Rafael Costa Rodrigues

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#	Paper	IF	Citations
118	Modifying enzyme activity and selectivity by immobilization. <i>Chemical Society Reviews</i> , 2013 , 42, 6290-	3 0 578.5	1298
117	Potential of Different Enzyme Immobilization Strategies to Improve Enzyme Performance. <i>Advanced Synthesis and Catalysis</i> , 2011 , 353, 2885-2904	5.6	1170
116	Glutaraldehyde in bio-catalysts design: a useful crosslinker and a versatile tool in enzyme immobilization. <i>RSC Advances</i> , 2014 , 4, 1583-1600	3.7	536
115	Strategies for the one-step immobilization-purification of enzymes as industrial biocatalysts. <i>Biotechnology Advances</i> , 2015 , 33, 435-56	17.8	463
114	Importance of the Support Properties for Immobilization or Purification of Enzymes. <i>ChemCatChem</i> , 2015 , 7, 2413-2432	5.2	387
113	Heterofunctional supports in enzyme immobilization: from traditional immobilization protocols to opportunities in tuning enzyme properties. <i>Biomacromolecules</i> , 2013 , 14, 2433-62	6.9	358
112	Coupling Chemical Modification and Immobilization to Improve the Catalytic Performance of Enzymes. <i>Advanced Synthesis and Catalysis</i> , 2011 , 353, 2216-2238	5.6	268
111	Immobilization of lipases on hydrophobic supports: immobilization mechanism, advantages, problems, and solutions. <i>Biotechnology Advances</i> , 2019 , 37, 746-770	17.8	254
110	Novozym 435: the perfect[lipase immobilized biocatalyst?. <i>Catalysis Science and Technology</i> , 2019 , 9, 2380-2420	5.5	241
109	Lipase from Rhizomucor miehei as an industrial biocatalyst in chemical process. <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2010 , 64, 1-22		219
108	Lipase from Rhizomucor miehei as a biocatalyst in fats and oils modification. <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2010 , 66, 15-32		200
107	Polyethylenimine: a very useful ionic polymer in the design of immobilized enzyme biocatalysts. Journal of Materials Chemistry B, 2017 , 5, 7461-7490	7.3	162
106	Chemical Modification in the Design of Immobilized Enzyme Biocatalysts: Drawbacks and Opportunities. <i>Chemical Record</i> , 2016 , 16, 1436-55	6.6	132
105	Chitosan crosslinked with genipin as support matrix for application in food process: Support characterization and ED-galactosidase immobilization. <i>Carbohydrate Polymers</i> , 2016 , 137, 184-190	10.3	128
104	Enzymatic reactors for biodiesel synthesis: Present status and future prospects. <i>Biotechnology Advances</i> , 2015 , 33, 511-25	17.8	124
103	Enzymatic Synthesis of Biodiesel from Transesterification Reactions of Vegetable Oils and Short Chain Alcohols. <i>JAOCS, Journal of the American Oil ChemistsnSociety</i> , 2008 , 85, 925-930	1.8	118
102	Effect of the support size on the properties of Egalactosidase immobilized on chitosan: advantages and disadvantages of macro and nanoparticles. <i>Biomacromolecules</i> , 2012 , 13, 2456-64	6.9	109

101	Hydrogen Peroxide in Biocatalysis. A Dangerous Liaison. Current Organic Chemistry, 2012, 16, 2652-267	21.7	103
100	Rapid and high yields of synthesis of butyl acetate catalyzed by Novozym 435: Reaction optimization by response surface methodology. <i>Process Biochemistry</i> , 2011 , 46, 2311-2316	4.8	95
99	The combined use of ultrasound and molecular sieves improves the synthesis of ethyl butyrate catalyzed by immobilized Thermomyces lanuginosus lipase. <i>Ultrasonics Sonochemistry</i> , 2015 , 22, 89-94	8.9	93
98	Amination of enzymes to improve biocatalyst performance: coupling genetic modification and physicochemical tools. <i>RSC Advances</i> , 2014 , 4, 38350-38374	3.7	91
97	Ultrasound-assisted butyl acetate synthesis catalyzed by Novozym 435: enhanced activity and operational stability. <i>Ultrasonics Sonochemistry</i> , 2013 , 20, 1155-60	8.9	90
96	Effects of the combined use of Thermomyces lanuginosus and Rhizomucor miehei lipases for the transesterification and hydrolysis of soybean oil. <i>Process Biochemistry</i> , 2011 , 46, 682-688	4.8	89
95	Use of enzymes in the production of semi-synthetic penicillins and cephalosporins: drawbacks and perspectives. <i>Current Medicinal Chemistry</i> , 2010 , 17, 3855-73	4.3	88
94	ImmobilizationEtabilization of the lipase from Thermomyces lanuginosus: Critical role of chemical amination. <i>Process Biochemistry</i> , 2009 , 44, 963-968	4.8	86
93	Improved production of butyl butyrate with lipase from Thermomyces lanuginosus immobilized on styrene-divinylbenzene beads. <i>Bioresource Technology</i> , 2013 , 134, 417-22	11	81
92	High stability of immobilized ED-galactosidase for lactose hydrolysis and galactooligosaccharides synthesis. <i>Carbohydrate Polymers</i> , 2013 , 95, 465-70	10.3	73
91	Optimization of ethyl ester production from olive and palm oils using mixtures of immobilized lipases. <i>Applied Catalysis A: General</i> , 2015 , 490, 50-56	5.1	66
90	Optimized preparation of CALB-CLEAs by response surface methodology: The necessity to employ a feeder to have an effective crosslinking. <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2012 , 80, 7-14		66
89	Combi-lipase for heterogeneous substrates: a new approach for hydrolysis of soybean oil using mixtures of biocatalysts. <i>RSC Advances</i> , 2014 , 4, 6863-6868	3.7	64
88	Enzyme co-immobilization: Always the biocatalyst designers' choiceBr not?. <i>Biotechnology Advances</i> , 2021 , 51, 107584	17.8	63
87	Ultrasound technology and molecular sieves improve the thermodynamically controlled esterification of butyric acid mediated by immobilized lipase from Rhizomucor miehei. <i>RSC Advances</i> , 2014 , 4, 8675	3.7	63
86	Two step ethanolysis: A simple and efficient way to improve the enzymatic biodiesel synthesis catalyzed by an immobilized\(\text{Stabilized lipase from Thermomyces lanuginosus.} \) Process Biochemistry , \(2010, 45, 1268-1273 \)	4.8	63
85	Comparison of acid, basic and enzymatic catalysis on the production of biodiesel after RSM optimization. <i>Renewable Energy</i> , 2019 , 135, 1-9	8.1	60
84	Fructooligosaccharides synthesis by highly stable immobilized Efructofuranosidase from Aspergillus aculeatus. <i>Carbohydrate Polymers</i> , 2014 , 103, 193-7	10.3	59

83	High operational stability of invertase from Saccharomyces cerevisiae immobilized on chitosan nanoparticles. <i>Carbohydrate Polymers</i> , 2013 , 92, 462-8	10.3	57
82	Immobilization of lipase B from Candida antarctica on porous styrene-divinylbenzene beads improves butyl acetate synthesis. <i>Biotechnology Progress</i> , 2012 , 28, 406-12	2.8	56
81	Transesterification of Waste Frying Oil and Soybean Oil by Combi-lipases Under Ultrasound-Assisted Reactions. <i>Applied Biochemistry and Biotechnology</i> , 2018 , 186, 576-589	3.2	52
80	Immobilization of Proteins in Poly-Styrene-Divinylbenzene Matrices: Functional Properties and Applications. <i>Current Organic Chemistry</i> , 2015 , 19, 1707-1718	1.7	51
79	Effect of immobilization protocol on optimal conditions of ethyl butyrate synthesis catalyzed by lipase B from Candida antarctica. <i>Journal of Chemical Technology and Biotechnology</i> , 2013 , 88, 1089-109	9 5 ^{3.5}	50
78	Stabilization of enzymes via immobilization: Multipoint covalent attachment and other stabilization strategies. <i>Biotechnology Advances</i> , 2021 , 52, 107821	17.8	50
77	Preparation and characterization of a Combi-CLEAs from pectinases and cellulases: a potential biocatalyst for grape juice clarification. <i>RSC Advances</i> , 2016 , 6, 27242-27251	3.7	49
76	Comparison of the performance of commercial immobilized lipases in the synthesis of different flavor esters. <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2014 , 105, 18-25		48
75	Improving the catalytic properties of immobilized Lecitase via physical coating with ionic polymers. <i>Enzyme and Microbial Technology</i> , 2014 , 60, 1-8	3.8	47
74	Immobilization and stabilization of different Eglucosidases using the glutaraldehyde chemistry: Optimal protocol depends on the enzyme. <i>International Journal of Biological Macromolecules</i> , 2019 , 129, 672-678	7.9	45
73	Evaluation of styrene-divinylbenzene beads as a support to immobilize lipases. <i>Molecules</i> , 2014 , 19, 762	294.485	44
72	Stabilizing hyperactivated lecitase structures through physical treatment with ionic polymers. <i>Process Biochemistry</i> , 2014 , 49, 1511-1515	4.8	43
71	Continuous production of Eyclodextrin from starch by highly stable cyclodextrin glycosyltransferase immobilized on chitosan. <i>Carbohydrate Polymers</i> , 2013 , 98, 1311-6	10.3	43
70	Magnetic biocatalysts of pectinase and cellulase: Synthesis and characterization of two preparations for application in grape juice clarification. <i>International Journal of Biological Macromolecules</i> , 2018 , 115, 35-44	7.9	41
69	Synthesis of butyl butyrate in batch and continuous enzymatic reactors using Thermomyces lanuginosus lipase immobilized in Immobead 150. <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2016 , 127, 67-75		41
68	Optimization of synthesis of fatty acid methyl esters catalyzed by lipase B from Candida antarctica immobilized on hydrophobic supports. <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2013 , 94, 51-56		41
67	The presence of thiolated compounds allows the immobilization of enzymes on glyoxyl agarose at mild pH values: New strategies of stabilization by multipoint covalent attachment. <i>Enzyme and Microbial Technology</i> , 2009 , 45, 477-483	3.8	41
66	A new bioprocess for the production of prebiotic lactosucrose by an immobilized Egalactosidase. <i>Process Biochemistry</i> , 2017 , 55, 96-103	4.8	40

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65	Pectin lyase immobilization using the glutaraldehyde chemistry increases the enzyme operation range. <i>Enzyme and Microbial Technology</i> , 2020 , 132, 109397	3.8	40	
64	Combined effects of ultrasound and immobilization protocol on butyl acetate synthesis catalyzed by CALB. <i>Molecules</i> , 2014 , 19, 9562-76	4.8	36	
63	One Pot Use of Combilipases for Full Modification of Oils and Fats: Multifunctional and Heterogeneous Substrates. <i>Catalysts</i> , 2020 , 10, 605	4	35	
62	Production and characterization of biodiesel from oil of fish waste by enzymatic catalysis. <i>Renewable Energy</i> , 2020 , 153, 1346-1354	8.1	35	
61	Lipase-catalyzed ethanolysis of soybean oil in a solvent-free system using central composite design and response surface methodology. <i>Journal of Chemical Technology and Biotechnology</i> , 2008 , 83, 849-85	5 4 ·5	35	
60	Continuous production of fructooligosaccharides and invert sugar by chitosan immobilized enzymes: Comparison between in fluidized and packed bed reactors. <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2015 , 111, 51-55		34	
59	Immobilization of Glycoside Hydrolase Families GH1, GH13, and GH70: State of the Art and Perspectives. <i>Molecules</i> , 2016 , 21,	4.8	34	
58	Production of organic solvent tolerant lipase by Staphylococcus caseolyticus EX17 using raw glycerol as substrate. <i>Journal of Chemical Technology and Biotechnology</i> , 2008 , 83, 821-828	3.5	33	
57	Improvement of pectinase, xylanase and cellulase activities by ultrasound: Effects on enzymes and substrates, kinetics and thermodynamic parameters. <i>Process Biochemistry</i> , 2017 , 61, 80-87	4.8	32	
56	Optimized immobilization of polygalacturonase from Aspergillus niger following different protocols: Improved stability and activity under drastic conditions. <i>International Journal of Biological Macromolecules</i> , 2019 , 138, 234-243	7.9	30	
55	Positive effects of the multipoint covalent immobilization in the reactivation of partially inactivated derivatives of lipase from Thermomyces lanuginosus. <i>Enzyme and Microbial Technology</i> , 2009 , 44, 386-393	3.8	30	
54	Reactivation of covalently immobilized lipase from Thermomyces lanuginosus. <i>Process Biochemistry</i> , 2009 , 44, 641-646	4.8	30	
53	Identification of Bioactive Compounds From Vitis labrusca L. Variety Concord Grape Juice Treated With Commercial Enzymes: Improved Yield and Quality Parameters. <i>Food and Bioprocess Technology</i> , 2016 , 9, 365-377	5.1	29	
52	Enzymatic synthesis of ethyl esters from waste oil using mixtures of lipases in a plug-flow packed-bed continuous reactor. <i>Biotechnology Progress</i> , 2018 , 34, 952-959	2.8	28	
51	Optimization of pineapple flavour synthesis by esterification catalysed by immobilized lipase from Rhizomucor miehei. <i>Flavour and Fragrance Journal</i> , 2012 , 27, 196-200	2.5	28	
50	Immobilization of Thermomyces lanuginosus lipase by different techniques on Immobead 150 support: characterization and applications. <i>Applied Biochemistry and Biotechnology</i> , 2014 , 172, 2507-20	3.2	25	
49	Improved reactivation of immobilized-stabilized lipase from Thermomyces lanuginosus by its coating with highly hydrophilic polymers. <i>Journal of Biotechnology</i> , 2009 , 144, 113-9	3.7	25	
48	Lecitase ultra: A phospholipase with great potential in biocatalysis. <i>Molecular Catalysis</i> , 2019 , 473, 1104	053	24	

47	Multipoint covalent immobilization of lipases on aldehyde-activated support: Characterization and application in transesterification reaction. <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2013 , 94, 57-62		24
46	Enzyme production of D-gluconic acid and glucose oxidase: successful tales of cascade reactions. <i>Catalysis Science and Technology</i> , 2020 , 10, 5740-5771	5.5	23
45	Influence of reaction parameters in the polymerization between genipin and chitosan for enzyme immobilization. <i>Process Biochemistry</i> , 2019 , 84, 73-80	4.8	22
44	Immobilization of pectinase on chitosan-magnetic particles: Influence of particle preparation protocol on enzyme properties for fruit juice clarification. <i>Biotechnology Reports (Amsterdam, Netherlands)</i> , 2019 , 24, e00373	5.3	21
43	Synergistic effects of Pectinex Ultra Clear and Lallzyme Beta on yield and bioactive compounds extraction of Concord grape juice. <i>LWT - Food Science and Technology</i> , 2016 , 72, 157-165	5.4	21
42	Complete reactivation of immobilized derivatives of a trimeric glutamate dehydrogenase from Thermus thermophillus. <i>Process Biochemistry</i> , 2010 , 45, 107-113	4.8	21
41	Valorization of Opuntia monacantha (Willd.) Haw. cladodes to obtain a mucilage with hydrocolloid features: Physicochemical and functional performance. <i>International Journal of Biological Macromolecules</i> , 2019 , 123, 900-909	7.9	20
40	Effect of deacetylation degree of chitosan on rheological properties and physical chemical characteristics of genipin-crosslinked chitosan beads. <i>Food Hydrocolloids</i> , 2020 , 106, 105876	10.6	19
39	Optimized butyl butyrate synthesis catalyzed by Thermomyces lanuginosus lipase. <i>Biotechnology Progress</i> , 2013 , 29, 1416-21	2.8	18
38	Modulation of a lipase from Staphylococcus warneri EX17 using immobilization techniques. <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2009 , 60, 125-132		18
37	Efficient purification-immobilization of an organic solvent-tolerant lipase from Staphylococcus warneri EX17 on porous styrene-divinylbenzene beads. <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2014 , 99, 51-55		17
36	Biotechnological prospects of the lipase from Mucor javanicus. <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2013 , 93, 34-43		17
35	Use of Lecitase-Ultra immobilized on styrene-divinylbenzene beads as catalyst of esterification reactions: Effects of ultrasounds. <i>Catalysis Today</i> , 2015 , 255, 27-32	5.3	17
34	Effect of feather meal as proteic feeder on combi-CLEAs preparation for grape juice clarification. <i>Process Biochemistry</i> , 2017 , 62, 122-127	4.8	15
33	Improved enzyme stability in lipase-catalyzed synthesis of fatty acid ethyl ester from soybean oil. <i>Applied Biochemistry and Biotechnology</i> , 2009 , 152, 394-404	3.2	15
32	Microbial Enzymes as Substitutes of Chemical Additives in Baking Wheat FlourBart I: Individual Effects of Nine Enzymes on Flour Dough Rheology. <i>Food and Bioprocess Technology</i> , 2016 , 9, 2012-2023	5.1	14
31	Microbial Enzymes as Substitutes of Chemical Additives in Baking Wheat Flour B art II: Combined Effects of Nine Enzymes on Dough Rheology. <i>Food and Bioprocess Technology</i> , 2016 , 9, 1598-1611	5.1	13

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29	Effects of oxygen volumetric mass transfer coefficient and pH on lipase production by Staphylococcus warneri EX17. <i>Biotechnology and Bioprocess Engineering</i> , 2009 , 14, 105-111	3.1	12
28	ULTRASOUND-ASSISTED TRANSESTERIFICATION OF SOYBEAN OIL USING COMBI-LIPASE BIOCATALYSTS. <i>Brazilian Journal of Chemical Engineering</i> , 2019 , 36, 995-1005	1.7	12
27	Synthesis of butyl esters via ultrasound-assisted transesterification of macaba (Acrocomia aculeata) acid oil using a biomass-derived fermented solid as biocatalyst. <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2016 , 133, S213-S219		12
26	Directed immobilization of CGTase: The effect of the enzyme orientation on the enzyme activity and its use in packed-bed reactor for continuous production of cyclodextrins. <i>Process Biochemistry</i> , 2017 , 58, 120-127	4.8	11
25	Effects of immobilization, pH and reaction time in the modulation of 日日or Eyclodextrins production by cyclodextrin glycosyltransferase: Batch and continuous process. <i>Carbohydrate Polymers</i> , 2017 , 169, 41-49	10.3	11
24	Production and optimization of isopropyl palmitate via biocatalytic route using home-made enzymatic catalysts. <i>Journal of Chemical Technology and Biotechnology</i> , 2019 , 94, 389-397	3.5	11
23	Improvement of Enzymatic Assisted Extraction Conditions on Anthocyanin Recovery from Different Varieties of V. vinifera and V. labrusca Grape Pomaces. <i>Food Analytical Methods</i> , 2019 , 12, 2056-2068	3.4	11
22	Purification, immobilization, and characterization of a specific lipase from Staphylococcus warneri EX17 by enzyme fractionating via adsorption on different hydrophobic supports. <i>Biotechnology Progress</i> , 2011 , 27, 717-23	2.8	10
21	Optimization of transglutaminase extraction produced by Bacillus circulans BL32 on solid-state cultivation. <i>Journal of Chemical Technology and Biotechnology</i> , 2008 , 83, 1306-1313	3.5	9
20	Physico-chemical properties, kinetic parameters, and glucose inhibition of several beta-glucosidases for industrial applications. <i>Process Biochemistry</i> , 2019 , 78, 82-90	4.8	8
19	Modification of Immobead 150 support for protein immobilization: Effects on the properties of immobilized Aspergillus oryzae Egalactosidase. <i>Biotechnology Progress</i> , 2018 , 34, 934-943	2.8	8
18	Stability/activity features of the main enzyme components of rohapect 10L. <i>Biotechnology Progress</i> , 2019 , 35, e2877	2.8	8
17	Dextransucrase immobilized on activated-chitosan particles as a novel biocatalyst. <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2016 , 133, S143-S149		8
16	Characterization of dietary fiber from residual cellulose sausage casings using a combination of enzymatic treatment and high-speed homogenization. <i>Food Hydrocolloids</i> , 2020 , 100, 105398	10.6	8
15	Effects of oxygen volumetric mass transfer coefficient on transglutaminase production by Bacillus circulans BL32. <i>Biotechnology and Bioprocess Engineering</i> , 2009 , 14, 571-576	3.1	7
14	Cloning and expression of the Bacillus amyloliquefaciens transglutaminase gene in E. coli using a bicistronic vector construction. <i>Enzyme and Microbial Technology</i> , 2020 , 134, 109468	3.8	7
13	Preparation and characterization of cross-linked enzyme aggregates of dextransucrase from Leuconostoc mesenteroides B-512F. <i>Process Biochemistry</i> , 2018 , 71, 101-108	4.8	7
12	Enzymatic clarification of orange juice in continuous bed reactors: Fluidized-bed versus packed-bed reactor. <i>Catalysis Today</i> , 2021 , 362, 184-191	5.3	6

11	Optimization and characterization of CLEAs of the very thermostable dimeric peroxidase from Roystonea regia. <i>RSC Advances</i> , 2015 , 5, 53047-53053	3.7	5
10	STABILIZATION STUDY OF TETRAMERIC Kluyveromyces lactis EGALACTOSIDASE BY IMMOBILIZATION ON IMMOBEAD: THERMAL, PHYSICO-CHEMICAL, TEXTURAL AND CATALYTIC PROPERTIES. <i>Brazilian Journal of Chemical Engineering</i> , 2019 , 36, 1403-1417	1.7	4
9	Effect of Tris Buffer in the Intensity of the Multipoint Covalent Immobilization of Enzymes in Glyoxyl-Agarose Beads. <i>Applied Biochemistry and Biotechnology</i> , 2021 , 193, 2843-2857	3.2	4
8	Aqueous enzymatic extraction of Ricinus communis seeds oil using Viscozyme L. <i>Industrial Crops and Products</i> , 2021 , 170, 113811	5.9	4
7	Physical-Chemical Properties of the Support Immobead 150 Before and After the Immobilization Process of Lipase. <i>Journal of the Brazilian Chemical Society</i> , 2016 ,	1.5	3
6	Kinetics and Thermodynamics of Thermal Inactivation of EGalactosidase from Aspergillus oryzae. <i>Brazilian Archives of Biology and Technology</i> , 2018 , 61,	1.8	3
5	Preparation of immobilized/stabilized biocatalysts of Eglucosidases from different sources: Importance of the support active groups and the immobilization protocol. <i>Biotechnology Progress</i> , 2019 , 35, e2890	2.8	2
4	An efficient decolorization of methyl orange dye by laccase from Marasmiellus palmivorus immobilized on chitosan-coated magnetic particles. <i>Biocatalysis and Agricultural Biotechnology</i> , 2020 , 30, 101859	4.2	2
3	Combination of Celluclast and Viscozyme improves enzymatic hydrolysis of residual cellulose casings: process optimization and scale-up. <i>Brazilian Journal of Chemical Engineering</i> , 2020 , 37, 463-473	1.7	2
2	Aqueous Extraction of Seed Oil from Mamey Sapote (Pouteria sapota) after Viscozyme L Treatment. <i>Catalysts</i> , 2021 , 11, 748	4	2
1	Responses to Lerner A. and Matthias T. Comment on Microbial Enzymes as Substitutes of Chemical Additives in Baking Wheat Flour Part II: Combined Effects of Nine Enzymes on Dough Rheology [M.M. Bueno, R.C.S. Thys and R.C. Rodrigues (2016), Food and Bioprocess Technology, 9(9), 1598 [1611] [Food and Bioprocess Technology, 2016, 9, 2127-2127]	5.1	1