Manuel Pinelo

List of Publications by Year
in descending order

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109	5,521	94269	85405
papers	citations	37 h-index	71 g-index

109	109	109	6414
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Mimicking natural strategies to create multi-environment enzymatic reactors: From natural cell compartments to artificial polyelectrolyte reactors. Biotechnology Advances, 2022, 54, 107798.	6.0	20
2	Free and immobilized biocatalysts for removing micropollutants from water and wastewater: Recent progress and challenges. Bioresource Technology, 2022, 344, 126201.	4.8	61
3	Modelling of oligodextran production via an immobilized enzyme membrane reactor: Bioreaction-separation coupling mechanism. Separation and Purification Technology, 2022, 282, 120024.	3.9	3
4	Separation of succinic acid from fermentation broth: Dielectric exclusion, Donnan effect and diffusion as the most influential mass transfer mechanisms. Separation and Purification Technology, 2022, 281, 119904.	3.9	8
5	Removal of tetracycline in enzymatic membrane reactor: Enzymatic conversion as the predominant mechanism over adsorption and membrane rejection. Journal of Environmental Chemical Engineering, 2022, 10, 106973.	3.3	15
6	Economic and environmental analysis of bio-succinic acid production: From established processes to a new continuous fermentation approach with in-situ electrolytic extraction. Chemical Engineering Research and Design, 2022, 179, 401-414.	2.7	17
7	An integrated sustainable biorefinery concept towards achieving zero-waste production. Journal of Cleaner Production, 2022, 336, 130317.	4.6	14
8	Engineering Mussel-Inspired Coating on Membranes for Green Enzyme Immobilization and Hyperstable Reuse. Industrial & Engineering Chemistry Research, 2022, 61, 5042-5053.	1.8	3
9	Enzymatic membrane reactor in xylose bioconversion with simultaneous cofactor regeneration. Bioorganic Chemistry, 2022, 123, 105781.	2.0	3
10	Synergistic action of laccase treatment and membrane filtration during removal of azo dyes in an enzymatic membrane reactor upgraded with electrospun fibers. Journal of Hazardous Materials, 2022, 435, 129071.	6.5	25
11	Variables and Mechanisms Affecting Electro-Membrane Extraction of Bio-Succinic Acid from Fermentation Broth. Membranes, 2022, 12, 542.	1.4	3
12	Integrated microsphere-packed bed enzymatic membrane reactor for enhanced bioconversion efficiency and stability: A proof-of-concept study. Journal of Membrane Science, 2022, 658, 120732.	4.1	6
13	Laccase immobilization in polyelectrolyte multilayer membranes for 17Î±-ethynylestradiol removal: Biocatalytic approach for pharmaceuticals degradation. Chemosphere, 2022, 304, 135374.	4.2	5
14	Horseradish peroxidase immobilised onto electrospun fibres and its application in decolourisation of dyes from model sea water. Process Biochemistry, 2021, 102, 10-21.	1.8	32
15	Sustainable bio-succinic acid production: superstructure optimization, techno-economic, and lifecycle assessment. Energy and Environmental Science, 2021, 14, 3542-3558.	15.6	65
16	Electrospun biosystems made of nylon 6 and laccase and its application in dyes removal. Environmental Technology and Innovation, 2021, 21, 101332.	3.0	18
17	Nanofiltration for separation and purification of saccharides from biomass. Frontiers of Chemical Science and Engineering, 2021, 15, 837-853.	2.3	24
18	Mathematical modelling of reaction-separation in an enzymatic membrane reactor during oligodextran production. Journal of Membrane Science, 2021, 623, 119082.	4.1	7

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19	Monolithic flow reactor for enzymatic oxidations. Journal of Chemical Technology and Biotechnology, 2021, 96, 2488-2495.	1.6	5
20	Development of an Ionic Porphyrin-Based Platform as a Biomimetic Light-Harvesting Agent for High-Performance Photoenzymatic Synthesis of Methanol from CO₂. ACS Sustainable Chemistry and Engineering, 2021, 9, 11503-11511.	3.2	27
21	Tailor-made novel electrospun polystyrene/poly(d,l-lactide-co-glycolide) for oxidoreductases immobilization: Improvement of catalytic properties under extreme reaction conditions. Bioorganic Chemistry, 2021, 114, 105036.	2.0	18
22	An enzymatic membrane reactor for oligodextran production: Effects of enzyme immobilization strategies on dextranase activity. Carbohydrate Polymers, 2021, 271, 118430.	5.1	11
23	Ultrafiltration intensification by dynamic operation: Insights from hybrid modeling. Chemical Engineering and Processing: Process Intensification, 2021, 169, 108618.	1.8	2
24	Surface treatments and functionalization of metalâ€ceramic membranes for improved enzyme immobilization performance. Journal of Chemical Technology and Biotechnology, 2020, 95, 993-1007.	1.6	17
25	Controlled pore collapse to increase solute rejection of modified PES membranes. Journal of Membrane Science, 2020, 595, 117515.	4.1	15
26	From second generation feed-stocks to innovative fermentation and downstream techniques for succinic acid production. Critical Reviews in Environmental Science and Technology, 2020, 50, 1829-1873.	6.6	37
27	Improved Alkyl Glycoside Synthesis by transâ€Glycosylation through Tailored Microenvironments of Immobilized Î²â€Glucosidase. ChemPlusChem, 2020, 85, 137-141.	1.3	9
28	The response surface methodology for optimization of tyrosinase immobilization onto electrospun polycaprolactoneâ€“chitosan fibers for use in bisphenol A removal. International Journal of Biological Macromolecules, 2020, 165, 2049-2059.	3.6	26
29	Charge exclusion as a strategy to control retention of small proteins in polyelectrolyte-modified ultrafiltration membranes. Separation and Purification Technology, 2020, 247, 116936.	3.9	12
30	Direct separation of acetate and furfural from xylose by nanofiltration of birch pretreated liquor: Effect of process conditions and separation mechanism. Separation and Purification Technology, 2020, 239, 116546.	3.9	12
31	Energy barriers to anion transport in polyelectrolyte multilayer nanofiltration membranes: Role of intra-pore diffusion. Journal of Membrane Science, 2020, 603, 117921.	4.1	51
32	Enzyme membrane reactors for production of oligosaccharides: A review on the interdependence between enzyme reaction and membrane separation. Separation and Purification Technology, 2020, 243, 116840.	3.9	35
33	A decision-support framework for techno-economic-sustainability assessment of resource recovery alternatives. Journal of Cleaner Production, 2020, 266, 121854.	4.6	18
34	Co-Immobilization of Glucose Dehydrogenase and Xylose Dehydrogenase as a New Approach for Simultaneous Production of Gluconic and Xylonic Acid. Materials, 2019, 12, 3167.	1.3	12
35	Multi-faceted strategy based on enzyme immobilization with reactant adsorption and membrane technology for biocatalytic removal of pollutants: A critical review. Biotechnology Advances, 2019, 37, 107401.	6.0	130
36	Membrane compaction, internal fouling, and membrane preconditioning as major factors affecting performance of solvent resistant nanofiltration membranes in methanol solutions. Separation and Purification Technology, 2019, 227, 115686.	3.9	4

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37	Robust biodegradation of naproxen and diclofenac by laccase immobilized using electrospun nanofibers with enhanced stability and reusability. Materials Science and Engineering C, 2019, 103, 109789.	3.8	81
38	Role of Operating Conditions in a Pilot Scale Investigation of Hollow Fiber Forward Osmosis Membrane Modules. Membranes, 2019, 9, 66.	1.4	34
39	Commercial polysulfone membranes pretreated with ethanol and NaOH: Effects on permeability, selectivity and antifouling properties. Separation and Purification Technology, 2019, 219, 82-89.	3.9	13
40	Bioconversion of xylose to xylonic acid via co-immobilized dehydrogenases for conjunct cofactor regeneration. Bioorganic Chemistry, 2019, 93, 102747.	2.0	15
41	Alcohol dehydrogenase on inorganic powders: Zeta potential and particle agglomeration as main factors determining activity during immobilization. Colloids and Surfaces B: Biointerfaces, 2019, 175, 136-142.	2.5	27
42	Enzyme Immobilization on Inorganic Surfaces for Membrane Reactor Applications: Mass Transfer Challenges, Enzyme Leakage and Reuse of Materials. Advanced Synthesis and Catalysis, 2018, 360, 2578-2607.	2.1	130
43	Surface modification of polysulfone membranes applied for a membrane reactor with immobilized alcohol dehydrogenase. Materials Today Communications, 2018, 14, 160-168.	0.9	22
44	Immobilization of alcohol dehydrogenase on ceramic silicon carbide membranes for enzymatic CH₃OH production. Journal of Chemical Technology and Biotechnology, 2018, 93, 2952-2961.	1.6	18
45	Directing filtration to narrow molecular weight distribution of oligodextran in an enzymatic membrane reactor. Journal of Membrane Science, 2018, 555, 268-279.	4.1	33
46	Simple Preparation of Thiolâ€“Ene Particles in Glycerol and Surface Functionalization by Thiolâ€“Ene Chemistry (TEC) and Surface Chain Transfer Free Radical Polymerization (SCTâ€FRP). Macromolecular Rapid Communications, 2018, 39, 1700394.	2.0	12
47	Experimental and computational evaluation of area selectively immobilized horseradish peroxidase in a microfluidic device. Chemical Engineering Journal, 2018, 332, 16-23.	6.6	13
48	Membrane separation of enzyme-converted biomass compounds: Recovery of xylose and production of gluconic acid as a value-added product. Separation and Purification Technology, 2018, 194, 73-80.	3.9	15
49	Upgrading of Biomass Monosaccharides by Immobilized Glucose Dehydrogenase and Xylose Dehydrogenase. ChemCatChem, 2018, 10, 5164-5173.	1.8	16
50	Developments in support materials for immobilization of oxidoreductases: A comprehensive review. Advances in Colloid and Interface Science, 2018, 258, 1-20.	7.0	203
51	A General Overview of Support Materials for Enzyme Immobilization: Characteristics, Properties, Practical Utility. Catalysts, 2018, 8, 92.	1.6	626
52	Lignin from hydrothermally pretreated grass biomass retards enzymatic cellulose degradation by acting as a physical barrier rather than by inducing nonproductive adsorption of enzymes. Biotechnology for Biofuels, 2018, 11, 85.	6.2	61
53	Efficient ionic liquid-based platform for multi-enzymatic conversion of carbon dioxide to methanol. Green Chemistry, 2018, 20, 4339-4348.	4.6	68
54	Ionic Liquids as Bifunctional Cosolvents Enhanced CO2 Conversion Catalysed by NADH-Dependent Formate Dehydrogenase. Catalysts, 2018, 8, 304.	1.6	11

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55	Impact of the fouling mechanism on enzymatic depolymerization of xylan in different configurations of membrane reactors. Separation and Purification Technology, 2017, 178, 154-162.	3.9	16
56	Surface properties correlate to the digestibility of hydrothermally pretreated lignocellulosic Poaceae biomass feedstocks. Biotechnology for Biofuels, 2017, 10, 49.	6.2	25
57	High-performance removal of acids and furans from wheat straw pretreatment liquid by diananofiltration. Separation Science and Technology, 2017, 52, 1901-1912.	1.3	10
58	Kinetics based reaction optimization of enzyme catalyzed reduction of formaldehyde to methanol with synchronous cofactor regeneration. Biotechnology and Bioengineering, 2017, 114, 2762-2770.	1.7	27
59	Development of a thiolâ€ene based screening platform for enzyme immobilization demonstrated using horseradish peroxidase. Biotechnology Progress, 2017, 33, 1267-1277.	1.3	9
60	Separation of xylose and glucose using an integrated membrane system for enzymatic cofactor regeneration and downstream purification. Journal of Membrane Science, 2017, 523, 327-335.	4.1	15
61	Enzyme recycling in lignocellulosic biorefineries. Biofuels, Bioproducts and Biorefining, 2017, 11, 150-167.	1.9	90
62	Significance of membrane bioreactor design on the biocatalytic performance of glucose oxidase and catalase: Free vs. immobilized enzyme systems. Biochemical Engineering Journal, 2017, 117, 41-47.	1.8	39
63	Enzymatic conversion of CO2 to CH3OH via reverse dehydrogenase cascade biocatalysis: Quantitative comparison of efficiencies of immobilized enzyme systems. Biochemical Engineering Journal, 2017, 127, 217-228.	1.8	78
64	Cascade catalysis in membranes with enzyme immobilization for multi-enzymatic conversion of CO2 to methanol. New Biotechnology, 2015, 32, 319-327.	2.4	114
65	Predicting optimal back-shock times in ultrafiltration hollow fiber modules II: Effect of inlet flow and concentration dependent viscosity. Journal of Membrane Science, 2015, 493, 486-495.	4.1	7
66	In Situ Formation of a Biocatalytic Alginate Membrane by Enhanced Concentration Polarization. ACS Applied Materials & Interfaces, 2015, 7, 17682-17691.	4.0	16
67	Separation of phenolic acids from monosaccharides by low-pressure nanofiltration integrated with laccase pre-treatments. Journal of Membrane Science, 2015, 482, 83-91.	4.1	50
68	High performance separation of xylose and glucose by enzyme assisted nanofiltration. Journal of Membrane Science, 2015, 492, 107-115.	4.1	37
69	Functionalization of a Membrane Sublayer Using Reverse Filtration of Enzymes and Dopamine Coating. ACS Applied Materials & Interfaces, 2014, 6, 22894-22904.	4.0	54
70	An integrated membrane system for the biocatalytic production of 3â€²-sialyllactose from dairy by-products. Bioresource Technology, 2014, 166, 9-16.	4.8	32
71	Directing filtration to optimize enzyme immobilization in reactive membranes. Journal of Membrane Science, 2014, 459, 1-11.	4.1	48
72	Enzyme immobilization by fouling in ultrafiltration membranes: Impact of membrane configuration and type on flux behavior and biocatalytic conversion efficacy. Biochemical Engineering Journal, 2014, 83, 79-89.	1.8	49

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73	Separation of 3â€²-sialyllactose and lactose by nanofiltration: A trade-off between charge repulsion and pore swelling induced by high pH. Separation and Purification Technology, 2014, 138, 77-83.	3.9	21
74	Filtration behavior of casein glycomacropeptide (CGMP) in an enzymatic membrane reactor: fouling control by membrane selection and threshold flux operation. Journal of Membrane Science, 2014, 469, 127-139.	4.1	44
75	Predicting optimal back-shock times in ultrafiltration hollow fibre modules through path-lines. Journal of Membrane Science, 2014, 470, 275-293.	4.1	7
76	Mathematical modelling of dextran filtration through hollow fibre membranes. Separation and Purification Technology, 2014, 125, 21-36.	3.9	11
77	Production of lipids and docosahexasaenoic acid (<scp>DHA</scp>) by a native Thraustochytrium strain. European Journal of Lipid Science and Technology, 2013, 115, 890-900.	1.0	31
78	Mechanisms controlling retention during ultrafiltration of charged saccharides: Molecular conformation and electrostatic forces. Separation and Purification Technology, 2013, 118, 704-709.	3.9	6
79	Fouling-induced enzyme immobilization for membrane reactors. Bioresource Technology, 2013, 147, 260-268.	4.8	57
80	Strategies for Controlling the Rejection of Charged Oligosaccharides During Ultrafiltration: Modification of Molecular Shape, Operational Pressure and Membrane Cutoff. Procedia Engineering, 2012, 44, 2026.	1.2	0
81	In vitro Activity on Human Gut Bacteria of Murta Leaf Extracts (Ugni molinae turcz.), a Native Plant from Southern Chile. Journal of Food Science, 2012, 77, M323-9.	1.5	11
82	Controlling the rejection of protein during membrane filtration by adding selected polyelectrolytes. Separation and Purification Technology, 2012, 85, 54-60.	3.9	18
83	Statistical modelling of the interplay between solute shape and rejection in porous membranes. Separation and Purification Technology, 2012, 89, 261-269.	3.9	8
84	A Laboratory Exercise To Understand the Importance of Enzyme Technology in the Fruit-Processing Industry: Viscosity Decrease and Phenols Release from Apple Mash. Journal of Chemical Education, 2011, 88, 499-502.	1.1	1
85	A Miniature Membrane Reactor for Evaluation of Process Design Options on the Enzymatic Degradation of Pectin. Industrial & Engineering Chemistry Research, 2011, 50, 11252-11258.	1.8	1
86	Recovery of volatile fruit juice aroma compounds by membrane technology: Sweeping gas versus vacuum membrane distillation. Innovative Food Science and Emerging Technologies, 2011, 12, 388-397.	2.7	51
87	A continuous membrane microbioreactor system for development of integrated pectin modification and separation processes. Chemical Engineering Journal, 2011, 167, 418-426.	6.6	31
88	Juice clarification by protease and pectinase treatments indicates new roles of pectin and protein in cherry juice turbidity. Food and Bioproducts Processing, 2010, 88, 259-265.	1.8	114
89	Plant location and extraction procedure strongly alter the antimicrobial activity of murta extracts. European Food Research and Technology, 2009, 228, 467-475.	1.6	56
90	Membrane technology for purification of enzymatically produced oligosaccharides: Molecular and operational features affecting performance. Separation and Purification Technology, 2009, 70, 1-11.	3.9	167

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91	Selective release of phenols from apple skin: Mass transfer kinetics during solvent and enzyme-assisted extraction. Separation and Purification Technology, 2008, 63, 620-627.	3.9	104
92	Separation and HPLC-MS Identification of Phenolic Antioxidants from Agricultural Residues: Almond Hulls and Grape Pomace. Journal of Agricultural and Food Chemistry, 2007, 55, 10101-10109.	2.4	98
93	Processing of Rosa rubiginosa: Extraction of oil and antioxidant substances. Bioresource Technology, 2007, 98, 3506-3512.	4.8	62
94	Supercritical fluid and solidâ€“liquid extraction of phenolic antioxidants from grape pomace: a comparative study. European Food Research and Technology, 2007, 226, 199-205.	1.6	94
95	Ethanolic extraction of Rosa rubiginosa soluble substances: Oil solubility equilibria and kinetic studies. Journal of Food Engineering, 2007, 79, 150-157.	2.7	60
96	Effect of Cellulases, Solvent Type and Particle Size Distribution on the Extraction of Chlorogenic Acid and Other Phenols from Spent Coffee Grounds. American Journal of Food Technology, 2007, 2, 641-651.	0.2	31
97	Murta Leaves (Ugni molinaeTurcz) as a Source of Antioxidant Polyphenols. Journal of Agricultural and Food Chemistry, 2006, 54, 59-64.	2.4	89
98	Effect of Clarification Techniques and Rat Intestinal Extract Incubation on Phenolic Composition and Antioxidant Activity of Black Currant Juice. Journal of Agricultural and Food Chemistry, 2006, 54, 6564-6571.	2.4	13
99	A Simple Method To Separate Red Wine Nonpolymeric and Polymeric Phenols by Solid-Phase Extraction. Journal of Agricultural and Food Chemistry, 2006, 54, 2839-2844.	2.4	41
100	Protease-Assisted Clarification of Black Currant Juice:Â Synergy with Other Clarifying Agents and Effects on the Phenol Content. Journal of Agricultural and Food Chemistry, 2006, 54, 6554-6563.	2.4	31
101	Upgrading of grape skins: Significance of plant cell-wall structural components and extraction techniques for phenol release. Trends in Food Science and Technology, 2006, 17, 579-590.	7.8	444
102	Influence of extraction conditions on phenolic yields from pine bark: assessment of procyanidins polymerization degree by thiolysis. Food Chemistry, 2006, 94, 406-414.	4.2	70
103	Applicability of NIR spectroscopy to determine oil and other physicochemical parameters in Rosa mosqueta and Chilean hazelnut. European Food Research and Technology, 2006, 222, 443-450.	1.6	8
104	Effect of bubbling nitrogen and pulsed flow on the antiradical activity of grape residues. Journal of Food Engineering, 2006, 73, 269-275.	2.7	4
105	Mass transfer during continuous solidâ€“liquid extraction of antioxidants from grape byproducts. Journal of Food Engineering, 2006, 77, 57-63.	2.7	119
106	A thermal treatment to increase the antioxidant capacity of natural phenols: catechin, resveratrol and grape extract cases. European Food Research and Technology, 2005, 221, 284-290.	1.6	39
107	Effect of Solvent, Temperature, and Solvent-to-Solid Ratio on the Total Phenolic Content and Antiradical Activity of Extracts from Different Components of Grape Pomace. Journal of Agricultural and Food Chemistry, 2005, 53, 2111-2117.	2.4	443
108	Solvent effect on quercetin antioxidant capacity. Food Chemistry, 2004, 88, 201-207.	4.2	72

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109	Interaction among Phenols in Food Fortification:Â Negative Synergism on Antioxidant Capacity. Journal of Agricultural and Food Chemistry, 2004, 52, 1177-1180.	2.4	180