Ivan Lavandera

List of Publications by Year
in descending order

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102 papers	3,977 citations	94269 37 h-index	143772 57 g-index
139 all docs	139 docs citations	139 times ranked	2708 citing authors

#	Article	IF	Citations
1	Formal Asymmetric Biocatalytic Reductive Amination. Angewandte Chemie - International Edition, 2008, 47, 9337-9340.	7.2	219
2	From a Racemate to a Single Enantiomer: Deracemization by Stereoinversion. Advanced Synthesis and Catalysis, 2006, 348, 1789-1805.	2.1	177
3	Asymmetric Synthesis of Optically Pure Pharmacologically Relevant Amines Employing Ï‰â€Transaminases. Advanced Synthesis and Catalysis, 2008, 350, 2761-2766.	2.1	176
4	Mimicking Nature: Synthetic Nicotinamide Cofactors for Câ•€ Bioreduction Using Enoate Reductases. Organic Letters, 2013, 15, 180-183.	2.4	155
5	One-Way Biohydrogen Transfer for Oxidation of sec-Alcohols. Organic Letters, 2008, 10, 2155-2158.	2.4	121
6	Enzymatic Reduction of Ketones in â€œMicro-aqueousâ€•Media Catalyzed by ADH-A from Rhodococcus ruber. Organic Letters, 2007, 9, 2163-2166.	2.4	119
7	Stereoselective Bioreduction of Bulky-Bulky Ketones by a Novel ADH from Ralstonia sp.. Journal of Organic Chemistry, 2008, 73, 6003-6005.	1.7	114
8	Biocatalytic deuterium- and hydrogen-transfer using over-expressed ADH-â€˜Aâ€™: enhanced stereoselectivity and2H-labeled chiral alcohols. Chemical Communications, 2006, , 2402-2404.	2.2	99
9	Transaminases Applied to the Synthesis of High Added-Value Enantiopure Amines. Organic Process Research and Development, 2014, 18, 788-792.	1.3	78
10	Asymmetric biocatalytic reduction of ketones using hydroxy-functionalised water-miscible ionic liquids as solvents. Tetrahedron: Asymmetry, 2007, 18, 2541-2546.	1.8	72
11	From Diols to Lactones under Aerobic Conditions using a Laccase/TEMPO Catalytic System in Aqueous Medium. Advanced Synthesis and Catalysis, 2012, 354, 3405-3408.	2.1	72
12	Stereoselective amination of racemic sec-alcohols through sequential application of laccases and transaminases. Green Chemistry, 2017, 19, 474-480.	4.6	66
13	Synthesis of Enantiopure Fluorohydrins Using Alcohol Dehydrogenases at High Substrate Concentrations. Journal of Organic Chemistry, 2013, 78, 7312-7317.	1.7	65
14	Tandem Concurrent Processes: One-Pot Single-Catalyst Biohydrogen Transfer for the Simultaneous Preparation of Enantiopure Secondary Alcohols. Journal of Organic Chemistry, 2009, 74, 1730-1732.	1.7	63
15	(Chemo)enzymatic cascadesâ€”Nature's synthetic strategy transferred to the laboratory. Journal of Molecular Catalysis B: Enzymatic, 2015, 114, 1-6.	1.8	61
16	Recent Advances in Cofactor Regeneration Systems Applied to Biocatalyzed Oxidative Processes. Current Organic Chemistry, 2012, 16, 2525-2541.	0.9	60
17	Simple and quick preparation of Î±-thiocyanate ketones in hydroalcoholic media. Access to 5-aryl-2-imino-1,3-oxathiolanes. Green Chemistry, 2009, 11, 452.	4.6	58
18	Steric vs. electronic effects in the Lactobacillus brevis ADH-catalyzed bioreduction of ketones. Organic and Biomolecular Chemistry, 2014, 12, 673-681.	1.5	56

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19	Stereo-Complementary Two-Step Cascades Using a Two-Enzyme System Leading to Enantiopure Epoxides. Advanced Synthesis and Catalysis, 2007, 349, 1399-1404.	2.1	55
20	Biocatalytic Cascade for the Synthesis of Enantiopure Î²â€Azidoalcohols and Î²â€Hydroxynitriles. European Journal of Organic Chemistry, 2009, 2009, 2293-2298.	1.2	53
21	Stereodivergent Preparation of Valuable Î³- or Î´-Hydroxy Esters and Lactones through One-Pot Cascade or Tandem Chemoenzymatic Protocols. ACS Catalysis, 2014, 4, 386-393.	5.5	53
22	Performance of Recombinantâ€Wholeâ€Cellâ€Catalyzed Reductions in Deepâ€Eutectica€Solventâ€“Aqueousâ€Media Mixtures. ChemCatChem, 2015, 7, 2654-2659.	1.8	53
23	An Inverse Substrate Orientation for the Regioselective Acylation of 3â€²,5â€²-Diaminonucleosides Catalyzed by Candida antarctica lipase B?. ChemBioChem, 2005, 6, 1381-1390.	1.3	52
24	An Exceptionally DMSOâ€Tolerant Alcohol Dehydrogenase for the Stereoselective Reduction of Ketones. ChemSusChem, 2008, 1, 431-436.	3.6	51
25	Coupling biocatalysis and click chemistry: one-pot two-step convergent synthesis of enantioenriched 1,2,3-triazole-derived diols. Chemical Communications, 2013, 49, 2625-2627.	2.2	51
26	Butâ€2â€eneâ€1,4â€diamine and Butâ€2â€eneâ€1,4â€diol as Donors for Thermodynamically Favored Transaminaseâ€and Alcohol Dehydrogenaseâ€Catalyzed Processes. Advanced Synthesis and Catalysis, 2016, 358, 1618-1624.	2.1	49
27	Structures of Alcohol Dehydrogenases from Ralstonia and Sphingobium spp. Reveal the Molecular Basis for Their Recognition of â€˜Bulkyâ€“Bulkyâ€™ Ketones. Topics in Catalysis, 2014, 57, 356-365.	1.3	48
28	Laccase/TEMPO-mediated system for the thermodynamically disfavored oxidation of 2,2-dihalo-1-phenylethanol derivatives. Green Chemistry, 2014, 16, 2448.	4.6	48
29	Ketoneâ€“Alcohol Hydrogenâ€Transfer Equilibria: Is the Biooxidation of Halohydrins Blocked?. Chemistry - A European Journal, 2010, 16, 11012-11019.	1.7	46
30	Access to Enantiopure Î±â€Alkylâ€Î²â€hydroxy Esters through Dynamic Kinetic Resolutions Employing Purified/Overexpressed Alcohol Dehydrogenases. Advanced Synthesis and Catalysis, 2012, 354, 1743-1749.	2.1	46
31	Escherichiaâ€…coli/ADHâ€A: An Allâ€Inclusive Catalyst for the Selective Biooxidation and Deracemisation of Secondary Alcohols. ChemCatChem, 2013, 5, 3875-3881.	1.8	46
32	Biocatalysed concurrent production of enantioenriched compounds through parallel interconnected kinetic asymmetric transformations. Organic and Biomolecular Chemistry, 2010, 8, 1431.	1.5	44
33	Oxidoreductases Working Together: Concurrent Obtaining of Valuable Derivatives by Employing the PIKAT Method. ChemCatChem, 2010, 2, 946-949.	1.8	42
34	Laccase/2,2,6,6â€Tetramethylpiperidinoxyl Radical (TEMPO): An Efficient Catalytic System for Selective Oxidations of Primary Hydroxy and Amino Groups in Aqueous and Biphasic Media. Advanced Synthesis and Catalysis, 2014, 356, 2321-2329.	2.1	42
35	Highly enantioselective synthesis of Î±-azido-Î²-hydroxy methyl ketones catalyzed by a cooperative prolineâ€“guanidinium salt system. Chemical Communications, 2014, 50, 2598.	2.2	40
36	Deracemisation of profenol core by combining laccase/TEMPO-mediated oxidation and alcohol dehydrogenase-catalysed dynamic kinetic resolution. Catalysis Science and Technology, 2015, 5, 1443-1446.	2.1	37

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37	A designer natural deep eutectic solvent to recycle the cofactor in alcohol dehydrogenase-catalysed processes. Green Chemistry, 2019, 21, 2946-2951.	4.6	37
38	Promiscuous Substrate Binding Explains the Enzymatic Stereoâ€•and Regiocontrolled Synthesis of Enantiopure Hydroxy Ketones and Diols. Advanced Synthesis and Catalysis, 2009, 351, 1842-1848.	2.1	36
39	Biocatalytic oxidation of benzyl alcohol to benzaldehyde via hydrogen transfer. Tetrahedron, 2009, 65, 6805-6809.	1.0	36
40	Catalytic Promiscuity of Transaminases: Preparation of Enantioenriched Î²â€Fluoroamines by Formal Tandem Hydrodefluorination/Deamination. Angewandte Chemie - International Edition, 2016, 55, 3144-3147.	7.2	36
41	Dynamic Kinetic Resolution of Î±â€Substituted Î²â€Ketoesters Catalyzed by Baeyerâ€“Villiger Monooxygenases: Access to Enantiopure Î±â€Hydroxy Esters. Angewandte Chemie - International Edition, 2011, 50, 8387-8390.	7.2	35
42	Conversion of Î³â€•and Î´â€Keto Esters into Optically Active Lactams. Transaminases in Cascade Processes. Advanced Synthesis and Catalysis, 2018, 360, 686-695.	2.1	34
43	First Regioselective Enzymatic Acylation of Amino Groups Applied to Pyrimidine 3â€˜,5â€˜-Diaminonucleoside Derivatives. Improved Synthesis of Pyrimidine 3â€˜,5â€˜-Diamino-2â€˜,3â€˜,5â€˜-trideoxynucleosides. Journal of Organic Chemistry, 2001, 66, 4079-4082.	1.7	33
44	Remote Interactions Explain the Unusual Regioselectivity of Lipase from Pseudomonas cepacia toward the Secondary Hydroxyl of 2â€²-Deoxynucleosides. ChemBioChem, 2006, 7, 693-698.	1.3	32
45	The Versatile Applications of DES and Their Influence on Oxidoreductase-Mediated Transformations. Molecules, 2019, 24, 2190.	1.7	29
46	Why Leave a Job Half Done? Recent Progress in Enzymatic Deracemizations. Current Green Chemistry, 2015, 2, 192-211.	0.7	28
47	Reduction processes biocatalyzed by Vigna unguiculata. Tetrahedron: Asymmetry, 2010, 21, 566-570.	1.8	27
48	Asymmetric Synthesis of Primary and Secondary Î²â€Fluoroâ€arylamines using Reductive Aminases from Fungi. ChemCatChem, 2020, 12, 2421-2425.	1.8	27
49	Expanding the regioselective enzymatic repertoire: oxidative mono-cleavage of dialkenes catalyzed by Trametes hirsuta. Chemical Communications, 2012, 48, 3303.	2.2	26
50	Expanding dynamic kinetic protocols: transaminase-catalyzed synthesis of Î±-substituted Î²-amino ester derivatives. Chemical Communications, 2013, 49, 10688.	2.2	26
51	Chemoenzymatic Deracemization of Secondary Alcohols by using a TEMPOâ€“Iodineâ€“Alcohol Dehydrogenase System. ChemCatChem, 2015, 7, 4016-4020.	1.8	26
52	Novel and efficient regioselective enzymatic approach to 3â€²-, 5â€²- and 3â€²,5â€²-di-O-crotonyl 2â€²-deoxynucleoside derivatives. Tetrahedron Letters, 2005, 46, 5835-5838.	0.7	25
53	Stereocomplementary Asymmetric Reduction of Bulkyâ€“Bulky Ketones by Biocatalytic Hydrogen Transfer. European Journal of Organic Chemistry, 2008, 2008, 2539-2543.	1.2	25
54	Shifting the equilibrium of a biocatalytic cascade synthesis to enantiopure epoxides using anion exchangers. Tetrahedron: Asymmetry, 2009, 20, 483-488.	1.8	24

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55	Chemoâ€•and Stereodivergent Preparation of Terminal Epoxides and Bromohydrins through Oneâ€Pot Biocatalysed Reactions: Access to Enantiopure Fiveâ€•and Sixâ€Membered Nâ€Heterocycles. Advanced Synthesis and Catalysis, 2010, 352, 1657-1661.	2.1	23
56	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. Analytical and Bioanalytical Chemistry, 2012, 402, 1879-1888.	1.9	22
57	Alcohol Dehydrogenases and Nâ€Heterocyclic Carbene Gold(I) Catalysts: Design of a Chemoenzymatic Cascade towards Optically Active Î²,Î²â€Disubstituted Allylic Alcohols. Angewandte Chemie - International Edition, 2021, 60, 13945-13951.	7.2	22
58	Asymmetric anti-Prelog reduction of ketones catalysed by Paracoccus pantotrophus and Comamonas sp. cells via hydrogen transfer. Tetrahedron: Asymmetry, 2008, 19, 1954-1958.	1.8	21
59	Stereoselective anti-Prelog reduction of ketones by whole cells of Comamonas testosteroni in a â€˜substrate-coupledâ€™ approach. Journal of Molecular Catalysis B: Enzymatic, 2008, 55, 126-129.	1.8	21
60	Chemo-promiscuity of alcohol dehydrogenases: reduction of phenylacetaldoxime to the alcohol. Tetrahedron, 2010, 66, 3410-3414.	1.0	21
61	Mild Chemoenzymatic Oxidation of Allylic sec-Alcohols. Application to Biocatalytic Stereoselective Redox Isomerizations. ACS Catalysis, 2018, 8, 2413-2419.	5.5	21
62	What to sacrifice? Fusions of cofactor regenerating enzymes with Baeyer-Villiger monooxygenases and alcohol dehydrogenases for self-sufficient redox biocatalysis. Tetrahedron, 2019, 75, 1832-1839.	1.0	21
63	Laccaseâ€•mediated Oxidations of Propargylic Alcohols. Application in the Deracemization of 1â€•arylpropâ€2â€•ynâ€1â€•ols in Combination with Alcohol Dehydrogenases. ChemCatChem, 2020, 12, 520-527.	1.8	21
64	Polyphosphazenes as Tunable and Recyclable Supports To Immobilize Alcohol Dehydrogenases and Lipases: Synthesis, Catalytic Activity, and Recycling Efficiency. Biomacromolecules, 2010, 11, 1291-1297.	2.6	20
65	Unmasking the Hidden Carbonyl Group Using Gold(I) Catalysts and Alcohol Dehydrogenases: Design of a Thermodynamically-Driven Cascade toward Optically Active Halohydrins. ACS Catalysis, 2022, 12, 2552-2560.	5.5	20
66	Expanding the Scope of Alcohol Dehydrogenases towards Bulkier Substrates: Stereoâ€•and Enantiopreference for Î±,Î±â€Dihalogenated Ketones. ChemCatChem, 2014, 6, 1066-1072.	1.8	19
67	Catalytic Promiscuity of Transaminases: Preparation of Enantioenriched Î²â€Fluoroamines by Formal Tandem Hydrodefluorination/Deamination. Angewandte Chemie, 2016, 128, 3196-3199.	1.6	19
68	Enzymatic regioselective production of chloramphenicol esters. Tetrahedron, 2011, 67, 2858-2862.	1.0	17
69	Sequential Twoâ€Step Stereoselective Amination of Allylic Alcohols through the Combination of Laccases and Amine Transaminases. ChemBioChem, 2020, 21, 200-211.	1.3	17
70	Redesigning the mechanism of the lipase-catalysed aminolysis of esters. Tetrahedron: Asymmetry, 2006, 17, 1264-1274.	1.8	16
71	Markovnikov Wackerâ€Tsuji Oxidation of Allyl(hetero)arenes and Application in a Oneâ€Pot Photoâ€Metalâ€Biocatalytic Approach to Enantioenriched Amines and Alcohols. Advanced Synthesis and Catalysis, 2021, 363, 4096-4108.	2.1	16
72	Novel and Efficient Chemoenzymatic Synthesis ofD-Glucose 6-Phosphate and Molecular Modeling Studies on the Selective Biocatalysis. European Journal of Organic Chemistry, 2007, 2007, 2769-2778.	1.2	15

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73	Testing of microorganisms for Ï‰-transaminase activity. Tetrahedron: Asymmetry, 2010, 21, 2005-2009.	1.8	15
74	Synthesis of Î±â€Alkylâ€Î²â€Hydroxy Amides through Biocatalytic Dynamic Kinetic Resolution Employing Alcohol Dehydrogenases. Advanced Synthesis and Catalysis, 2019, 361, 2706-2712.	2.1	15
75	Biocatalytic preparation of enantioenriched 3,4-dihydroxypiperidines and theoretical study of Candida antarctica lipase B enantioselectivity. Tetrahedron, 2006, 62, 3284-3291.	1.0	14
76	Broadening the chemical scope of laccases: selective deprotection of N-benzyl groups. Green Chemistry, 2015, 17, 2794-2798.	4.6	14
77	Chemoenzymatic preparation of optically active 3-(1H-imidazol-1-yl)cyclohexanol-based ionic liquids: application in organocatalysis and toxicity studies. RSC Advances, 2012, 2, 6455.	1.7	13
78	Immobilized redox enzymatic catalysts: Baeyerâ€“Villiger monooxygenases supported on polyphosphazenes. Journal of Molecular Catalysis B: Enzymatic, 2012, 74, 178-183.	1.8	13
79	Novel chemoenzymatic oxidation of amines into oximes based on hydrolase-catalysed peracid formation. Organic and Biomolecular Chemistry, 2017, 15, 3196-3201.	1.5	13
80	Efficient synthesis of Î±-alkyl-Î²-amino amides by transaminase-mediated dynamic kinetic resolutions. Catalysis Science and Technology, 2019, 9, 4083-4090.	2.1	12
81	One-pot two-step chemoenzymatic deracemization of allylic alcohols using laccases and alcohol dehydrogenases. Molecular Catalysis, 2020, 493, 111087.	1.0	12
82	Enzymatic acylation reactions on Ï‰-hydroxycyanohydrins. Tetrahedron, 2004, 60, 10525-10532.	1.0	11
83	Asymmetric chemoenzymatic synthesis of N-acetyl-Î±-amino esters based on lipase-catalyzed kinetic resolutions through interesterification reactions. Tetrahedron, 2014, 70, 2264-2271.	1.0	11
84	Deep Eutectic Solvents as Media in Alcohol Dehydrogenaseâ€Catalyzed Reductions of Halogenated Ketones. ChemCatChem, 2020, 12, 832-836.	1.8	11
85	Novel and efficient syntheses of 3â€²,5â€²-diamino derivatives of 2â€²,3â€²,5â€²-trideoxycytidine and 2â€²,3â€²,5â€²-trideoxyadenosine. Protonation behavior of 3â€²,5â€²-diaminonucleosides. Tetrahedron, 2003, 59, 5449-5456.	1.0	10
86	Is the ring conformation the most critical parameter in lipase-catalysed acylation of cycloalkanols?. Organic and Biomolecular Chemistry, 2004, 2, 2572-2577.	1.5	10
87	Synthesis of nitrogenated lignin-derived compounds and reactivity with laccases. Study of their application in mild chemoenzymatic oxidative processes. RSC Advances, 2017, 7, 50459-50471.	1.7	10
88	First Regioselective Enzymatic Alkoxycarbonylation of Primary Amines. Synthesis of Novel 5â€˜- and 3â€˜-Carbamates of Pyrimidine 3â€˜,5â€˜-Diaminonucleoside Derivatives Including BVDU Analogues. Journal of Organic Chemistry, 2004, 69, 1748-1751.	1.7	9
89	A straightforward route to obtain 13C1-labeled clenbuterol. Tetrahedron, 2011, 67, 5577-5581.	1.0	9
90	Imidazolium-Based Ionic Liquids as Non-conventional Media for Alcohol Dehydrogenase-Catalysed Reactions. Topics in Catalysis, 2014, 57, 332-338.	1.3	9

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91	Supported ionic liquid-like phases as efficient solid ionic solvents for the immobilisation of alcohol dehydrogenases towards the development of stereoselective bioreductions. Green Chemistry, 2021, 23, 5609-5617.	4.6	9
92	Synthesis, Protonation Behavior, Conformational Analysis, and Regioselective Enzymatic Acylation of the Novel Diamino Analogue of (E)-5-(2-Bromovinyl)-2â€²-deoxyuridine (BVDU). Nucleosides, Nucleotides and Nucleic Acids, 2003, 22, 1939-1952.	0.4	8
93	Stereoselective Enzymatic Reduction of 1,4-Diaryl-1,4-Diones to the Corresponding Diols Employing Alcohol Dehydrogenases. Catalysts, 2018, 8, 150.	1.6	8
94	Biocatalyzed synthesis of both enantiopure fluoromisonidazole antipodes. Tetrahedron Letters, 2013, 54, 5022-5025.	0.7	7
95	Baeyerâ€“Villiger monooxygenase-catalyzed desymmetrizations of cyclobutanones. Application to the synthesis of valuable spirolactones. Tetrahedron, 2016, 72, 7268-7275.	1.0	7
96	Alcohol Dehydrogenases and Nâ€Heterocyclic Carbene Gold(I) Catalysts: Design of a Chemoenzymatic Cascade towards Optically Active Î²,Î²â€Disubstituted Allylic Alcohols. Angewandte Chemie, 2021, 133, 14064-14070.	1.6	7
97	Chemoenzymatic Oxosulfonylationâ€Bioreduction Sequence for the Stereoselective Synthesis of Î²â€Hydroxy Sulfones. ChemSusChem, 2021, , .	3.6	7
98	Synthesis and Antiviral Activity Assay of Novel (E)-3â€²,5â€²-Diamino-5-(2-bromovinyl)-2â€²,3â€²,5â€²-trideoxyuridine. Nucleosides, Nucleotides and Nucleic Acids, 2003, 22, 833-836.	0.4	4
99	Enzymatic Regioselective Levulinylation of 2â€²âDeoxyribonucleosides and 2â€²â€•O â€Methylribonucleosides. Current Protocols in Nucleic Acid Chemistry, 2005, 21, Unit 2.11.	0.5	3
100	Transaminases as suitable catalysts for the synthesis of enantiopure Î²,Î²-difluoroamines. Organic and Biomolecular Chemistry, 2022, 20, 984-988.	1.5	3
101	Regioselective Preparation of Thiamphenicol Esters Through Lipase-Catalyzed Processes. Journal of the Brazilian Chemical Society, 2014, , .	0.6	2
102	The Reactivity of Î±â€Fluoroketones with PLP Dependent Enzymes: Transaminases as Hydrodefluorinases. ChemCatChem, 2021, 13, 3967-3972.	1.8	1