

Ivan Lavandera

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113
papers

3,258
citations

34
h-index

52
g-index

139
ext. papers

3,668
ext. citations

5.3
avg, IF

5.28
L-index

#	Paper	IF	Citations
113	Formal asymmetric biocatalytic reductive amination. <i>Angewandte Chemie - International Edition</i> , 2008 , 47, 9337-40	16.4	194
112	Asymmetric Synthesis of Optically Pure Pharmacologically Relevant Amines Employing α -Transaminases. <i>Advanced Synthesis and Catalysis</i> , 2008 , 350, 2761-2766	5.6	160
111	From a Racemate to a Single Enantiomer: Deracemization by Stereo-inversion. <i>Advanced Synthesis and Catalysis</i> , 2006 , 348, 1789-1805	5.6	155
110	Mimicking nature: synthetic nicotinamide cofactors for C?C bioreduction using enoate reductases. <i>Organic Letters</i> , 2013 , 15, 180-3	6.2	125
109	Enzymatic reduction of ketones in "micro-aqueous" media catalyzed by ADH-A from <i>Rhodococcus ruber</i> . <i>Organic Letters</i> , 2007 , 9, 2163-6	6.2	113
108	One-way biohydrogen transfer for oxidation of sec-alcohols. <i>Organic Letters</i> , 2008 , 10, 2155-8	6.2	99
107	Stereoselective bioreduction of bulky-bulky ketones by a novel ADH from <i>Ralstonia</i> sp. <i>Journal of Organic Chemistry</i> , 2008 , 73, 6003-5	4.2	92
106	Biocatalytic deuterium- and hydrogen-transfer using over-expressed ADH-'A': enhanced stereoselectivity and 2H-labeled chiral alcohols. <i>Chemical Communications</i> , 2006 , 2402-4	5.8	83
105	Asymmetric biocatalytic reduction of ketones using hydroxy-functionalised water-miscible ionic liquids as solvents. <i>Tetrahedron: Asymmetry</i> , 2007 , 18, 2541-2546		71
104	Formal Asymmetric Biocatalytic Reductive Amination. <i>Angewandte Chemie</i> , 2008 , 120, 9477-9480	3.6	69
103	Transaminases Applied to the Synthesis of High Added-Value Enantiopure Amines. <i>Organic Process Research and Development</i> , 2014 , 18, 788-792	3.9	64
102	Tandem concurrent processes: one-pot single-catalyst biohydrogen transfer for the simultaneous preparation of enantiopure secondary alcohols. <i>Journal of Organic Chemistry</i> , 2009 , 74, 1730-2	4.2	56
101	(Chemo)enzymatic cascades: Nature's synthetic strategy transferred to the laboratory. <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2015 , 114, 1-6		53
100	From Diols to Lactones under Aerobic Conditions using a Laccase/TEMPO Catalytic System in Aqueous Medium. <i>Advanced Synthesis and Catalysis</i> , 2012 , 354, 3405-3408	5.6	52
99	Recent Advances in Cofactor Regeneration Systems Applied to Biocatalyzed Oxidative Processes. <i>Current Organic Chemistry</i> , 2012 , 16, 2525-2541	1.7	52
98	Performance of Recombinant-Whole-Cell-Catalyzed Reductions in Deep-Eutectic-Solvent/Aqueous-Media Mixtures. <i>ChemCatChem</i> , 2015 , 7, 2654-2659	5.2	51
97	Synthesis of enantiopure fluorohydrins using alcohol dehydrogenases at high substrate concentrations. <i>Journal of Organic Chemistry</i> , 2013 , 78, 7312-7	4.2	50

96	Stereoselective amination of racemic sec-alcohols through sequential application of laccases and transaminases. <i>Green Chemistry</i> , 2017 , 19, 474-480	10	49
95	Steric vs. electronic effects in the <i>Lactobacillus brevis</i> ADH-catalyzed bioreduction of ketones. <i>Organic and Biomolecular Chemistry</i> , 2014 , 12, 673-81	3.9	48
94	Stereo-Complementary Two-Step Cascades Using a Two-Enzyme System Leading to Enantiopure Epoxides. <i>Advanced Synthesis and Catalysis</i> , 2007 , 349, 1399-1404	5.6	48
93	An inverse substrate orientation for the regioselective acylation of 3',5'-diaminonucleosides catalyzed by <i>Candida antarctica</i> lipase B?. <i>ChemBioChem</i> , 2005 , 6, 1381-90	3.8	48
92	An exceptionally DMSO-tolerant alcohol dehydrogenase for the stereoselective reduction of ketones. <i>ChemSusChem</i> , 2008 , 1, 431-6	8.3	46
91	Biocatalytic Cascade for the Synthesis of Enantiopure β -Azidoalcohols and β -Hydroxynitriles. <i>European Journal of Organic Chemistry</i> , 2009 , 2009, 2293-2298	3.2	44
90	Coupling biocatalysis and click chemistry: one-pot two-step convergent synthesis of enantioenriched 1,2,3-triazole-derived diols. <i>Chemical Communications</i> , 2013 , 49, 2625-2627	5.8	43
89	Simple and quick preparation of β -thiocyanate ketones in hydroalcoholic media. Access to 5-aryl-2-imino-1,3-oxathiolanes. <i>Green Chemistry</i> , 2009 , 11, 452	10	43
88	Stereodivergent Preparation of Valuable α - or β -Hydroxy Esters and Lactones through One-Pot Cascade or Tandem Chemoenzymatic Protocols. <i>ACS Catalysis</i> , 2014 , 4, 386-393	13.1	40
87	But-2-ene-1,4-diamine and But-2-ene-1,4-diol as Donors for Thermodynamically Favored Transaminase- and Alcohol Dehydrogenase-Catalyzed Processes. <i>Advanced Synthesis and Catalysis</i> , 2016 , 358, 1618-1624	5.6	38
86	Structures of Alcohol Dehydrogenases from <i>Ralstonia</i> and <i>Sphingobium</i> spp. Reveal the Molecular Basis for Their Recognition of Bulky Ketones. <i>Topics in Catalysis</i> , 2014 , 57, 356-365	2.3	38
85	Access to Enantiopure β -Alkyl- β -Hydroxy Esters through Dynamic Kinetic Resolutions Employing Purified/Overexpressed Alcohol Dehydrogenases. <i>Advanced Synthesis and Catalysis</i> , 2012 , 354, 1743-1749	5.6	38
84	<i>Escherichia coli</i> /ADH-A: An All-Inclusive Catalyst for the Selective Biooxidation and Deracemisation of Secondary Alcohols. <i>ChemCatChem</i> , 2013 , 5, 3875-3881	5.2	37
83	Ketone-alcohol hydrogen-transfer equilibria: is the biooxidation of halohydrins blocked?. <i>Chemistry - A European Journal</i> , 2010 , 16, 11012-9	4.8	37
82	Biocatalysed concurrent production of enantioenriched compounds through parallel interconnected kinetic asymmetric transformations. <i>Organic and Biomolecular Chemistry</i> , 2010 , 8, 1431-1439	3.9	36
81	Laccase/TEMPO-mediated system for the thermodynamically disfavored oxidation of 2,2-dihalo-1-phenylethanol derivatives. <i>Green Chemistry</i> , 2014 , 16, 2448	10	35
80	Promiscuous Substrate Binding Explains the Enzymatic Stereo- and Regiocontrolled Synthesis of Enantiopure Hydroxy Ketones and Diols. <i>Advanced Synthesis and Catalysis</i> , 2009 , 351, 1842-1848	5.6	34
79	Oxidoreductases Working Together: Concurrent Obtaining of Valuable Derivatives by Employing the PIKAT Method. <i>ChemCatChem</i> , 2010 , 2, 946-949	5.2	34

78	Dynamic kinetic resolution of α -substituted β -ketoesters catalyzed by Baeyer-Villiger monooxygenases: access to enantiopure β -hydroxy esters. <i>Angewandte Chemie - International Edition</i> , 2011 , 50, 8387-90	16.4	33
77	Highly enantioselective synthesis of α -azido- β -hydroxy methyl ketones catalyzed by a cooperative proline-guanidinium salt system. <i>Chemical Communications</i> , 2014 , 50, 2598-600	5.8	32
76	Laccase/2,2,6,6-Tetramethylpiperidinoxyl Radical (TEMPO): An Efficient Catalytic System for Selective Oxidations of Primary Hydroxy and Amino Groups in Aqueous and Biphasic Media. <i>Advanced Synthesis and Catalysis</i> , 2014 , 356, 2321-2329	5.6	32
75	Biocatalytic oxidation of benzyl alcohol to benzaldehyde via hydrogen transfer. <i>Tetrahedron</i> , 2009 , 65, 6805-6809	2.4	32
74	A designer natural deep eutectic solvent to recycle the cofactor in alcohol dehydrogenase-catalysed processes. <i>Green Chemistry</i> , 2019 , 21, 2946-2951	10	31
73	Catalytic Promiscuity of Transaminases: Preparation of Enantioenriched α -Fluoroamines by Formal Tandem Hydrodefluorination/Deamination. <i>Angewandte Chemie - International Edition</i> , 2016 , 55, 3144-7	16.4	31
72	Deracemisation of profenol core by combining laccase/TEMPO-mediated oxidation and alcohol dehydrogenase-catalysed dynamic kinetic resolution. <i>Catalysis Science and Technology</i> , 2015 , 5, 1443-1446	5.5	30
71	Remote interactions explain the unusual regioselectivity of lipase from <i>Pseudomonas cepacia</i> toward the secondary hydroxyl of 2'-deoxynucleosides. <i>ChemBioChem</i> , 2006 , 7, 693-8	3.8	30
70	First regioselective enzymatic acylation of amino groups applied to pyrimidine 3',5'-diaminonucleoside derivatives. Improved synthesis of pyrimidine 3',5'-diamino-2',3',5'-trideoxynucleosides. <i>Journal of Organic Chemistry</i> , 2001 , 66, 4079-82	4.2	29
69	Why Leave a Job Half Done? Recent Progress in Enzymatic Deracemizations. <i>Current Green Chemistry</i> , 2015 , 2, 192-211	1.3	26
68	Novel and efficient regioselective enzymatic approach to 3',5'- and 3',5'-di-O-crotonyl 2'-deoxynucleoside derivatives. <i>Tetrahedron Letters</i> , 2005 , 46, 5835-5838	2	25
67	Stereocomplementary Asymmetric Reduction of Bulky Bulky Ketones by Biocatalytic Hydrogen Transfer. <i>European Journal of Organic Chemistry</i> , 2008 , 2008, 2539-2543	3.2	24
66	Conversion of α - and β -Keto Esters into Optically Active Lactams. Transaminases in Cascade Processes. <i>Advanced Synthesis and Catalysis</i> , 2018 , 360, 686-695	5.6	23
65	Expanding dynamic kinetic protocols: transaminase-catalyzed synthesis of α -substituted β -amino ester derivatives. <i>Chemical Communications</i> , 2013 , 49, 10688-90	5.8	22
64	Chemoenzymatic Deracemization of Secondary Alcohols by using a TEMPO-catalyzed Alcohol Dehydrogenase System. <i>ChemCatChem</i> , 2015 , 7, 4016-4020	5.2	21
63	Shifting the equilibrium of a biocatalytic cascade synthesis to enantiopure epoxides using anion exchangers. <i>Tetrahedron: Asymmetry</i> , 2009 , 20, 483-488		21
62	Chemo- and Stereodivergent Preparation of Terminal Epoxides and Bromohydrins through One-Pot Biocatalysed Reactions: Access to Enantiopure Five- and Six-Membered N-Heterocycles. <i>Advanced Synthesis and Catalysis</i> , 2010 , 352, 1657-1661	5.6	21
61	Stereoselective anti-Prelog reduction of ketones by whole cells of <i>Comamonas testosteroni</i> in a substrate-coupled approach. <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2008 , 55, 126-129		21

60	Polyphosphazenes as tunable and recyclable supports to immobilize alcohol dehydrogenases and lipases: synthesis, catalytic activity, and recycling efficiency. <i>Biomacromolecules</i> , 2010 , 11, 1291-7	6.9	20
59	Reduction processes biocatalyzed by <i>Vigna unguiculata</i> . <i>Tetrahedron: Asymmetry</i> , 2010 , 21, 566-570		20
58	Development of a routine method for the simultaneous confirmation and determination of clenbuterol in urine by minimal labeling isotope pattern deconvolution and GC-EI-MS. <i>Analytical and Bioanalytical Chemistry</i> , 2012 , 402, 1879-88	4.4	19
57	Expanding the regioselective enzymatic repertoire: oxidative mono-cleavage of dialkenes catalyzed by <i>Trametes hirsuta</i> . <i>Chemical Communications</i> , 2012 , 48, 3303-5	5.8	19
56	Catalytic Promiscuity of Transaminases: Preparation of Enantioenriched β -Fluoroamines by Formal Tandem Hydrodefluorination/Deamination. <i>Angewandte Chemie</i> , 2016 , 128, 3196-3199	3.6	19
55	The Versatile Applications of DES and Their Influence on Oxidoreductase-Mediated Transformations. <i>Molecules</i> , 2019 , 24,	4.8	17
54	Chemo-promiscuity of alcohol dehydrogenases: reduction of phenylacetaldoxime to the alcohol. <i>Tetrahedron</i> , 2010 , 66, 3410-3414	2.4	17
53	Redesigning the mechanism of the lipase-catalysed aminolysis of esters. <i>Tetrahedron: Asymmetry</i> , 2006 , 17, 1264-1274		16
52	Asymmetric anti-Prelog reduction of ketones catalysed by <i>Paracoccus pantotrophus</i> and <i>Comamonas</i> sp. cells via hydrogen transfer. <i>Tetrahedron: Asymmetry</i> , 2008 , 19, 1954-1958		15
51	Enzymatic regioselective production of chloramphenicol esters. <i>Tetrahedron</i> , 2011 , 67, 2858-2862	2.4	14
50	Novel and Efficient Chemoenzymatic Synthesis of D-Glucose 6-Phosphate and Molecular Modeling Studies on the Selective Biocatalysis. <i>European Journal of Organic Chemistry</i> , 2007 , 2007, 2769-2778	3.2	14
49	Asymmetric Synthesis of Primary and Secondary β -Fluoro-arylamines using Reductive Aminases from Fungi. <i>ChemCatChem</i> , 2020 , 12, 2421-2425	5.2	13
48	Mild Chemoenzymatic Oxidation of Allylic sec-Alcohols. Application to Biocatalytic Stereoselective Redox Isomerizations. <i>ACS Catalysis</i> , 2018 , 8, 2413-2419	13.1	13
47	Expanding the Scope of Alcohol Dehydrogenases towards Bulkier Substrates: Stereo- and Enantioselectivity for α -Dihalogenated Ketones. <i>ChemCatChem</i> , 2014 , 6, 1066-1072	5.2	13
46	Testing of microorganisms for β -transaminase activity. <i>Tetrahedron: Asymmetry</i> , 2010 , 21, 2005-2009		13
45	Novel chemoenzymatic oxidation of amines into oximes based on hydrolase-catalysed peracid formation. <i>Organic and Biomolecular Chemistry</i> , 2017 , 15, 3196-3201	3.9	12
44	Immobilized redox enzymatic catalysts: Baeyer-Villiger monooxygenases supported on polyphosphazenes. <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2012 , 74, 178-183		12
43	Chemoenzymatic preparation of optically active 3-(1H-imidazol-1-yl)cyclohexanol-based ionic liquids: application in organocatalysis and toxicity studies. <i>RSC Advances</i> , 2012 , 2, 6455	3.7	12

42	Biocatalytic preparation of enantioenriched 3,4-dihydropiperidines and theoretical study of <i>Candida antarctica</i> lipase B enantioselectivity. <i>Tetrahedron</i> , 2006 , 62, 3284-3291	2.4	12
41	Synthesis of β -alkyl- β -hydroxy amides through biocatalytic dynamic kinetic resolution employing alcohol dehydrogenases. <i>Advanced Synthesis and Catalysis</i> , 2019 , 361, 2706	5.6	11
40	Dynamic kinetic resolution of β -substituted β -ketoesters catalyzed by Baeyer-Villiger monooxygenases: Access to enantiopure β -hydroxy esters. <i>Angewandte Chemie</i> , 2011 , 123, 8537-8540	3.6	11
39	Enzymatic acylation reactions on β -hydroxycyanohydrins. <i>Tetrahedron</i> , 2004 , 60, 10525-10532	2.4	11
38	Is the ring conformation the most critical parameter in lipase-catalysed acylation of cycloalkanols?. <i>Organic and Biomolecular Chemistry</i> , 2004 , 2, 2572-7	3.9	10
37	Alcohol dehydrogenases and N-heterocyclic carbene gold(I) catalysts: Design of a chemoenzymatic cascade towards optically active β -disubstituted allylic alcohols. <i>Angewandte Chemie - International Edition</i> , 2021 , 60, 13945-13951	16.4	10
36	What to sacrifice? Fusions of cofactor regenerating enzymes with Baeyer-Villiger monooxygenases and alcohol dehydrogenases for self-sufficient redox biocatalysis. <i>Tetrahedron</i> , 2019 , 75, 1832-1839	2.4	10
35	Novel and efficient syntheses of 3',5'-diamino derivatives of 2',3',5'-trideoxycytidine and 2',3',5'-trideoxyadenosine. Protonation behavior of 3',5'-diaminonucleosides. <i>Tetrahedron</i> , 2003 , 59, 5449-5456	2.4	9
34	Imidazolium-based ionic liquids as non-conventional media for alcohol dehydrogenase-catalysed reactions. <i>Topics in Catalysis</i> , 2014 , 57, 332-338	2.3	8
33	Asymmetric chemoenzymatic synthesis of N-acetyl- β -amino esters based on lipase-catalyzed kinetic resolutions through transesterification reactions. <i>Tetrahedron</i> , 2014 , 70, 2264-2271	2.4	8
32	A straightforward route to obtain $^{13}\text{C}_1$ -labeled clenbuterol. <i>Tetrahedron</i> , 2011 , 67, 5577-5581	2.4	8
31	Sequential two-step stereoselective amination of allylic alcohols through the combination of laccases and amine transaminases. <i>ChemBioChem</i> , 2020 , 21, 200-211	3.8	8
30	Synthesis, protonation behavior, conformational analysis, and regioselective enzymatic acylation of the novel diamino analogue of (E)-5-(2-bromovinyl)-2'-deoxyuridine (BVDU). <i>Nucleosides, Nucleotides and Nucleic Acids</i> , 2003 , 22, 1939-52	1.4	7
29	Unmasking the hidden carbonyl group using gold(I) catalysts and alcohol dehydrogenases: Design of a thermodynamically-driven cascade toward optically active halohydrins. <i>ACS Catalysis</i> , 2552-2560	13.1	7
28	Deep eutectic solvents as media in alcohol dehydrogenase-catalyzed reductions of halogenated ketones. <i>ChemCatChem</i> , 2020 , 12, 832-836	5.2	7
27	Laccase-mediated oxidations of propargylic alcohols. Application in the deracemization of 1-arylprop-2-yn-1-ols in combination with alcohol dehydrogenases. <i>ChemCatChem</i> , 2020 , 12, 520-527	5.2	7
26	Broadening the chemical scope of laccases: selective deprotection of N-benzyl groups. <i>Green Chemistry</i> , 2015 , 17, 2794-2798	10	6
25	Efficient synthesis of β -alkyl- β -amino amides by transaminase-mediated dynamic kinetic resolutions. <i>Catalysis Science and Technology</i> , 2019 , 9, 4083-4090	5.5	6

24	Synthesis of nitrogenated lignin-derived compounds and reactivity with laccases. Study of their application in mild chemoenzymatic oxidative processes. <i>RSC Advances</i> , 2017 , 7, 50459-50471	3.7	6
23	First regioselective enzymatic alkoxy-carbonylation of primary amines. Synthesis of novel 5'- and 3'-carbamates of pyrimidine 3',5'-diaminonucleoside derivatives including BVDU analogues. <i>Journal of Organic Chemistry</i> , 2004 , 69, 1748-51	4.2	6
22	Baeyer-Villiger monooxygenase-catalyzed desymmetrizations of cyclobutanones. Application to the synthesis of valuable spirolactones. <i>Tetrahedron</i> , 2016 , 72, 7268-7275	2.4	5
21	Stereoselective Enzymatic Reduction of 1,4-Diaryl-1,4-Diones to the Corresponding Diols Employing Alcohol Dehydrogenases. <i>Catalysts</i> , 2018 , 8, 150	4	5
20	Biocatalyzed synthesis of both enantiopure fluoromisonidazole antipodes. <i>Tetrahedron Letters</i> , 2013 , 54, 5022-5025	2	4
19	One-pot two-step chemoenzymatic deracemization of allylic alcohols using laccases and alcohol dehydrogenases. <i>Molecular Catalysis</i> , 2020 , 493, 111087	3.3	4
18	Alcohol Dehydrogenases and N-Heterocyclic Carbene Gold(I) Catalysts: Design of a Chemoenzymatic Cascade towards Optically Active β -Disubstituted Allylic Alcohols. <i>Angewandte Chemie</i> , 2021 , 133, 14064-14070	3.6	4
17	Recent Advances in Biocatalysis Applied to Organic Synthesis 2011 , 491-527		3
16	Synthesis and antiviral activity assay of novel (E)-3',5'-diamino-5-(2-bromovinyl)-2',3',5'-trideoxyuridine. <i>Nucleosides, Nucleotides and Nucleic Acids</i> , 2003 , 22, 833-6	1.4	3
15	Enzymes Applied to the Synthesis of Amines 2021 , 143-180		3
14	Markovnikov Wacker-Tsuji Oxidation of Allyl(hetero)arenes and Application in a One-Pot Photo-Metal-Biocatalytic Approach to Enantioenriched Amines and Alcohols. <i>Advanced Synthesis and Catalysis</i> , 2021 , 363, 4096-4108	5.6	3
13	Recent Advances in Selective Biocatalytic (Hydrogen Transfer) Reductions 2019 , 227-259		2
12	Concepts in Biocatalysis 2012 , 43-66		2
11	Enzymatic regioselective levulinylolation of 2'-deoxyribonucleosides and 2'-o-methylribonucleosides. <i>Current Protocols in Nucleic Acid Chemistry</i> , 2005 , Chapter 2, Unit 2.11	0.5	2
10	Applications of Oxidoreductases in Synthesis: A Roadmap to Access Value-Added Products 2021 , 181-223		2
9	Supported ionic liquid-like phases as efficient solid ionic solvents for the immobilisation of alcohol dehydrogenases towards the development of stereoselective bioreductions. <i>Green Chemistry</i> , 2021 , 23, 5609-5617	10	2
8	Biocatalytic Concurrent Processes 2011 , 1		1
7	Chemoenzymatic Sequential One-Pot Protocols 2021 , 403-426		1

6	Application of Nonaqueous Media in Biocatalysis 2021 , 245-274	1
5	Practical Multienzymatic Transformations: Combining Enzymes for the One-pot Synthesis of Organic Molecules in a Straightforward Manner 2021 , 361-402	1
4	Photobiocatalysis 2021 , 317-359	0
3	The Reactivity of α -Fluoroketones with PLP Dependent Enzymes: Transaminases as Hydrodefluorinases. <i>ChemCatChem</i> , 2021 , 13, 3967-3972	5.2 0
2	Synthetic Strategies Based on C=O Bioreductions for the Preparation of Biologically Active Molecules 2013 , 85-111	
1	Nonconventional Cofactor Regeneration Systems 2021 , 275-296	