2.7	23

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109	The influence of segregation on the yield for a seriesâ€“parallel reaction. Chemical Engineering Science, 1998, 53, 1791-1801.	1.9	14
110	A two-stage reaction with initially separated reactants. Physica A: Statistical Mechanics and Its Applications, 1998, 256, 65-86.	1.2	15
111	The development of asymmetry and period doubling for oscillatory flow in baffled channels. Journal of Fluid Mechanics, 1996, 328, 19-48.	1.4	34
112	An improved model of potential and current distribution within a flow-through porous electrode. Electrochimica Acta, 1996, 41, 519-526.	2.6	79
113	The simulation of stretch rates for the quantitative prediction and mapping of mixing within a channel flow. Chemical Engineering Science, 1995, 50, 3727-3746.	1.9	33
114	A numerical and experimental study of transition processes in an obstructed channel flow. Journal of Fluid Mechanics, 1994, 260, 185-209.	1.4	49
115	The simulation of chaotic mixing and dispersion for periodic flows in baffled channels. Chemical Engineering Science, 1991, 46, 1669-1677.	1.9	88