

Benjamin P. Wilson

List of Publications by Year in descending order

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97
papers

2,414
citations

186265

28
h-index

243625

44
g-index

99
all docs

99
docs citations

99
times ranked

2219
citing authors

#	ARTICLE	IF	CITATIONS
1	Selective extraction of lithium (Li) and preparation of battery grade lithium carbonate (Li ₂ CO ₃) from spent Li-ion batteries in nitrate system. <i>Journal of Power Sources</i> , 2019, 415, 179-188.	7.8	166
2	Mechanistic and Spatial Study of Ultrasonically Induced Luminol Chemiluminescence. <i>Journal of Physical Chemistry A</i> , 1999, 103, 3955-3962.	2.5	123
3	Selective reductive leaching of cobalt and lithium from industrially crushed waste Li-ion batteries in sulfuric acid system. <i>Waste Management</i> , 2018, 76, 582-590.	7.4	118
4	Mechanical and hydrometallurgical processes in HCl media for the recycling of valuable metals from Li-ion battery waste. <i>Resources, Conservation and Recycling</i> , 2019, 142, 257-266.	10.8	91
5	Carbon nanotube-copper composites by electrodeposition on carbon nanotube fibers. <i>Carbon</i> , 2016, 107, 281-287.	10.3	83
6	Leaching of Metals from Spent Lithium-Ion Batteries. <i>Recycling</i> , 2017, 2, 20.	5.0	78
7	Electro-hydraulic fragmentation vs conventional crushing of photovoltaic panels – Impact on recycling. <i>Waste Management</i> , 2019, 87, 43-50.	7.4	64
8	Extraction of gallium and germanium from zinc refinery residues by pressure acid leaching. <i>Hydrometallurgy</i> , 2016, 164, 313-320.	4.3	63
9	Lanthanide-alkali double sulfate precipitation from strong sulfuric acid NiMH battery waste leachate. <i>Waste Management</i> , 2018, 71, 381-389.	7.4	55
10	Extraction of Li and Co from industrially produced Li-ion battery waste – Using the reductive power of waste itself. <i>Waste Management</i> , 2019, 95, 604-611.	7.4	55
11	Toxicity Identification and Evolution Mechanism of Thermolysis-Driven Gas Emissions from Cathodes of Spent Lithium-Ion Batteries. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 18228-18235.	6.7	54
12	Recovery and separation of gallium(III) and germanium(IV) from zinc refinery residues: Part I: Leaching and iron(III) removal. <i>Hydrometallurgy</i> , 2017, 169, 564-570.	4.3	50
13	Synergistic Recovery of Valuable Metals from Spent Nickel–Metal Hydride Batteries and Lithium-Ion Batteries. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 16103-16111.	6.7	49
14	Selective lithium recovery and integrated preparation of high-purity lithium hydroxide products from spent lithium-ion batteries. <i>Separation and Purification Technology</i> , 2021, 259, 118181.	7.9	46
15	Solubility study of lignin in industrial organic solvents and investigation of electrochemical properties of spray-coated solutions. <i>Industrial Crops and Products</i> , 2020, 148, 112310.	5.2	44
16	Recovery and separation of gallium(III) and germanium(IV) from zinc refinery residues : Part II: Solvent extraction. <i>Hydrometallurgy</i> , 2017, 171, 149-156.	4.3	43
17	Noncovalent Surface Modification of Cellulose Nanopapers by Adsorption of Polymers from Aprotic Solvents. <i>Langmuir</i> , 2017, 33, 5707-5712.	3.5	43
18	Global occurrence, chemical properties, and ecological impacts of e-wastes (IUPAC Technical Report). <i>Pure and Applied Chemistry</i> , 2020, 92, 1733-1767.	1.9	42

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19	Formation of ultra-thin amorphous conversion films on zinc alloy coatings. <i>Electrochimica Acta</i> , 2006, 51, 2956-2963.	5.2	41
20	Observations of copper deposition on functionalized carbon nanotube films. <i>Electrochimica Acta</i> , 2017, 232, 495-504.	5.2	38
21	Role of impurity copper in Li-ion battery recycling to LiCoO ₂ cathode materials. <i>Journal of Power Sources</i> , 2020, 450, 227630.	7.8	38
22	Hazard-free treatment of electrolytic manganese residue and recovery of manganese using low temperature roasting-water washing process. <i>Journal of Hazardous Materials</i> , 2021, 402, 123561.	12.4	38
23	The formation and characterisation of ultra-thin films containing Ag nanoparticles. <i>Journal of Materials Chemistry</i> , 2008, 18, 199-206.	6.7	35
24	Recovery and separation of rare earths and boron from spent Nd-Fe-B magnets. <i>Minerals Engineering</i> , 2020, 145, 106097.	4.3	35
25	Direct alcohol fuel cells: Increasing platinum performance by modification with sp-group metals. <i>Journal of Power Sources</i> , 2015, 275, 341-350.	7.8	34
26	From Waste to Valuable Resource: Lignin as a Sustainable Anti-Corrosion Coating. <i>Coatings</i> , 2018, 8, 454.	2.6	34
27	Platinum Recovery from Industrial Process Solutions by Electrodeposition—Redox Replacement. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 14631-14640.	6.7	32
28	Formation of ultra-thin amorphous conversion films on zinc alloy coatings. <i>Electrochimica Acta</i> , 2006, 51, 3066-3075.	5.2	30
29	Extraction of Ga and Ge from zinc refinery residues in H ₂ C ₂ O ₄ solutions containing H ₂ O ₂ . <i>International Journal of Mineral Processing</i> , 2017, 163, 14-23.	2.6	29
30	Nickel Metal Hydride Battery Waste: Mechano-hydrometallurgical Experimental Study on Recycling Aspects. <i>Journal of Sustainable Metallurgy</i> , 2020, 6, 78-90.	2.3	28
31	Selective extraction of valuable metals from spent EV power batteries using sulfation roasting and two stage leaching process. <i>Separation and Purification Technology</i> , 2021, 258, 118078.	7.9	28
32	Carbon Nanostructure Based Platform for Enzymatic Glutamate Biosensors. <i>Journal of Physical Chemistry C</i> , 2017, 121, 4618-4626.	3.1	27
33	Electrochemical recovery of tellurium from metallurgical industrial waste. <i>Journal of Applied Electrochemistry</i> , 2020, 50, 1-14.	2.9	27
34	Recovery and separation of silver and mercury from hazardous zinc refinery residues produced by zinc oxygen pressure leaching. <i>Hydrometallurgy</i> , 2019, 185, 38-45.	4.3	26
35	Mechanism of selective gold extraction from multi-metal chloride solutions by electrodeposition-redox replacement. <i>Green Chemistry</i> , 2020, 22, 3615-3625.	9.0	26
36	The efficiency of scrap Cu and Al current collector materials as reductants in LIB waste leaching. <i>Hydrometallurgy</i> , 2021, 203, 105608.	4.3	25

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37	A direct synthesis of platinum/nickel co-catalysts on titanium dioxide nanotube surface from hydrometallurgical-type process streams. <i>Journal of Cleaner Production</i> , 2018, 201, 39-48.	9.3	24
38	Biomass-Assisted Reductive Leaching in H ₂ SO ₄ Medium for the Recovery of Valuable Metals from Spent Mixed-Type Lithium-Ion Batteries. <i>Jom</i> , 2019, 71, 4465-4472.	1.9	23
39	Recovery of Silver from Dilute Effluents via Electrodeposition and Redox Replacement. <i>Journal of the Electrochemical Society</i> , 2019, 166, E266-E274.	2.9	23
40	Improved Metal Circular Economy-Selective Recovery of Minor Ag Concentrations from Zn Process Solutions. <i>ACS Sustainable Chemistry and Engineering</i> , 2017, 5, 10996-11004.	6.7	22
41	Effect of typical impurities for the formation of floating slimes in copper electrorefining. <i>International Journal of Mineral Processing</i> , 2017, 168, 109-115.	2.6	21
42	Clean and efficient recovery of spent LiCoO cathode material: Water-leaching characteristics and low-temperature ammonium sulfate calcination mechanisms. <i>Journal of Cleaner Production</i> , 2020, 268, 122299.	9.3	21
43	Selective separation of rare earths from spent Nd-Fe-B magnets using two-stage ammonium sulfate roasting followed by water leaching. <i>Hydrometallurgy</i> , 2021, 203, 105626.	4.3	20
44	Strongly reduced thermal conductivity in hybrid ZnO/nanocellulose thin films. <i>Journal of Materials Science</i> , 2017, 52, 6093-6099.	3.7	19
45	Recycling of spent NiMH batteries: Integration of battery leach solution into primary Ni production using solvent extraction. <i>Sustainable Materials and Technologies</i> , 2019, 22, e00121.	3.3	19
46	The interference of copper, iron and aluminum with hydrogen peroxide and its effects on reductive leaching of LiNi _{1/3} Mn _{1/3} Co _{1/3} O ₂ . <i>Separation and Purification Technology</i> , 2022, 281, 119903.	7.9	19
47	QCM study of the adsorption of polyelectrolyte covered mesoporous TiO ₂ nanocontainers on SAM modified Au surfaces. <i>Journal of Colloid and Interface Science</i> , 2011, 362, 180-187.	9.4	18
48	Formation of Pt/Pb nanoparticles by electrodeposition and redox replacement cycles on fluorine doped tin oxide glass. <i>Electrochimica Acta</i> , 2013, 88, 278-286.	5.2	18
49	Oxalic Acid Recovery from High Iron Oxalate Waste Solution by a Combination of Ultrasound-Assisted Conversion and Cooling Crystallization. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 17372-17378.	6.7	18
50	Recovery of Gold from Chloride Solution by TEMPO-Oxidized Cellulose Nanofiber Adsorbent. <i>Sustainability</i> , 2019, 11, 1406.	3.2	17
51	Diffusion coefficient of cupric ion in a copper electrorefining electrolyte containing nickel and arsenic. <i>Minerals Engineering</i> , 2019, 134, 381-389.	4.3	15
52	Recovery of High-Purity MnO ₂ from the Acid Leaching Solution of Spent Li-Ion Batteries. <i>Jom</i> , 2020, 72, 790-799.	1.9	15
53	Effect of probe tip inclination on the response of the Scanning Vibrating Electrode Technique to an idealised pit-like feature. <i>Electrochimica Acta</i> , 2012, 66, 52-60.	5.2	13
54	Life cycle assessment of gas atomised sponge nickel for use in alkaline hydrogen fuel cell applications. <i>Journal of Power Sources</i> , 2013, 243, 242-252.	7.8	13

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55	Life cycle assessment of sponge nickel produced by gas atomisation for use in industrial hydrogenation catalysis applications. <i>International Journal of Life Cycle Assessment</i> , 2013, 18, 362-376.	4.7	13
56	The Effect of the Redox Potential of Aqua Regia and Temperature on the Au, Cu, and Fe Dissolution from WPCBs. <i>Recycling</i> , 2017, 2, 14.	5.0	13
57	Structural distinction due to deposition method in ultrathin films of cellulose nanofibres. <i>Cellulose</i> , 2018, 25, 1715-1724.	4.9	12
58	Dissolution Control of Mg by Cellulose Acetateâ€“Polyelectrolyte Membranes. <i>ACS Applied Materials & Interfaces</i> , 2014, 6, 22393-22399.	8.0	11
59	Parameters affecting monolayer organisation of substituted polysaccharides on solid substrates upon Langmuirâ€“Schaefer deposition. <i>Reactive and Functional Polymers</i> , 2016, 99, 100-106.	4.1	11
60	Comparison of Different Leaching Media and Their Effect on REEs Recovery from Spent Nd-Fe-B Magnets. <i>Jom</i> , 2020, 72, 806-815.	1.9	11
61	A sustainable two-layer lignin-anodized composite coating for the corrosion protection of high-strength low-alloy steel. <i>Progress in Organic Coatings</i> , 2020, 148, 105866.	3.9	11
62	Biopolymeric Anticorrosion Coatings from Cellulose Nanofibrils and Colloidal Lignin Particles. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 41034-41045.	8.0	11
63	Study on valuable metal incorporation in the Feâ€“Al precipitate during neutralization of LIB leach solution. <i>Scientific Reports</i> , 2021, 11, 23283.	3.3	11
64	Investigation into the effect of mechanical activation on the leaching of chalcopyrite in a glycine medium. <i>Hydrometallurgy</i> , 2021, 203, 105492.	4.3	10
65	Utilizing Cu ⁺ as catalyst in reductive leaching of lithium-ion battery cathode materials in H ₂ SO ₄ â€“NaCl solutions. <i>Hydrometallurgy</i> , 2022, 208, 105808.	4.3	10
66	Investigating changes in corrosion mechanism induced by laser welding galvanised steel specimens using scanning vibrating electrode technique. <i>Corrosion Engineering Science and Technology</i> , 2002, 37, 225-230.	0.3	9
67	Glycine leaching of Sarcheshmeh chalcopyrite concentrate at high pulp densities in a stirred tank reactor. <i>Minerals Engineering</i> , 2020, 157, 106555.	4.3	9
68	Controllable Production of Ag/Zn and Ag Particles from Hydrometallurgical Zinc Solutions. <i>ACS Sustainable Chemistry and Engineering</i> , 2021, 9, 8186-8197.	6.7	9
69	Modelling the effect of temperature and free acid, silver, copper and lead concentrations on silver electrorefining electrolyte conductivity. <i>Hydrometallurgy</i> , 2016, 166, 154-159.	4.3	8
70	Effect of Additives on Smut-Layer Formation and Pitting during Aluminum Etching in Hydrochloric Acid. <i>Journal of the Electrochemical Society</i> , 2008, 155, C22.	2.9	7
71	Combined in situ electrochemical impedance spectroscopyâ€“UV/Vis and AFM studies of Ag nanoparticle stability in perfluorinated films. <i>Materials Chemistry and Physics</i> , 2012, 134, 302-308.	4.0	6
72	Purification of Nickel Sulfate by Batch Cooling Crystallization. <i>Chemical Engineering and Technology</i> , 2019, 42, 1475-1480.	1.5	6

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73	Modelling the Effect of Solution Composition and Temperature on the Conductivity of Zinc Electrowinning Electrolytes. <i>Metals</i> , 2021, 11, 1824.	2.3	6
74	Applicability of solid process residues as sorbents for the treatment of industrial wastewaters. <i>Journal of Cleaner Production</i> , 2020, 246, 118951.	9.3	5
75	Cyclic voltammetry and potentiodynamic polarization studies of chalcopyrite concentrate in glycine medium. <i>Transactions of Nonferrous Metals Society of China</i> , 2021, 31, 545-554.	4.2	5
76	Investigation into the Effect of Spot Weld Electrode Life and Quality on the Corrosion Behavior of Galvanized Automotive Steel Using the Three-dimensional Scanning Vibrating Technique. <i>ECS Transactions</i> , 2013, 50, 53-64.	0.5	4
77	The effect of gold on anode passivation and high current density operation under simulated silver electrorefining conditions. <i>Hydrometallurgy</i> , 2016, 166, 57-61.	4.3	4
78	Green and Controllable Preparation of Cu/Zn Alloys Using Combined Electrodeposition and Redox Replacement. <i>ACS Sustainable Chemistry and Engineering</i> , 2022, 10, 4770-4779.	6.7	4
79	Effect of viscosity and applied potential on oscillations at a Pt/Pt dual-electrode in a ferricyanide system. <i>Electrochimica Acta</i> , 2010, 55, 4669-4675.	5.2	3
80	Kinetic study and modelling of silver dissolution in synthetic industrial silver electrolyte as a function of electrolyte composition and temperature. <i>Corrosion Science</i> , 2018, 138, 163-169.	6.6	3
81	Electrochemical Growth of Ag/Zn Alloys from Zinc Process Solutions and Their Dealloying Behavior. <i>ACS Sustainable Chemistry and Engineering</i> , 2022, 10, 3716-3725.	6.7	3
82	Targeted surface modification of Cu/Zn/Ag coatings and Ag/Cu particles based on sacrificial element selection by electrodeposition and redox replacement. <i>Surface and Coatings Technology</i> , 2022, 441, 128531.	4.8	3
83	Sympathetic current oscillations at an enzyme electrode induced by potential oscillations at a Pt surface. <i>Electrochemistry Communications</i> , 2009, 11, 2328-2331.	4.7	2
84	The Use of 3D-SVET for the Examination of Plasticized PVC Coatings: Effect of Deformation and UV Irradiation on Barrier Properties. <i>ECS Transactions</i> , 2015, 64, 69-80.	0.5	2
85	Value-added materials from the hydrometallurgical processing of jarosite waste. <i>E3S Web of Conferences</i> , 2016, 8, 01015.	0.5	2
86	Modelling of silver anode dissolution and the effect of gold as impurity under simulated industrial silver electrorefining conditions. <i>Hydrometallurgy</i> , 2019, 189, 105105.	4.3	2
87	High Purity Nickel Recovery from an Industrial Sidestream Using Concentration and Liquid-Liquid Extraction Techniques. <i>Jom</i> , 2020, 72, 831-838.	1.9	2
88	Industrial validation of conductivity and viscosity models for copper electrolysis processes. <i>Minerals Engineering</i> , 2021, 171, 107069.	4.3	2
89	Modelling the physico-chemical effect of silver electrorefining as effect of temperature, free acid, silver, copper and lead concentrations. <i>AIP Conference Proceedings</i> , 2017, , .	0.4	1
90	Study of Transport Properties of Polyelectrolyte-Cellulose Acetate Membranes. <i>ECS Transactions</i> , 2017, 77, 663-669.	0.5	1

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91	Design of optimal electrolyte circulation based on the kinetic modelling of copper dissolution in silver electrorefining. Hydrometallurgy, 2020, 196, 105403.	4.3	1
92	Leaching of Sb from TROF Furnace DorÃ© Slag. Minerals, Metals and Materials Series, 2017, , 43-49.	0.4	1
93	Electrochemical Scanning Techniques for the Examination of Bi-Metallic Coins. ECS Transactions, 2015, 64, 47-59.	0.5	0
94	Time-Dependent Behavior of Cation Transport through Cellulose Acetate-Cationic Polyelectrolyte Membranes. Journal of the Electrochemical Society, 2018, 165, H39-H44.	2.9	0
95	Deposition of Ultrathin Cellulose Nanofibers Films As Bio-Implant Corrosion Coatings. ECS Meeting Abstracts, 2017, , .	0.0	0
96	Study of Transport Properties of Polyelectrolyte-Cellulose Acetate Membranes. ECS Meeting Abstracts, 2017, , .	0.0	0
97	Environmentally Friendly Coatings for Improved Stainless Steel Corrosion Resistance from Biorefinery Side Streams. ECS Meeting Abstracts, 2018, , .	0.0	0