Roberto Fernandez-Lafuente

List of Publications by Year
in descending order

#	Article	IF	Citations
1	Improvement of enzyme activity, stability and selectivity via immobilization techniques. Enzyme and Microbial Technology, 2007, 40, 1451-1463.	1.6	2,864
2	Modifying enzyme activity and selectivity by immobilization. Chemical Society Reviews, 2013, 42, 6290-6307.	18.7	1,552
3	Potential of Different Enzyme Immobilization Strategies to Improve Enzyme Performance. Advanced Synthesis and Catalysis, 2011, 353, 2885-2904.	2.1	1,389
4	Glutaraldehyde in bio-catalysts design: a useful crosslinker and a versatile tool in enzyme immobilization. RSC Advances, 2014, 4, 1583-1600.	1.7	669
5	Strategies for the one-step immobilizationâ€"purification of enzymes as industrial biocatalysts. Biotechnology Advances, 2015, 33, 435-456.	6.0	568
6	Stabilization of multimeric enzymes: Strategies to prevent subunit dissociation. Enzyme and Microbial Technology, 2009, 45, 405-418.	1.6	561
7	Control of protein immobilization: Coupling immobilization and site-directed mutagenesis to improve biocatalyst or biosensor performance. Enzyme and Microbial Technology, 2011, 48, 107-122.	1.6	541
8	Lipase from Thermomyces lanuginosus: Uses and prospects as an industrial biocatalyst. Journal of Molecular Catalysis B: Enzymatic, 2010, 62, 197-212.	1.8	495
9	A single step purification, immobilization, and hyperactivation of lipases via interfacial adsorption on strongly hydrophobic supports. , 1998, 58, 486-493.		469
10	Importance of the Support Properties for Immobilization or Purification of Enzymes. ChemCatChem, 2015, 7, 2413-2432.	1.8	466
11	Immobilization of lipases by selective adsorption on hydrophobic supports. Chemistry and Physics of Lipids, 1998, 93, 185-197.	1.5	441
12	Heterofunctional Supports in Enzyme Immobilization: From Traditional Immobilization Protocols to Opportunities in Tuning Enzyme Properties. Biomacromolecules, 2013, 14, 2433-2462.	2.6	429
13	Immobilization of lipases on hydrophobic supports involves the open form of the enzyme. Enzyme and Microbial Technology, 2015, 71, 53-57.	1.6	429
14	Immobilization of lipases on hydrophobic supports: immobilization mechanism, advantages, problems, and solutions. Biotechnology Advances, 2019, 37, 746-770.	6.0	409
15	Novozym 435: the â€œperfectâ€• lipase immobilized biocatalyst?. Catalysis Science and Technology, 2019, 9, 2380-2420.	2.1	393
16	Interfacial adsorption of lipases on very hydrophobic support (octadecylâ€"Sepabeads): immobilization, hyperactivation and stabilization of the open form of lipases. Journal of Molecular Catalysis B: Enzymatic, 2002, 19-20, 279-286.	1.8	384
17	Different mechanisms of protein immobilization on glutaraldehyde activated supports: Effect of support activation and immobilization conditions. Enzyme and Microbial Technology, 2006, 39, 877-882.	1.6	361
18	Glyoxyl agarose: A fully inert and hydrophilic support for immobilization and high stabilization of proteins. Enzyme and Microbial Technology, 2006, 39, 274-280.	1.6	347

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19	Coupling Chemical Modification and Immobilization to Improve the Catalytic Performance of Enzymes. Advanced Synthesis and Catalysis, 2011, 353, 2216-2238.	2.1	329
20	Parameters necessary to define an immobilized enzyme preparation. Process Biochemistry, 2020, 90, 66-80.	1.8	306
21	Enhancing the functional properties of thermophilic enzymes by chemical modification and immobilization. Enzyme and Microbial Technology, 2011, 49, 326-346.	1.6	295
22	Multifunctional Epoxy Supports:Â A New Tool To Improve the Covalent Immobilization of Proteins. The Promotion of Physical Adsorptions of Proteins on the Supports before Their Covalent Linkage. Biomacromolecules, 2000, 1, 739-745.	2.6	281
23	Stabilization of enzymes via immobilization: Multipoint covalent attachment and other stabilization strategies. Biotechnology Advances, 2021, 52, 107821.	6.0	280
24	Immobilization of enzymes on heterofunctional epoxy supports. Nature Protocols, 2007, 2, 1022-1033.	5.5	269
25	Nanomaterials for biocatalyst immobilization â€“ state of the art and future trends. RSC Advances, 2016, 6, 104675-104692.	1.7	267
26	Epoxy Sepabeads: A Novel Epoxy Support for Stabilization of Industrial Enzymes via Very Intense Multipoint Covalent Attachment. Biotechnology Progress, 2002, 18, 629-634.	1.3	259
27	Enzyme stabilization by glutaraldehyde crosslinking of adsorbed proteins on aminated supports. Journal of Biotechnology, 2005, 119, 70-75.	1.9	259
28	Some special features of glyoxyl supports to immobilize proteins. Enzyme and Microbial Technology, 2005, 37, 456-462.	1.6	257
29	Lipase from Rhizomucor miehei as an industrial biocatalyst in chemical process. Journal of Molecular Catalysis B: Enzymatic, 2010, 64, 1-22.	1.8	241
30	Preparation of activated supports containing low pK amino groups. A new tool for protein immobilization via the carboxyl coupling method. Enzyme and Microbial Technology, 1993, 15, 546-550.	1.6	240
31	Epoxy-Amino Groups:Â A New Tool for Improved Immobilization of Proteins by the Epoxy Method. Biomacromolecules, 2003, 4, 772-777.	2.6	234
32	Polyethylenimine: a very useful ionic polymer in the design of immobilized enzyme biocatalysts. Journal of Materials Chemistry B, 2017, 5, 7461-7490.	2.9	228
33	Agarose and Its Derivatives as Supports for Enzyme Immobilization. Molecules, 2016, 21, 1577.	1.7	227
34	Reversible enzyme immobilization via a very strong and nondistorting ionic adsorption on support-polyethylenimine composites. , 2000, 68, 98-105.		225
35	Lipase from Rhizomucor miehei as a biocatalyst in fats and oils modification. Journal of Molecular Catalysis B: Enzymatic, 2010, 66, 15-32.	1.8	225
36	General Trend of Lipase to Self-Assemble Giving Bimolecular Aggregates Greatly Modifies the Enzyme Functionality. Biomacromolecules, 2003, 4, 1-6.	2.6	212

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37	Effect of the support and experimental conditions in the intensity of the multipoint covalent attachment of proteins on glyoxyl-agarose supports: Correlation between enzymeâ€"support linkages and thermal stability. Enzyme and Microbial Technology, 2007, 40, 1160-1166.	1.6	200
38	Activation of Bacterial Thermoalkalophilic Lipases Is Spurred by Dramatic Structural Rearrangements. Journal of Biological Chemistry, 2009, 284, 4365-4372.	1.6	196
39	Interfacially activated lipases against hydrophobic supports: Effect of the support nature on the biocatalytic properties. Process Biochemistry, 2008, 43, 1061-1067.	1.8	191
40	Advances in the design of new epoxy supports for enzyme immobilizationâ€"stabilization. Biochemical Society Transactions, 2007, 35, 1593-1601.	1.6	188
41	Versatility of glutaraldehyde to immobilize lipases: Effect of the immobilization protocol on the properties of lipase B from Candida antarctica. Process Biochemistry, 2012, 47, 1220-1227.	1.8	188
42	Chemical Modification in the Design of Immobilized Enzyme Biocatalysts: Drawbacks and Opportunities. Chemical Record, 2016, 16, 1436-1455.	2.9	183
43	Biotechnological Applications of Proteases in Food Technology. Comprehensive Reviews in Food Science and Food Safety, 2018, 17, 412-436.	5.9	183
44	Is enzyme immobilization a mature discipline? Some critical considerations to capitalize on the benefits of immobilization. Chemical Society Reviews, 2022, 51, 6251-6290.	18.7	183
45	Chitosan crosslinked with genipin as support matrix for application in food process: Support characterization and Î²-d-galactosidase immobilization. Carbohydrate Polymers, 2016, 137, 184-190.	5.1	181
46	Effect of protein load on stability of immobilized enzymes. Enzyme and Microbial Technology, 2017, 98, 18-25.	1.6	176
47	Modulation of the enantioselectivity of lipases via controlled immobilization and medium engineering: hydrolytic resolution of mandelic acid esters. Enzyme and Microbial Technology, 2002, 31, 775-783.	1.6	160
48	Use of Alcalase in the production of bioactive peptides: A review. International Journal of Biological Macromolecules, 2020, 165, 2143-2196.	3.6	160
49	Novozym 435 displays very different selectivity compared to lipase from Candida antarctica B adsorbed on other hydrophobic supports. Journal of Molecular Catalysis B: Enzymatic, 2009, 57, 171-176.	1.8	159
50	Enzyme co-immobilization: Always the biocatalyst designers' choiceâ€¦or not?. Biotechnology Advances, 2021, 51, 107584.	6.0	152
51	Antimicrobial Peptides: Promising Compounds Against Pathogenic Microorganisms. Current Medicinal Chemistry, 2014, 21, 2299-2321.	1.2	146
52	Strategies for enzyme stabilization by intramolecular crosslinking with bifunctional reagents. Enzyme and Microbial Technology, 1995, 17, 517-523.	1.6	145
53	Immobilization-stabilization of Penicillin G acylase fromEscherichia coli. Applied Biochemistry and Biotechnology, 1990, 26, 181-195.	1.4	141
54	Enzymatic reactors for biodiesel synthesis: Present status and future prospects. Biotechnology Advances, 2015, 33, 511-525.	6.0	141

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55	Inactivation of immobilized trypsin under dissimilar conditions produces trypsin molecules with different structures. RSC Advances, 2016, 6, 27329-27334.	1.7	139
56	The coimmobilization of d-amino acid oxidase and catalase enables the quantitative transformation of d-amino acids (d-phenylalanine) into Î±-keto acids (phenylpyruvic acid). Enzyme and Microbial Technology, 1998, 23, 28-33.	1.6	137
57	Hydrogen Peroxide in Biocatalysis. A Dangerous Liaison. Current Organic Chemistry, 2012, 16, 2652-2672.	0.9	133
58	Effect of the Support Size on the Properties of Î²-Galactosidase Immobilized on Chitosan: Advantages and Disadvantages of Macro and Nanoparticles. Biomacromolecules, 2012, 13, 2456-2464.	2.6	131
59	Encapsulation of crosslinked penicillin G acylase aggregates in lentikats: Evaluation of a novel biocatalyst in organic media. Biotechnology and Bioengineering, 2004, 86, 558-562.	1.7	130
60	Improved performance of lipases immobilized on heterofunctional octyl-glyoxyl agarose beads. RSC Advances, 2015, 5, 11212-11222.	1.7	129
61	Modulation of the enantioselectivity of Candida antarctica B lipase via conformational engineering. Kinetic resolution of (Â±)-Î±-hydroxy-phenylacetic acid derivatives. Tetrahedron: Asymmetry, 2002, 13, 1337-1345.	1.8	124
62	Use of immobilized lipases for lipase purification via specific lipaseâ€"lipase interactions. Journal of Chromatography A, 2004, 1038, 267-273.	1.8	121
63	Glutaraldehyde Cross-Linking of Lipases Adsorbed on Aminated Supports in the Presence of Detergents Leads to Improved Performance. Biomacromolecules, 2006, 7, 2610-2615.	2.6	121
64	Co-Aggregation of Penicillin G Acylase and Polyionic Polymers:Â An Easy Methodology To Prepare Enzyme Biocatalysts Stable in Organic Media. Biomacromolecules, 2004, 5, 852-857.	2.6	120
65	Stabilization of multimeric enzymes via immobilization and post-immobilization techniques. Journal of Molecular Catalysis B: Enzymatic, 1999, 7, 181-189.	1.8	119
66	Self-assembly ofPseudomonas fluorescenslipase into bimolecular aggregates dramatically affects functional properties. Biotechnology and Bioengineering, 2003, 82, 232-237.	1.7	119
67	Evaluation of different lipase biocatalysts in the production of biodiesel from used cooking oil: Critical role of the immobilization support. Fuel, 2017, 200, 1-10.	3.4	118
68	Amination of enzymes to improve biocatalyst performance: coupling genetic modification and physicochemical tools. RSC Advances, 2014, 4, 38350-38374.	1.7	117
69	Effect of immobilization rate and enzyme crowding on enzyme stability under different conditions. The case of lipase from Thermomyces lanuginosus immobilized on octyl agarose beads. Process Biochemistry, 2017, 56, 117-123.	1.8	115
70	Improved stabilization of chemically aminated enzymes via multipoint covalent attachment on glyoxyl supports. Journal of Biotechnology, 2005, 116, 1-10.	1.9	114
71	CLEAs of lipases and poly-ionic polymers: A simple way of preparing stable biocatalysts with improved properties. Enzyme and Microbial Technology, 2006, 39, 750-755.	1.6	114
72	Simple and efficient immobilization of lipase B from Candida antarctica on porous styreneâ€"divinylbenzene beads. Enzyme and Microbial Technology, 2011, 49, 72-78.	1.6	113

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73	Improved production of biolubricants from soybean oil and different polyols via esterification reaction catalyzed by immobilized lipase from Candida rugosa. Fuel, 2018, 215, 705-713.	3.4	113
74	Stabilization of Penicillin G Acylase from Escherichia coli : Site-Directed Mutagenesis of the Protein Surface To Increase Multipoint Covalent Attachment. Applied and Environmental Microbiology, 2004, 70, 1249-1251.	1.4	111
75	Coating of Soluble and Immobilized Enzymes with Ionic Polymers: Full Stabilization of the Quaternary Structure of Multimeric Enzymes. Biomacromolecules, 2009, 10, 742-747.	2.6	111
76	The immobilization of a thermophilic Î²-galactosidase on Sepabeads supports decreases product inhibition. Enzyme and Microbial Technology, 2003, 33, 199-205.	1.6	110
77	Lipaseâ€"lipase interactions as a new tool to immobilize and modulate the lipase properties. Enzyme and Microbial Technology, 2005, 36, 447-454.	1.6	110
78	Specificity enhancement towards hydrophobic substrates by immobilization of lipases by interfacial activation on hydrophobic supports. Enzyme and Microbial Technology, 2007, 41, 565-569.	1.6	109
79	Use of Enzymes in the Production of Semi-Synthetic Penicillins and Cephalosporins: Drawbacks and Perspectives. Current Medicinal Chemistry, 2010, 17, 3855-3873.	1.2	109
80	Dextran aldehyde coating of glucose oxidase immobilized on magnetic nanoparticles prevents its inactivation by gas bubbles. Journal of Molecular Catalysis B: Enzymatic, 2005, 32, 97-101.	1.8	106
81	Relevance of substrates and products on the desorption of lipases physically adsorbed on hydrophobic supports. Enzyme and Microbial Technology, 2017, 96, 30-35.	1.6	106
82	Ultrasound-assisted butyl acetate synthesis catalyzed by Novozym 435: Enhanced activity and operational stability. Ultrasonics Sonochemistry, 2013, 20, 1155-1160.	3.8	105
83	Characterization of supports activated with divinyl sulfone as a tool to immobilize and stabilize enzymes via multipoint covalent attachment. Application to chymotrypsin. RSC Advances, 2015, 5, 20639-20649.	1.7	104
84	Kinetic resolution of drug intermediates catalyzed by lipase B from <i>Candida antarctica</i> immobilized on immobeadâ€350. Biotechnology Progress, 2018, 34, 878-889.	1.3	104
85	One-step purification, covalent immobilization, and additional stabilization of poly-His-tagged proteins using novel heterofunctional chelate-epoxy supports. Biotechnology and Bioengineering, 2001, 76, 269-276.	1.7	103
86	Chitosan activated with divinyl sulfone: a new heterofunctional support for enzyme immobilization. Application in the immobilization of lipase B from Candida antarctica. International Journal of Biological Macromolecules, 2019, 130, 798-809.	3.6	103
87	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.	1.8	102
88	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.	3.8	102
89	Solid-Phase Chemical Amination of a Lipase from Bacillus thermocatenulatus To Improve Its Stabilization via Covalent Immobilization on Highly Activated Glyoxyl-Agarose. Biomacromolecules, 2008, 9, 2553-2561.	2.6	98
90	Modulation of penicillin acylase properties via immobilization techniques: one-pot chemoenzymatic synthesis of cephamandole from cephalosporin C. Bioorganic and Medicinal Chemistry Letters, 2001, 11, 2429-2432.	1.0	97

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91	Facile synthesis of artificial enzyme nano-environments via solid-phase chemistry of immobilized derivatives: Dramatic stabilization of penicillin acylase versus organic solvents. Enzyme and Microbial Technology, 1999, 24, 96-103.	1.6	96
92	Solid-Phase Handling of Hydrophobins:Â Immobilized Hydrophobins as a New Tool To Study Lipases. Biomacromolecules, 2003, 4, 204-210.	2.6	96
93	Co-aggregation of Enzymes and Polyethyleneimine:Â A Simple Method To Prepare Stable and Immobilized Derivatives of Glutaryl Acylase. Biomacromolecules, 2005, 6, 1839-1842.	2.6	96
94	Cross-Linked Aggregates of Multimeric Enzymes:Â A Simple and Efficient Methodology To Stabilize Their Quaternary Structure. Biomacromolecules, 2004, 5, 814-817.	2.6	95
95	Modulation of lipase properties in macro-aqueous systems by controlled enzyme immobilization: enantioselective hydrolysis of a chiral ester by immobilized Pseudomonas lipase. Enzyme and Microbial Technology, 2001, 28, 389-396.	1.6	94
96	Improved production of butyl butyrate with lipase from Thermomyces lanuginosus immobilized on styreneâ€“divinylbenzene beads. Bioresource Technology, 2013, 134, 417-422.	4.8	94
97	Effect of chemical modification of Novozym 435 on its performance in the alcoholysis of camelina oil. Biochemical Engineering Journal, 2016, 111, 75-86.	1.8	94
98	Comparison of acid, basic and enzymatic catalysis on the production of biodiesel after RSM optimization. Renewable Energy, 2019, 135, 1-9.	4.3	94
99	Structural and Functional Stabilization of L-Asparaginase via Multisubunit Immobilization onto Highly Activated Supports. Biotechnology Progress, 2001, 17, 537-542.	1.3	93
100	Bovine trypsin immobilization on agarose activated with divinylsulfone: Improved activity and stability via multipoint covalent attachment. Journal of Molecular Catalysis B: Enzymatic, 2015, 117, 38-44.	1.8	93
101	Development of simple protocols to solve the problems of enzyme coimmobilization. Application to coimmobilize a lipase and a Î²-galactosidase. RSC Advances, 2016, 6, 61707-61715.	1.7	93
102	Evaluation of divinylsulfone activated agarose to immobilize lipases and to tune their catalytic properties. Process Biochemistry, 2015, 50, 918-927.	1.8	91
103	Immobilization of lactase from Kluyveromyces lactis greatly reduces the inhibition promoted by glucose. full hydrolysis of lactose in milk. Biotechnology Progress, 2004, 20, 1259-1262.	1.3	90
104	Stabilization of enzymes by multipoint immobilization of thiolated proteins on new epoxy-thiol supports. Biotechnology and Bioengineering, 2005, 90, 597-605.	1.7	90
105	High stability of immobilized Î²-d-galactosidase for lactose hydrolysis and galactooligosaccharides synthesis. Carbohydrate Polymers, 2013, 95, 465-470.	5.1	90
106	Modulation of Mucor miehei lipase properties via directed immobilization on different hetero-functional epoxy resins. Journal of Molecular Catalysis B: Enzymatic, 2003, 21, 201-210.	1.8	88
107	Easy stabilization of interfacially activated lipases using heterofunctional divinyl sulfone activated-octyl agarose beads. Modulation of the immobilized enzymes by altering their nanoenvironment. Process Biochemistry, 2016, 51, 865-874.	1.8	88
108	Comparison of the immobilization of lipase from Pseudomonas fluorescens on divinylsulfone or p-benzoquinone activated support. International Journal of Biological Macromolecules, 2019, 134, 936-945.	3.6	88

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109	Liquid lipase preparations designed for industrial production of biodiesel. Is it really an optimal solution?. Renewable Energy, 2021, 164, 1566-1587.	4.3	88
110	Preparation of a Stable Biocatalyst of Bovine Liver Catalase Using Immobilization and Postimmobilization Techniques. Biotechnology Progress, 2003, 19, 763-767.	1.3	87
111	Preparation of inert magnetic nano-particles for the directed immobilization of antibodies. Biosensors and Bioelectronics, 2005, 20, 1380-1387.	5.3	86
112	Improvement of the stability of alcohol dehydrogenase by covalent immobilization on glyoxyl-agarose. Journal of Biotechnology, 2006, 125, 85-94.	1.9	86
113	Immobilization of Lipase A from Candida antarctica onto Chitosan-Coated Magnetic Nanoparticles. International Journal of Molecular Sciences, 2019, 20, 4018.	1.8	86
114	Enzyme reaction engineering: Synthesis of antibiotics catalysed by stabilized penicillin G acylase in the presence of organic cosolvents. Enzyme and Microbial Technology, 1991, 13, 898-905.	1.6	84
115	Novel Bifunctional Epoxy/Thiol-Reactive Support to Immobilize Thiol Containing Proteins by the Epoxy Chemistry. Biomacromolecules, 2003, 4, 1495-1501.	2.6	84
116	Immobilization of lipases via interfacial activation on hydrophobic supports: Production of biocatalysts libraries by altering the immobilization conditions. Catalysis Today, 2021, 362, 130-140.	2.2	83
117	Reversible and strong immobilization of proteins by ionic exchange on supports coated with sulfate-dextran. Biotechnology Progress, 2004, 20, 1134-1139.	1.3	82
118	Improved catalytic properties of immobilized lipases by the presence of very low concentrations of detergents in the reaction medium. Biotechnology and Bioengineering, 2007, 97, 242-250.	1.7	81
119	Accurel MP 1000 as a support for the immobilization of lipase from Burkholderia cepacia : Application to the kinetic resolution of myo -inositol derivatives. Process Biochemistry, 2015, 50, 1557-1564.	1.8	81
120	Reversible immobilization of a thermophilic Î²-galactosidase via ionic adsorption on PEI-coated Sepabeads. Enzyme and Microbial Technology, 2003, 32, 369-374.	1.6	80
121	Enzyme production of<scp>d</scp>-gluconic acid and glucose oxidase: successful tales of cascade reactions. Catalysis Science and Technology, 2020, 10, 5740-5771.	2.1	80
122	Use of aqueous two-phase systems for in situ extraction of water soluble antibiotics during their synthesis by enzymes immobilized on porous supports. , 1998, 59, 73-79.		79
123	Stabilizing effects of cations on lipases depend on the immobilization protocol. RSC Advances, 2015, 5, 83868-83875.	1.7	79
124	Design of a lipase-nano particle biocatalysts and its use in the kinetic resolution of medicament precursors. Biochemical Engineering Journal, 2017, 125, 104-115.	1.8	79
125	One-Step Purification, Covalent Immobilization, and Additional Stabilization of a Thermophilic Poly-His-Tagged Î²-Galactosidase fromThermussp. Strain T2 by using Novel Heterofunctional Chelateâ€"Epoxy Sepabeads. Biomacromolecules, 2003, 4, 107-113.	2.6	78
126	Preparation of a very stable immobilized biocatalyst of glucose oxidase from Aspergillus niger. Journal of Biotechnology, 2006, 121, 284-289.	1.9	78

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127	Biotechnological relevance of the lipase A from Candida antarctica. Catalysis Today, 2021, 362, 141-154.	2.2	78
128	A Novel Heterofunctional Epoxy-Amino Sepabeads for a New Enzyme Immobilization Protocol: Immobilization-Stabilization of Î²-Galactosidase from Aspergillus oryzae. Biotechnology Progress, 2003, 19, 1056-1060.	1.3	77
129	Combi-lipase for heterogeneous substrates: a new approach for hydrolysis of soybean oil using mixtures of biocatalysts. RSC Advances, 2014, 4, 6863-6868.	1.7	77
130	Stabilization of dimeric Î²-glucosidase from Aspergillu s nige r via glutaraldehyde immobilization under different conditions. Enzyme and Microbial Technology, 2018, 110, 38-45.	1.6	77
131	Effects of Enzyme Loading and Immobilization Conditions on the Catalytic Features of Lipase From Pseudomonas fluorescens Immobilized on Octyl-Agarose Beads. Frontiers in Bioengineering and Biotechnology, 2020, 8, 36.	2.0	77
132	Biotransformations Catalyzed by Multimeric Enzymes:Â Stabilization of Tetrameric Ampicillin Acylase Permits the Optimization of Ampicillin Synthesis under Dissociation Conditions. Biomacromolecules, 2001, 2, 95-104.	2.6	76
133	Design of a coreâ€"shell support to improve lipase features by immobilization. RSC Advances, 2016, 6, 62814-62824.	1.7	76
134	Affinity chromatography of polyhistidine tagged enzymes. Journal of Chromatography A, 2001, 915, 97-106.	1.8	75
135	Reversible Immobilization of Invertase on Sepabeads Coated with Polyethyleneimine: Optimization of the Biocatalyst's Stability. Biotechnology Progress, 2002, 18, 1221-1226.	1.3	75
136	Stabilization of a Formate Dehydrogenase by Covalent Immobilization on Highly Activated Glyoxyl-Agarose Supports. Biomacromolecules, 2006, 7, 669-673.	2.6	75
137	Improvement of the functional properties of a thermostable lipase from alcaligenes sp. via strong adsorption on hydrophobic supports. Enzyme and Microbial Technology, 2006, 38, 975-980.	1.6	75
138	Preparation of coreâ€"shell polymer supports to immobilize lipase B from Candida antarctica. Journal of Molecular Catalysis B: Enzymatic, 2014, 100, 59-67.	1.8	75
139	Tuning the catalytic properties of lipases immobilized on divinylsulfone activated agarose by altering its nanoenvironment. Enzyme and Microbial Technology, 2015, 77, 1-7.	1.6	75
140	Optimization of ethyl ester production from olive and palm oils using mixtures of immobilized lipases. Applied Catalysis A: General, 2015, 490, 50-56.	2.2	75
141	Operational stabilities of different chemical derivatives of Novozym 435 in an alcoholysis reaction. Enzyme and Microbial Technology, 2016, 90, 35-44.	1.6	75
142	Use of dextrans as long and hydrophilic spacer arms to improve the performance of immobilized proteins acting on macromolecules. , 1998, 60, 518-523.		74
143	The presence of methanol exerts a strong and complex modulation of the synthesis of different antibiotics by immobilized penicillin G acylase. Enzyme and Microbial Technology, 1998, 23, 305-310.	1.6	74
144	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.	1.7	74

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145	Enzymatic esterification of palm fatty-acid distillate for the production of polyol esters with biolubricant properties. Industrial Crops and Products, 2018, 116, 90-96.	2.5	74
146	Stabilization of heterodimeric enzyme by multipoint covalent immobilization: Penicillin G acylase fromKluyvera citrophila. Biotechnology and Bioengineering, 1993, 42, 455-464.	1.7	73
147	Immobilization of lipases on glyoxylâ€"octyl supports: Improved stability and reactivation strategies. Process Biochemistry, 2015, 50, 1211-1217.	1.8	73
148	Evaluation of different commercial hydrophobic supports for the immobilization of lipases: tuning their stability, activity and specificity. RSC Advances, 2016, 6, 100281-100294.	1.7	73
149	New applications of glyoxyl-octyl agarose in lipases co-immobilization: Strategies to reuse the most stable lipase. International Journal of Biological Macromolecules, 2019, 131, 989-997.	3.6	73
150	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.	1.8	72
151	Fructooligosaccharides synthesis by highly stable immobilized Î²-fructofuranosidase from Aspergillus aculeatus. Carbohydrate Polymers, 2014, 103, 193-197.	5.1	72
152	Immobilization of CALB on activated chitosan: Application to enzymatic synthesis in supercritical and near-critical carbon dioxide. Biotechnology Reports (Amsterdam, Netherlands), 2017, 14, 16-26.	2.1	72
153	Solvent-free esterifications mediated by immobilized lipases: a review from thermodynamic and kinetic perspectives. Catalysis Science and Technology, 2021, 11, 5696-5711.	2.1	72
154	Immobilization and stabilization of different Î²-glucosidases using the glutaraldehyde chemistry: Optimal protocol depends on the enzyme. International Journal of Biological Macromolecules, 2019, 129, 672-678.	3.6	71
155	Ion exchange using poorly activated supports, an easy way for purification of large proteins. Journal of Chromatography A, 2004, 1034, 155-159.	1.8	70
156	Two step ethanolysis: A simple and efficient way to improve the enzymatic biodiesel synthesis catalyzed by an immobilizedâ€"stabilized lipase from Thermomyces lanuginosus. Process Biochemistry, 2010, 45, 1268-1273.	1.8	70
157	Stabilizing hyperactivated lecitase structures through physical treatment with ionic polymers. Process Biochemistry, 2014, 49, 1511-1515.	1.8	70
158	Versatility of divinylsulfone supports permits the tuning of CALB properties during its immobilization. RSC Advances, 2015, 5, 35801-35810.	1.7	70
159	Reversible immobilization of lipases on octyl-glutamic agarose beads: A mixed adsorption that reinforces enzyme immobilization. Journal of Molecular Catalysis B: Enzymatic, 2016, 128, 10-18.	1.8	70
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