Rafael Costa Rodrigues

List of Publications by Year in Descending Order

118 papers	9,497 citations	45 h-index	96 g-index
126 ext. papers	10,875 ext. citations	5.9 avg, IF	6.56 L-index

#	Paper	IF	Citations
118	Enzyme co-immobilization: Always the biocatalyst designers' choice or not?. *Biotechnology Advances*, **2021**, 51, 107584	17.8	63
117	Effect of Tris Buffer in the Intensity of the Multipoint Covalent Immobilization of Enzymes in Glyoxyl-Agarose Beads. *Applied Biochemistry and Biotechnology*, **2021**, 193, 2843-2857	3.2	4
116	Aqueous Extraction of Seed Oil from Mamey Sapote (Pouteria sapota) after Viscozyme L Treatment. *Catalysts*, **2021**, 11, 748	4	2
115	Enzymatic clarification of orange juice in continuous bed reactors: Fluidized-bed versus packed-bed reactor. *Catalysis Today*, **2021**, 362, 184-191	5.3	6
114	Aqueous enzymatic extraction of Ricinus communis seeds oil using Viscozyme L. *Industrial Crops and Products*, **2021**, 170, 113811	5.9	4
113	Stabilization of enzymes via immobilization: Multipoint covalent attachment and other stabilization strategies. *Biotechnology Advances*, **2021**, 52, 107821	17.8	50
112	Effect of deacetylation degree of chitosan on rheological properties and physical chemical characteristics of genipin-crosslinked chitosan beads. *Food Hydrocolloids*, **2020**, 106, 105876	10.6	19
111	One Pot Use of Combilipases for Full Modification of Oils and Fats: Multifunctional and Heterogeneous Substrates. *Catalysts*, **2020**, 10, 605	4	35
110	Production and characterization of biodiesel from oil of fish waste by enzymatic catalysis. *Renewable Energy*, **2020**, 153, 1346-1354	8.1	35
109	Cloning and expression of the Bacillus amyloliquefaciens transglutaminase gene in E. coli using a bicistronic vector construction. *Enzyme and Microbial Technology*, **2020**, 134, 109468	3.8	7
108	Enzyme production of D-gluconic acid and glucose oxidase: successful tales of cascade reactions. *Catalysis Science and Technology*, **2020**, 10, 5740-5771	5.5	23
107	An efficient decolorization of methyl orange dye by laccase from Marasmiellus palmivorus immobilized on chitosan-coated magnetic particles. *Biocatalysis and Agricultural Biotechnology*, **2020**, 30, 101859	4.2	2
106	Combination of Celluclast and Viscozyme improves enzymatic hydrolysis of residual cellulose casings: process optimization and scale-up. *Brazilian Journal of Chemical Engineering*, **2020**, 37, 463-473	1.7	2
105	Characterization of dietary fiber from residual cellulose sausage casings using a combination of enzymatic treatment and high-speed homogenization. *Food Hydrocolloids*, **2020**, 100, 105398	10.6	8
104	Pectin lyase immobilization using the glutaraldehyde chemistry increases the enzyme operation range. *Enzyme and Microbial Technology*, **2020**, 132, 109397	3.8	40
103	Immobilization of pectinase on chitosan-magnetic particles: Influence of particle preparation protocol on enzyme properties for fruit juice clarification. *Biotechnology Reports (Amsterdam, Netherlands)*, **2019**, 24, e00373	5.3	21
102	Physico-chemical properties, kinetic parameters, and glucose inhibition of several beta-glucosidases for industrial applications. *Process Biochemistry*, **2019**, 78, 82-90	4.8	8

101	Influence of reaction parameters in the polymerization between genipin and chitosan for enzyme immobilization. *Process Biochemistry*, **2019**, 84, 73-80	4.8	22
100	Lecitase ultra: A phospholipase with great potential in biocatalysis. *Molecular Catalysis*, **2019**, 473, 110405	3.3	24
99	Immobilization of lipases on hydrophobic supports: immobilization mechanism, advantages, problems, and solutions. *Biotechnology Advances*, **2019**, 37, 746-770	17.8	254
98	Novozym 435: the "perfect" lipase immobilized biocatalyst?. *Catalysis Science and Technology*, **2019**, 9, 2380-2420	5.5	241
97	Immobilization and stabilization of different β-glucosidases using the glutaraldehyde chemistry: Optimal protocol depends on the enzyme. *International Journal of Biological Macromolecules*, **2019**, 129, 672-678	7.9	45
96	Production and optimization of isopropyl palmitate via biocatalytic route using home-made enzymatic catalysts. *Journal of Chemical Technology and Biotechnology*, **2019**, 94, 389-397	3.5	11
95	Preparation of immobilized/stabilized biocatalysts of β-glucosidases from different sources: Importance of the support active groups and the immobilization protocol. *Biotechnology Progress*, **2019**, 35, e2890	2.8	2
94	Optimized immobilization of polygalacturonase from Aspergillus niger following different protocols: Improved stability and activity under drastic conditions. *International Journal of Biological Macromolecules*, **2019**, 138, 234-243	7.9	30
93	Improvement of Enzymatic Assisted Extraction Conditions on Anthocyanin Recovery from Different Varieties of V. vinifera and V. labrusca Grape Pomaces. *Food Analytical Methods*, **2019**, 12, 2056-2068	3.4	11
92	Stability/activity features of the main enzyme components of rohapect 10L. *Biotechnology Progress*, **2019**, 35, e2877	2.8	8
91	ULTRASOUND-ASSISTED TRANSESTERIFICATION OF SOYBEAN OIL USING COMBI-LIPASE BIOCATALYSTS. *Brazilian Journal of Chemical Engineering*, **2019**, 36, 995-1005	1.7	12
90	STABILIZATION STUDY OF TETRAMERIC Kluyveromyces lactis β-GALACTOSIDASE BY IMMOBILIZATION ON IMMOBEAD: THERMAL, PHYSICO-CHEMICAL, TEXTURAL AND CATALYTIC PROPERTIES. *Brazilian Journal of Chemical Engineering*, **2019**, 36, 1403-1417	1.7	4
89	Valorization of Opuntia monacantha (Willd.) Haw. cladodes to obtain a mucilage with hydrocolloid features: Physicochemical and functional performance. *International Journal of Biological Macromolecules*, **2019**, 123, 900-909	7.9	20
88	Comparison of acid, basic and enzymatic catalysis on the production of biodiesel after RSM optimization. *Renewable Energy*, **2019**, 135, 1-9	8.1	60
87	Transesterification of Waste Frying Oil and Soybean Oil by Combi-lipases Under Ultrasound-Assisted Reactions. *Applied Biochemistry and Biotechnology*, **2018**, 186, 576-589	3.2	52
86	Magnetic biocatalysts of pectinase and cellulase: Synthesis and characterization of two preparations for application in grape juice clarification. *International Journal of Biological Macromolecules*, **2018**, 115, 35-44	7.9	41
85	Enzymatic synthesis of ethyl esters from waste oil using mixtures of lipases in a plug-flow packed-bed continuous reactor. *Biotechnology Progress*, **2018**, 34, 952-959	2.8	28
84	Modification of Immobead 150 support for protein immobilization: Effects on the properties of immobilized Aspergillus oryzae β-galactosidase. *Biotechnology Progress*, **2018**, 34, 934-943	2.8	8

83	Kinetics and Thermodynamics of Thermal Inactivation of Galactosidase from Aspergillus oryzae. *Brazilian Archives of Biology and Technology*, **2018**, 61,	1.8	3
82	Preparation and characterization of cross-linked enzyme aggregates of dextransucrase from Leuconostoc mesenteroides B-512F. *Process Biochemistry*, **2018**, 71, 101-108	4.8	7
81	A new bioprocess for the production of prebiotic lactosucrose by an immobilized galactosidase. *Process Biochemistry*, **2017**, 55, 96-103	4.8	40
80	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. *Process Biochemistry*, **2017**, 58, 120-127	4.8	11
79	Effects of immobilization, pH and reaction time in the modulation of or cyclodextrins production by cyclodextrin glycosyltransferase: Batch and continuous process. *Carbohydrate Polymers*, **2017**, 169, 41-49	10.3	11
78	Effect of feather meal as proteic feeder on combi-CLEAs preparation for grape juice clarification. *Process Biochemistry*, **2017**, 62, 122-127	4.8	15
77	Combination of ultrasound, enzymes and mechanical stirring: A new method to improve Vitis vinifera Cabernet Sauvignon must yield, quality and bioactive compounds. *Food and Bioproducts Processing*, **2017**, 105, 197-204	4.9	12
76	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
75	Improvement of pectinase, xylanase and cellulase activities by ultrasound: Effects on enzymes and substrates, kinetics and thermodynamic parameters. *Process Biochemistry*, **2017**, 61, 80-87	4.8	32
74	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 611] *Food and Bioprocess Technology*, **2016**, 9, 2127-2127	5.1	1
73	Microbial Enzymes as Substitutes of Chemical Additives in Baking Wheat Flour Part I: Individual Effects of Nine Enzymes on Flour Dough Rheology. *Food and Bioprocess Technology*, **2016**, 9, 2012-2023	5.1	14
72	Chemical Modification in the Design of Immobilized Enzyme Biocatalysts: Drawbacks and Opportunities. *Chemical Record*, **2016**, 16, 1436-55	6.6	132
71	Synergistic effects of Pectinex Ultra Clear and Lallzyme Beta on yield and bioactive compounds extraction of Concord grape juice. *LWT - Food Science and Technology*, **2016**, 72, 157-165	5.4	21
70	Identification of Bioactive Compounds From Vitis labrusca L. Variety Concord Grape Juice Treated With Commercial Enzymes: Improved Yield and Quality Parameters. *Food and Bioprocess Technology* , **2016**, 9, 365-377	5.1	29
69	Preparation and characterization of a Combi-CLEAs from pectinases and cellulases: a potential biocatalyst for grape juice clarification. *RSC Advances*, **2016**, 6, 27242-27251	3.7	49
68	Synthesis of butyl butyrate in batch and continuous enzymatic reactors using Thermomyces lanuginosus lipase immobilized in Immobead 150. *Journal of Molecular Catalysis B: Enzymatic*, **2016**, 127, 67-75		41
67	Chitosan crosslinked with genipin as support matrix for application in food process: Support characterization and D-galactosidase immobilization. *Carbohydrate Polymers*, **2016**, 137, 184-190	10.3	128
66	Physical-Chemical Properties of the Support Immobead 150 Before and After the Immobilization Process of Lipase. *Journal of the Brazilian Chemical Society*, **2016**,	1.5	3

65	Immobilization of Glycoside Hydrolase Families GH1, GH13, and GH70: State of the Art and Perspectives. *Molecules*, **2016**, 21,	4.8	34
64	Dextransucrase immobilized on activated-chitosan particles as a novel biocatalyst. *Journal of Molecular Catalysis B: Enzymatic*, **2016**, 133, S143-S149		8
63	Synthesis of butyl esters via ultrasound-assisted transesterification of macaba (Acrocomia aculeata) acid oil using a biomass-derived fermented solid as biocatalyst. *Journal of Molecular Catalysis B: Enzymatic*, **2016**, 133, S213-S219		12
62	Microbial Enzymes as Substitutes of Chemical Additives in Baking Wheat Flour-Part II: Combined Effects of Nine Enzymes on Dough Rheology. *Food and Bioprocess Technology*, **2016**, 9, 1598-1611	5.1	13
61	Enzymatic reactors for biodiesel synthesis: Present status and future prospects. *Biotechnology Advances*, **2015**, 33, 511-25	17.8	124
60	Optimization and characterization of CLEAs of the very thermostable dimeric peroxidase from Roystonea regia. *RSC Advances*, **2015**, 5, 53047-53053	3.7	5
59	Strategies for the one-step immobilization-purification of enzymes as industrial biocatalysts. *Biotechnology Advances*, **2015**, 33, 435-56	17.8	463
58	Continuous production of fructooligosaccharides and invert sugar by chitosan immobilized enzymes: Comparison between in fluidized and packed bed reactors. *Journal of Molecular Catalysis B: Enzymatic*, **2015**, 111, 51-55		34
57	The combined use of ultrasound and molecular sieves improves the synthesis of ethyl butyrate catalyzed by immobilized Thermomyces lanuginosus lipase. *Ultrasonics Sonochemistry*, **2015**, 22, 89-94	8.9	93
56	Optimization of ethyl ester production from olive and palm oils using mixtures of immobilized lipases. *Applied Catalysis A: General*, **2015**, 490, 50-56	5.1	66
55	Importance of the Support Properties for Immobilization or Purification of Enzymes. *ChemCatChem* , **2015**, 7, 2413-2432	5.2	387
54	Use of Lecitase-Ultra immobilized on styrene-divinylbenzene beads as catalyst of esterification reactions: Effects of ultrasounds. *Catalysis Today*, **2015**, 255, 27-32	5.3	17
53	Immobilization of Proteins in Poly-Styrene-Divinylbenzene Matrices: Functional Properties and Applications. *Current Organic Chemistry*, **2015**, 19, 1707-1718	1.7	51
52	Comparison of the performance of commercial immobilized lipases in the synthesis of different flavor esters. *Journal of Molecular Catalysis B: Enzymatic*, **2014**, 105, 18-25		48
51	Fructooligosaccharides synthesis by highly stable immobilized β-fructofuranosidase from Aspergillus aculeatus. *Carbohydrate Polymers*, **2014**, 103, 193-7	10.3	59
50	Glutaraldehyde in bio-catalysts design: a useful crosslinker and a versatile tool in enzyme immobilization. *RSC Advances*, **2014**, 4, 1583-1600	3.7	536
49	Amination of enzymes to improve biocatalyst performance: coupling genetic modification and physicochemical tools. *RSC Advances*, **2014**, 4, 38350-38374	3.7	91
48	Combi-lipase for heterogeneous substrates: a new approach for hydrolysis of soybean oil using mixtures of biocatalysts. *RSC Advances*, **2014**, 4, 6863-6868	3.7	64

47	Ultrasound technology and molecular sieves improve the thermodynamically controlled esterification of butyric acid mediated by immobilized lipase from Rhizomucor miehei. *RSC Advances*, **2014**, 4, 8675	3.7	63
46	Efficient purification-immobilization of an organic solvent-tolerant lipase from Staphylococcus warneri EX17 on porous styrene-divinylbenzene beads. *Journal of Molecular Catalysis B: Enzymatic*, **2014**, 99, 51-55		17
45	Improving the catalytic properties of immobilized Lecitase via physical coating with ionic polymers. *Enzyme and Microbial Technology*, **2014**, 60, 1-8	3.8	47
44	Stabilizing hyperactivated lecitase structures through physical treatment with ionic polymers. *Process Biochemistry*, **2014**, 49, 1511-1515	4.8	43
43	Combined effects of ultrasound and immobilization protocol on butyl acetate synthesis catalyzed by CALB. *Molecules*, **2014**, 19, 9562-76	4.8	36
42	Evaluation of styrene-divinylbenzene beads as a support to immobilize lipases. *Molecules*, **2014**, 19, 7629-45	4.8	44
41	Immobilization of Thermomyces lanuginosus lipase by different techniques on Immobead 150 support: characterization and applications. *Applied Biochemistry and Biotechnology*, **2014**, 172, 2507-20	3.2	25
40	Heterofunctional supports in enzyme immobilization: from traditional immobilization protocols to opportunities in tuning enzyme properties. *Biomacromolecules*, **2013**, 14, 2433-62	6.9	358
39	Continuous production of Ecyclodextrin from starch by highly stable cyclodextrin glycosyltransferase immobilized on chitosan. *Carbohydrate Polymers*, **2013**, 98, 1311-6	10.3	43
38	Multipoint covalent immobilization of lipases on aldehyde-activated support: Characterization and application in transesterification reaction. *Journal of Molecular Catalysis B: Enzymatic*, **2013**, 94, 57-62		24
37	Effect of immobilization protocol on optimal conditions of ethyl butyrate synthesis catalyzed by lipase B from Candida antarctica. *Journal of Chemical Technology and Biotechnology*, **2013**, 88, 1089-1095	3.5	50
36	Biotechnological prospects of the lipase from Mucor javanicus. *Journal of Molecular Catalysis B: Enzymatic*, **2013**, 93, 34-43		17
35	Optimization of synthesis of fatty acid methyl esters catalyzed by lipase B from Candida antarctica immobilized on hydrophobic supports. *Journal of Molecular Catalysis B: Enzymatic*, **2013**, 94, 51-56		41
34	High operational stability of invertase from Saccharomyces cerevisiae immobilized on chitosan nanoparticles. *Carbohydrate Polymers*, **2013**, 92, 462-8	10.3	57
33	Ultrasound-assisted butyl acetate synthesis catalyzed by Novozym 435: enhanced activity and operational stability. *Ultrasonics Sonochemistry*, **2013**, 20, 1155-60	8.9	90
32	Improved production of butyl butyrate with lipase from Thermomyces lanuginosus immobilized on styrene-divinylbenzene beads. *Bioresource Technology*, **2013**, 134, 417-22	11	81
31	High stability of immobilized ED-galactosidase for lactose hydrolysis and galactooligosaccharides synthesis. *Carbohydrate Polymers*, **2013**, 95, 465-70	10.3	73
30	Modifying enzyme activity and selectivity by immobilization. *Chemical Society Reviews*, **2013**, 42, 6290-307	38.5	1298

29	Optimized butyl butyrate synthesis catalyzed by Thermomyces lanuginosus lipase. *Biotechnology Progress*, **2013**, 29, 1416-21	2.8	18
28	Optimized preparation of CALB-CLEAs by response surface methodology: The necessity to employ a feeder to have an effective crosslinking. *Journal of Molecular Catalysis B: Enzymatic*, **2012**, 80, 7-14		66
27	Optimization of pineapple flavour synthesis by esterification catalysed by immobilized lipase from Rhizomucor miehei. *Flavour and Fragrance Journal*, **2012**, 27, 196-200	2.5	28
26	Immobilization of lipase B from Candida antarctica on porous styrene-divinylbenzene beads improves butyl acetate synthesis. *Biotechnology Progress*, **2012**, 28, 406-12	2.8	56
25	Effect of the support size on the properties of β-galactosidase immobilized on chitosan: advantages and disadvantages of macro and nanoparticles. *Biomacromolecules*, **2012**, 13, 2456-64	6.9	109
24	Hydrogen Peroxide in Biocatalysis. A Dangerous Liaison. *Current Organic Chemistry*, **2012**, 16, 2652-2672	1.7	103
23	Rapid and high yields of synthesis of butyl acetate catalyzed by Novozym 435: Reaction optimization by response surface methodology. *Process Biochemistry*, **2011**, 46, 2311-2316	4.8	95
22	Coupling Chemical Modification and Immobilization to Improve the Catalytic Performance of Enzymes. *Advanced Synthesis and Catalysis*, **2011**, 353, 2216-2238	5.6	268
21	Potential of Different Enzyme Immobilization Strategies to Improve Enzyme Performance. *Advanced Synthesis and Catalysis*, **2011**, 353, 2885-2904	5.6	1170
20	Purification, immobilization, and characterization of a specific lipase from Staphylococcus warneri EX17 by enzyme fractionating via adsorption on different hydrophobic supports. *Biotechnology Progress*, **2011**, 27, 717-23	2.8	10
19	Effects of the combined use of Thermomyces lanuginosus and Rhizomucor miehei lipases for the transesterification and hydrolysis of soybean oil. *Process Biochemistry*, **2011**, 46, 682-688	4.8	89
18	Use of enzymes in the production of semi-synthetic penicillins and cephalosporins: drawbacks and perspectives. *Current Medicinal Chemistry*, **2010**, 17, 3855-73	4.3	88
17	Lipase from Rhizomucor miehei as an industrial biocatalyst in chemical process. *Journal of Molecular Catalysis B: Enzymatic*, **2010**, 64, 1-22		219
16	Lipase from Rhizomucor miehei as a biocatalyst in fats and oils modification. *Journal of Molecular Catalysis B: Enzymatic*, **2010**, 66, 15-32		200
15	Complete reactivation of immobilized derivatives of a trimeric glutamate dehydrogenase from Thermus thermophillus. *Process Biochemistry*, **2010**, 45, 107-113	4.8	21
14	Two step ethanolysis: A simple and efficient way to improve the enzymatic biodiesel synthesis catalyzed by an immobilized-stabilized lipase from Thermomyces lanuginosus. *Process Biochemistry*, **2010**, 45, 1268-1273	4.8	63
13	Modulation of a lipase from Staphylococcus warneri EX17 using immobilization techniques. *Journal of Molecular Catalysis B: Enzymatic*, **2009**, 60, 125-132		18
12	Improved enzyme stability in lipase-catalyzed synthesis of fatty acid ethyl ester from soybean oil. *Applied Biochemistry and Biotechnology*, **2009**, 152, 394-404	3.2	15

11	Effects of oxygen volumetric mass transfer coefficient and pH on lipase production by Staphylococcus warneri EX17. *Biotechnology and Bioprocess Engineering*, **2009**, 14, 105-111	3.1	12
10	Effects of oxygen volumetric mass transfer coefficient on transglutaminase production by Bacillus circulans BL32. *Biotechnology and Bioprocess Engineering*, **2009**, 14, 571-576	3.1	7
9	Positive effects of the multipoint covalent immobilization in the reactivation of partially inactivated derivatives of lipase from Thermomyces lanuginosus. *Enzyme and Microbial Technology*, **2009**, 44, 386-393	3.8	30
8	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. *Enzyme and Microbial Technology*, **2009**, 45, 477-483	3.8	41
7	Improved reactivation of immobilized-stabilized lipase from Thermomyces lanuginosus by its coating with highly hydrophilic polymers. *Journal of Biotechnology*, **2009**, 144, 113-9	3.7	25
6	Reactivation of covalently immobilized lipase from Thermomyces lanuginosus. *Process Biochemistry* , **2009**, 44, 641-646	4.8	30
5	Immobilization–stabilization of the lipase from Thermomyces lanuginosus: Critical role of chemical amination. *Process Biochemistry*, **2009**, 44, 963-968	4.8	86
4	Enzymatic Synthesis of Biodiesel from Transesterification Reactions of Vegetable Oils and Short Chain Alcohols. *JAOCS, Journal of the American Oil Chemists'Society*, **2008**, 85, 925-930	1.8	118
3	Production of organic solvent tolerant lipase by Staphylococcus caseolyticus EX17 using raw glycerol as substrate. *Journal of Chemical Technology and Biotechnology*, **2008**, 83, 821-828	3.5	33
2	Lipase-catalyzed ethanolysis of soybean oil in a solvent-free system using central composite design and response surface methodology. *Journal of Chemical Technology and Biotechnology*, **2008**, 83, 849-854	3.5	35
1	Optimization of transglutaminase extraction produced by Bacillus circulans BL32 on solid-state cultivation. *Journal of Chemical Technology and Biotechnology*, **2008**, 83, 1306-1313	3.5	9