Francesca Pagnanelli

List of Publications by Year in descending order

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70961 98622 5,035 128 41 citations h-index g-index papers

129 129 129 4806 docs citations times ranked citing authors all docs

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#	Article	IF	CITATIONS
1	Biosorption of Metal lons onArthrobacter sp.:Â Biomass Characterization and Biosorption Modeling. Environmental Science & Envi	4.6	290
2	Heavy metal removal by olive pomace: biosorbent characterisation and equilibrium modelling. Chemical Engineering Science, 2003, 58, 4709-4717.	1.9	270
3	Biosorption of heavy metals by Sphaerotilus natans: an equilibrium study at different pH and biomass concentrations. Hydrometallurgy, 2001, 60, 129-141.	1.8	263
4	pH-related equilibria models for biosorption in single metal systems. Chemical Engineering Science, 2002, 57, 307-313.	1.9	207
5	Metal speciation and pH effect on Pb, Cu, Zn and Cd biosorption onto Sphaerotilus natans: Langmuir-type empirical model. Water Research, 2003, 37, 627-633.	5. 3	195
6	Product recovery from Li-ion battery wastes coming from an industrial pre-treatment plant: Lab scale tests and process simulations. Journal of Power Sources, 2012, 206, 393-401.	4.0	146
7	Cobalt products from real waste fractions of end of life lithium ion batteries. Waste Management, 2016, 51, 214-221.	3.7	124
8	Simultaneous recycling of nickel metal hydride, lithium ion and primary lithium batteries: Accomplishment of European Guidelines by optimizing mechanical pre-treatment and solvent extraction operations. Journal of Power Sources, 2012, 212, 205-211.	4.0	123
9	Recycling of end of life photovoltaic panels: A chemical prospective on process development. Solar Energy, 2019, 177, 746-761.	2.9	109
10	Selective recovery of cobalt from mixed lithium ion battery wastes using deep eutectic solvent. Chemical Engineering Journal, 2021, 417, 129249.	6.6	108
11	Acid reducing leaching of cathodic powder from spent lithium ion batteries: Glucose oxidative pathways and particle area evolution. Journal of Industrial and Engineering Chemistry, 2014, 20, 3201-3207.	2.9	107
12	Physical and chemical treatment of end of life panels: An integrated automatic approach viable for different photovoltaic technologies. Waste Management, 2017, 59, 422-431.	3.7	95
13	Olive mill solid residues as heavy metal sorbent material: a preliminary study. Waste Management, 2002, 22, 901-907.	3.7	89
14	Equilibrium biosorption studies in single and multi-metal systems. Process Biochemistry, 2001, 37, 115-124.	1.8	88
15	Multi-metallic modelling for biosorption of binary systems. Water Research, 2002, 36, 4095-4105.	5.3	86
16	Mechanisms of heavy-metal removal by activated sludge. Chemosphere, 2009, 75, 1028-1034.	4.2	83
17	Shrinking core model with variable activation energy: a kinetic model of manganiferous ore leaching with sulphuric acid and lactose. Hydrometallurgy, 2001, 60, 167-179.	1.8	79
18	Biotreatment and bioassessment of heavy metal removal byÂsulphate reducing bacteria in fixed bed reactors. Water Research, 2010, 44, 151-158.	5.3	77

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19	lonic strength effect on copper biosorption by Sphaerotilus natans: equilibrium study and dynamic modelling in membrane reactor. Water Research, 2006, 40, 144-152.	5.3	72
20	Closed-loop hydrometallurgical treatment of end-of-life lithium ion batteries: Towards zero-waste process and metal recycling in advanced batteries. Journal of Energy Chemistry, 2019, 35, 220-227.	7.1	72
21	Chemical treatment of olive pomace: Effect on acid-basic properties and metal biosorption capacity. Journal of Hazardous Materials, 2008, 156, 448-457.	6.5	69
22	Biosorption of copper by Sphaerotilus natans immobilised in polysulfone matrix: equilibrium and kinetic analysis. Hydrometallurgy, 2003, 70, 101-112.	1.8	68
23	Reductive acid leaching of manganese dioxide with glucose: Identification of oxidation derivatives of glucose. Hydrometallurgy, 2006, 81, 234-240.	1.8	67
24	Leaching of electrodic powders from lithium ion batteries: Optimization of operating conditions and effect of physical pretreatment for waste fraction retrieval. Waste Management, 2017, 60, 706-715.	3.7	67
25	New biosorbent materials for heavy metal removal: Product development guided by active site characterization. Water Research, 2008, 42, 2953-2962.	5.3	64
26	Isolation and quantification of cadmium removal mechanisms in batch reactors inoculated by sulphate reducing bacteria: Biosorption versus bioprecipitation. Bioresource Technology, 2010, 101, 2981-2987.	4.8	62
27	Leaching of low-grade manganese ores by using nitric acid and glucose: optimization of the operating conditions. Hydrometallurgy, 2004, 75, 157-167.	1.8	57
28	Biosorption of protons and heavy metals onto olive pomace: Modelling of competition effects. Water Research, 2005, 39, 1639-1651.	5.3	57
29	Preparation and characterisation of chemical manganese dioxide: Effect of the operating conditions. Journal of Power Sources, 2007, 166, 567-577.	4.0	50
30	Biotreatment of Cr(VI) contaminated waters by sulphate reducing bacteria fed with ethanol. Journal of Hazardous Materials, 2012, 199-200, 186-192.	6.5	49
31	Integrated biomass production and biodegradation of olive mill wastewater by cultivation of Scenedesmus sp Algal Research, 2015, 9, 306-311.	2.4	49
32	Study of the synthesis of copper nanoparticles: the role of capping and kinetic towards control of particle size and stability. Journal of Nanoparticle Research, 2016, 18, 1.	0.8	49
33	Modelling of the acid–base properties of natural and synthetic adsorbent materials used for heavy metal removal from aqueous solutions. Chemosphere, 2004, 54, 905-915.	4.2	48
34	Electrochemical nucleation and three-dimensional growth of metal nanoparticles under mixed kinetic-diffusion control: model development and validation. Electrochimica Acta, 2016, 206, 116-126.	2.6	48
35	Mixotrophic growth of <i>Chlorella vulgaris</i> and <i>Nannochloropsis oculata</i> : interaction between glucose and nitrate. Journal of Chemical Technology and Biotechnology, 2014, 89, 652-661.	1.6	47
36	Preliminary screening of purification processes of liquor leach solutions obtained from reductive leaching of low-grade manganese ores. Hydrometallurgy, 2004, 71, 319-327.	1.8	46

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37	Full recycling of spent lithium ion batteries with production of core-shell nanowires//exfoliated graphite asymmetric supercapacitor. Journal of Energy Chemistry, 2021, 58, 336-344.	7.1	46
38	Recovery of manganese from zinc alkaline batteries by reductive acid leaching using carbohydrates as reductant. Hydrometallurgy, 2009, 99, 115-118.	1.8	42
39	Adsorption onto activated carbon for molybdenum recovery from leach liquors of exhausted hydrotreating catalysts. Hydrometallurgy, 2011, 110, 67-72.	1.8	42
40	Pulsed electrodeposition of cobalt nanoparticles on copper: influence of the operating parameters on size distribution and morphology. Electrochimica Acta, 2015, 155, 228-235.	2.6	42
41	Morphology-controlled synthesis of cobalt nanostructures by facile electrodeposition: transition from hexagonal nanoplatelets to nanoflakes. Electrochimica Acta, 2016, 220, 405-416.	2.6	42
42	Assessment of solid reactive mixtures for the development of biological permeable reactive barriers. Journal of Hazardous Materials, 2009, 170, 998-1005.	6.5	40
43	Micellar Enhanced Ultrafiltration for Arsenic(V) Removal:Â Effect of Main Operating Conditions and Dynamic Modelling. Environmental Science & Eamp; Technology, 2006, 40, 2746-2752.	4.6	39
44	Treatment of concentrated arsenic(V) solutions by micellar enhanced ultrafiltration with high molecular weight cut-off membrane. Journal of Hazardous Materials, 2007, 148, 116-121.	6.5	38
45	Integrated microalgae biomass production and olive mill wastewater biodegradation: Optimization of the wastewater supply strategy. Chemical Engineering Journal, 2018, 349, 539-546.	6.6	37
46	Two-layer shrinking-core model: parameter estimation for the reaction order in leaching processes. Chemical Engineering Journal, 2002, 90, 231-240.	6.6	36
47	Production of an iron-coated adsorbent for arsenic removal by hydrothermal carbonization of olive pomace: Effect of the feedwater pH. Journal of Environmental Management, 2020, 273, 111164.	3.8	36
48	Toxic elements at a disused mine district: Particle size distribution and total concentration in stream sediments and mine tailings. Journal of Hazardous Materials, 2007, 148, 409-418.	6.5	34
49	Development of new composite biosorbents from olive pomace wastes. Applied Surface Science, 2010, 256, 5492-5497.	3.1	34
50	Electrodeposition of cobalt nanowires into alumina templates generated by one-step anodization. Electrochimica Acta, 2018, 259, 711-722.	2.6	33
51	Automobile shredded residue valorisation by hydrometallurgical metal recovery. Journal of Hazardous Materials, 2011, 185, 44-48.	6.5	32
52	Selective precipitation of metals from synthetic spent refinery catalyst leach liquor with biogenic H2S produced in a lactate-fed anaerobic baffled reactor. Hydrometallurgy, 2013, 139, 154-161.	1.8	31
53	Biosorption-mediated reduction of Cr(VI) using heterotrophically-grown Chlorella vulgaris: Active sites and ionic strength effect. Chemical Engineering Journal, 2013, 231, 94-102.	6.6	28
54	The influence of phenols extracted from olive mill wastewater on the heterotrophic and mixotrophic growth of <i>Scenedesmus</i> sp Journal of Chemical Technology and Biotechnology, 2018, 93, 3619-3626.	1.6	27

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55	Extraction of Carotenoids and Fat-Soluble Vitamins from Tetradesmus Obliquus Microalgae: An Optimized Approach by Using Supercritical CO2. Molecules, 2019, 24, 2581.	1.7	27
56	Heterotrophic cultivation of T. obliquus under non-axenic conditions by uncoupled supply of nitrogen and glucose. Biochemical Engineering Journal, 2019, 145, 127-136.	1.8	27
57	Electrochemical synthesis of nanowire anodes from spent lithium ion batteries. Electrochimica Acta, 2019, 319, 481-489.	2.6	25
58	Modeling of Copper Biosorption by Arthrobactersp. in a UF/MF Membrane Reactor. Environmental Science &	4.6	23
59	Non-electrostatic surface complexation models for protons and lead(II) sorption onto single minerals and their mixture. Chemosphere, 2006, 63, 1063-1073.	4.2	23
60	Electrochemical nucleation and three-dimensional growth under mixed kinetic-diffusion control: analytical approximation of the current transient. Electrochimica Acta, 2016, 205, 113-117.	2.6	23
61	Recycling of solar photovoltaic panels: Techno-economic assessment in waste management perspective. Journal of Cleaner Production, 2022, 363, 132384.	4.6	23
62	Sequential extraction of lutein and βâ€carotene from wet microalgal biomass. Journal of Chemical Technology and Biotechnology, 2020, 95, 3024-3033.	1.6	22
63	Biosorption of binary heavy metal systems onto Sphaerotilus natans cells confined in an UF/MF membrane reactor: dynamic simulations by different Langmuir-type competitive models. Water Research, 2004, 38, 1055-1061.	5.3	20
64	Solvent versus thermal treatment for glass recovery from end of life photovoltaic panels: Environmental and economic assessment. Journal of Environmental Management, 2019, 248, 109313.	3.8	20
65	Use of natural materials for the inhibition of iron oxidizing bacteria involved in the generation of acid mine drainage. Hydrometallurgy, 2007, 87, 27-35.	1.8	19
66	Effect of Ca2+ concentration on Scenedesmus sp. growth in heterotrophic and photoautotrophic cultivation. New Biotechnology, 2018, 40, 228-235.	2.4	19
67	Quantification of <i>Tetradesmus obliquus</i> (Chlorophyceae) cell size and lipid content heterogeneity at singleâ€cell level. Journal of Phycology, 2018, 54, 187-197.	1.0	19
68	Multivariate modeling for microalgae growth in outdoor photobioreactors. Algal Research, 2020, 45, 101663.	2.4	19
69	Microalgae cultivation by uncoupled nutrient supply in sequencing batch reactor (SBR) integrated with olive mill wastewater treatment. Chemical Engineering Journal, 2021, 410, 128417.	6.6	19
70	Optimisation and validation of mechanistic models for heavy metal bio-sorption onto a natural biomass. Hydrometallurgy, 2005, 80, 107-125.	1.8	18
71	A versatile electrochemical method to synthesize Co-CoO core-shell nanowires anodes for lithium ion batteries with superior stability and rate capability. Electrochimica Acta, 2018, 290, 347-355.	2.6	18
72	Electrodeposition of cobalt nanoparticles: An analysis of the mechanisms behind the deviation from three-dimensional diffusion-control. Journal of Electroanalytical Chemistry, 2019, 851, 113413.	1.9	18

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73	Optimizing the structure of Ni–Ni(OH)2/NiO core-shell nanowire electrodes for application in pseudocapacitors: The influence of metallic core, Ni(OH)2/NiO ratio and nanowire length. Journal of Alloys and Compounds, 2021, 856, 157718.	2.8	18
74	Continuous biosorption of copper and lead in single and binary systems using Sphaerotilus natans cells confined by a membrane: experimental validation of dynamic models. Hydrometallurgy, 2005, 76, 73-85.	1.8	17
75	Mechanistic modelling of copper biosorption by wild type and engineered Saccharomyces cerevisiae biomasses. Chemical Engineering Journal, 2014, 244, 561-568.	6.6	16
76	Effect of surfactant/water ratio and reagents' concentration on size distribution of manganese carbonate nanoparticles synthesized by microemulsion mediated route. Applied Surface Science, 2015, 331, 463-471.	3.1	16
77	Effect of equilibrium models in the simulation of heavy metal biosorption in single and two-stage UF/MF membrane reactor systems. Biochemical Engineering Journal, 2003, 15, 27-35.	1.8	15
78	Upcycling Real Waste Mixed Lithium-Ion Batteries by Simultaneous Production of rGO and Lithium-Manganese-Rich Cathode Material. ACS Sustainable Chemistry and Engineering, 2021, 9, 13303-13311.	3.2	15
79	Two-Dimensional Restructuring of Cu ₂ O Can Improve the Performance of Nanosized n-TiO ₂ /p-Cu ₂ O Photoelectrodes under UV–Visible Light. ACS Applied Materials & Amp; Interfaces, 2021, 13, 47932-47944.	4.0	14
80	Two-phase synthesis of Fe-loaded hydrochar for As removal: The distinct effects of initial pH, reaction time and Fe/hydrochar ratio. Journal of Environmental Management, 2022, 302, 114058.	3.8	14
81	A closed-form solution of population-balance models for the dissolution of polydisperse mixtures. Chemical Engineering Journal, 2002, 87, 275-284.	6.6	13
82	Development and Techno-Economic Analysis of an Advanced Recycling Process for Photovoltaic Panels Enabling Polymer Separation and Recovery of Ag and Si. Energies, 2020, 13, 6690.	1.6	13
83	Nucleation and growth of metal nanoparticles on a planar electrode: A new model based on iso-nucleation-time classes of particles. Electrochimica Acta, 2019, 296, 82-93.	2.6	12
84	Control of bacterial contamination in microalgae cultures integrated with wastewater treatment by applying feast and famine conditions. Journal of Environmental Chemical Engineering, 2022, 10, 108262.	3.3	12
85	Mechanistic modeling of heavy metal biosorption in batch and membrane reactor systems. Hydrometallurgy, 2003, 71, 201-208.	1.8	11
86	Structural modelling for the dissolution of non-porous ores: dissolution with sporulation. Chemical Engineering Journal, 2004, 99, 89-104.	6.6	11
87	Bioassessment of a combined chemical–biological treatment for synthetic acid mine drainage. Journal of Hazardous Materials, 2008, 159, 567-573.	6.5	11
88	Synthesis of MnCO3 nanoparticles by microemulsions: statistical evaluation of the effects of operating conditions on particle size distribution. Journal of Nanoparticle Research, 2013, 15, 1.	0.8	11
89	Photovoltaic panel recycling: from type-selective processes to flexible apparatus for simultaneous treatment of different types. Institutions of Mining and Metallurgy Transactions Section C: Mineral Processing and Extractive Metallurgy, 2016, 125, 221-227.	0.6	11
90	Copper and cadmium biosorption ontoSphaerotilus natans: application and discrimination of commonly used adsorption models. Separation Science and Technology, 2002, 37, 677-699.	1.3	10

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91	Heavy metal biosorption in binary systems: simulation in single- and two-stage UF/MF membrane reactors. Hydrometallurgy, 2002, 66, 107-115.	1.8	10
92	Theoretical and Experimental Analysis of the Role of Sludge Age on the Removal of Adsorbed Micropollutants in Activated Sludge Processes. Industrial & Engineering Chemistry Research, 2008, 47, 6775-6782.	1.8	10
93	Manganese ferrite nanoparticle production from industrial wastes as sorbent material for arsenic removal from aqueous solutions. Particulate Science and Technology, 2020, 38, 433-442.	1.1	10
94	New strategies enhancing feasibility of microalgal cultivations. Studies in Surface Science and Catalysis, 2020, 179, 287-316.	1.5	10
95	Sustainable Bioactive Packaging Based on Thermoplastic Starch and Microalgae. International Journal of Molecular Sciences, 2022, 23, 178.	1.8	10
96	Equilibrium, Kinetic and Dynamic Modelling of Biosorption Processes. , 2011, , 59-120.		9
97	Metal recovery from endâ€ofâ€life hydrotreating catalysts by selective precipitation: Laboratory tests and preliminary process analysis. Environmental Progress and Sustainable Energy, 2015, 34, 703-712.	1.3	9
98	Valorization of polymeric fractions and metals from end of life photovoltaic panels. Waste Management, 2021, 122, 89-99.	3.7	9
99	Extraction of microalgal starch and pigments by using different cell disruption methods and aqueous twoâ€phase system. Journal of Chemical Technology and Biotechnology, 2022, 97, 67-78.	1.6	9
100	Copper biosorption by Sphaerotilus natans confined in UF membrane module: experimental study and kinetic modeling. Hydrometallurgy, 2004, 72, 21-30.	1.8	8
101	Two electrodeposition strategies for the morphology-controlled synthesis of cobalt nanostructures. , 2018, , .		7
102	Production of microalgae biomass in a continuous stirred bioreactor: Analysis of microalgae-bacteria competition mediated by nitrogen and organic carbon. Chemical Engineering Science, 2022, 260, 117826.	1.9	7
103	Shape evolution and effect of organic additives in the electrosynthesis of Cu nanostructures. Journal of Solid State Electrochemistry, 2019, 23, 2723-2735.	1.2	6
104	Magnetic force microscopy characterization of core–shell cobalt-oxide/hydroxide nanoparticles. Journal of Magnetism and Magnetic Materials, 2020, 516, 167299.	1.0	5
105	Extracellular and intracellular phenol production by microalgae during photoautotrophic batch cultivation. New Biotechnology, 2021, 62, 1-9.	2.4	5
106	Electrodeposited Copper Nanocatalysts for CO2 Electroreduction: Effect of Electrodeposition Conditions on Catalysts' Morphology and Selectivity. Energies, 2021, 14, 5012.	1.6	5
107	Proton Binding onto Soil by Nonelectrostatic Models:Â Isolation and Identification of Mineral Contributions. Environmental Science & Environmental Sci	4.6	4
108	$\mbox{Ti/TiO2/Cu2O}$ electrodes for photocatalytic applications: Synthesis and characterization. AIP Conference Proceedings, 2019, , .	0.3	4

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109	Recovery of nanoferrites from metal bearing wastes: Synthesis, characterization and adsorption study. Journal of Molecular Liquids, 2020, 318, 114047.	2.3	4
110	Material Flux through an Innovative Recycling Process Treating Different Types of End-of-Life Photovoltaic Panels: Demonstration at Pilot Scale. Energies, 2021, 14, 5534.	1.6	4
111	Single Cell Analysis of Microalgae and Associated Bacteria Flora by Using Flow Cytometry. Biotechnology and Bioprocess Engineering, 2021, 26, 898-909.	1.4	4
112	Sulphate bioreduction for the treatment of polluted waters: solid versus liquid organic substrates. Journal of Chemical Technology and Biotechnology, 2009, 84, 859-863.	1.6	3
113	Recovery of critical metals from LCDs and Li-ion batteries. , 2016, , .		3
114	Recovery and application of magnetic nanosized sorbents from waste lithium-ion batteries. Ceramics International, 2020, 46, 7559-7567.	2.3	3
115	Cryo-Mechanical Treatment and Hydrometallurgical Process for Recycling Li-MnO2 Primary Batteries with the Direct Production of LiMnPO4 Nanoparticles. Energies, 2020, 13, 4004.	1.6	3
116	The sporulation model for manganiferous ore dissolution. Chemical Engineering Science, 2004, 59, 5107-5112.	1.9	2
117	Influence of surface heterogeneity in electroosmotic flows—Implications in chromatography, fluid mixing, and chemical reactions in microdevices. Applied Surface Science, 2007, 253, 5785-5790.	3.1	2
118	Inhibition of Iron Oxidizing Bacteria Involved in the Generation of Acid Mine Drainage. Advanced Materials Research, 0, 71-73, 681-684.	0.3	2
119	Electrochemical synthesis of nanowires electrodes and their application in energy storage devices. AIP Conference Proceedings, 2019, , .	0.3	2
120	Sulphate Reducing Bacteria for the Treatment of Heavy Metals Contaminated Waters in Permeable Reactive Barriers. Advanced Materials Research, 2009, 71-73, 565-568.	0.3	1
121	Acid mine drainage attenuation by inhibition of pyrite bioleaching using limestone and olive pomace. Chemistry and Ecology, 2012, 28, 293-303.	0.6	1
122	Bioactive and passive mechanisms of pollutant removal in bioreduction processes in fixed bed columns: Numerical simulations. Environmental Progress and Sustainable Energy, 2014, 33, 70-80.	1.3	1
123	Biosorption of Copper by Saccharomyces cerevisiae: From Biomass Characterization to Process Development., 2017,, 205-224.		1
124	Process Simulation for Li-MnO2 Primary Battery Recycling: Cryo-Mechanical and Hydrometallurgical Treatments at Pilot Scale. Energies, 2020, 13, 4546.	1.6	1
125	Production of nanostructured electrodes from spent Lithium ion batteries and their application in new energy storage devices. AIP Conference Proceedings, 2020, , .	0.3	0
126	TiO2 nanotubes in lithium-ion batteries. AIP Conference Proceedings, 2020, , .	0.3	0

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127	Magnetic force microscopy characterization of cobalt nanoparticles: A preliminary study. AIP Conference Proceedings, 2020, , .	0.3	O
128	Synthesis of copper nanostructured electrodes onto carbon paper for the catalytic electroreduction of CO2., 2021,,.		0