

Philippe Compain

List of Publications by Year in descending order

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101
papers

3,835
citations

136950

32
h-index

138484

58
g-index

129
all docs

129
docs citations

129
times ranked

2636
citing authors

#	ARTICLE	IF	CITATIONS
1	Carbohydrate mimetics-based glycosyltransferase inhibitors. <i>Bioorganic and Medicinal Chemistry</i> , 2001, 9, 3077-3092.	3.0	319
2	Design, Synthesis and Biological Evaluation of Iminosugar-Based Glycosyltransferase Inhibitors. <i>Current Topics in Medicinal Chemistry</i> , 2003, 3, 541-560.	2.1	183
3	Glycosidase Inhibition with Fullerene Iminosugar Balls: A Dramatic Multivalent Effect. <i>Angewandte Chemie - International Edition</i> , 2010, 49, 5753-5756.	13.8	174
4	Olefin Metathesis of Amine-Containing Systems: Beyond the Current Consensus. <i>Advanced Synthesis and Catalysis</i> , 2007, 349, 1829-1846.	4.3	157
5	Tactics and strategies for the synthesis of iminosugar C-glycosides: a review. <i>Tetrahedron: Asymmetry</i> , 2009, 20, 672-711.	1.8	154
6	Design and Synthesis of Highly Potent and Selective Pharmacological Chaperones for the Treatment of Gaucher's disease. <i>ChemBioChem</i> , 2006, 7, 1356-1359.	2.6	151
7	Catalytic C-H amination at its limits: challenges and solutions. <i>Organic Chemistry Frontiers</i> , 2017, 4, 2500-2521.	4.5	146
8	±-1-C-Octyl-1-deoxynojirimycin as a pharmacological chaperone for Gaucher disease. <i>Bioorganic and Medicinal Chemistry</i> , 2006, 14, 7736-7744.	3.0	106
9	The Multivalent Effect in Glycosidase Inhibition: A New, Rapidly Emerging Topic in Glycoscience. <i>ChemBioChem</i> , 2014, 15, 1239-1251.	2.6	101
10	The Multivalent Effect in Glycosidase Inhibition: Probing the Influence of Architectural Parameters with Cyclodextrin-Based Iminosugar Click Clusters. <i>Chemistry - A European Journal</i> , 2011, 17, 13825-13831.	3.3	93
11	Iminosugar-based glycopolypeptides: glycosidase inhibition with bioinspired glycoprotein analogue micellar self-assemblies. <i>Chemical Communications</i> , 2014, 50, 3350-3352.	4.1	75
12	First total synthesis of (+)-hyacinthacine A2. <i>Tetrahedron: Asymmetry</i> , 2001, 12, 1807-1809.	1.8	71
13	A General Strategy for the Practical Synthesis of Nojirimycin C-Glycosides and Analogues. Extension to the First Reported Example of an Iminosugar 1-Phosphonate. <i>Journal of Organic Chemistry</i> , 2002, 67, 6960-6970.	3.2	64
14	Cyclodextrin-Based Iminosugar Click Clusters: The First Examples of Multivalent Pharmacological Chaperones for the Treatment of Lysosomal Storage Disorders. <i>ChemBioChem</i> , 2012, 13, 661-664.	2.6	63
15	New Aspects of Catalytic Intramolecular C-H Amination: Unexpected Formation of a Seven-Membered Ring in Nitrogen-Containing Systems. <i>Organic Letters</i> , 2006, 8, 4493-4496.	4.6	61
16	Second-Generation Iminoxyditol-Based Pharmacological Chaperones for the Treatment of Gaucher Disease. <i>ChemMedChem</i> , 2011, 6, 353-361.	3.2	58
17	A Systematic Investigation of Iminosugar Click Clusters as Pharmacological Chaperones for the Treatment of Gaucher Disease. <i>ChemBioChem</i> , 2014, 15, 309-319.	2.6	57
18	The Multivalent Effect in Glycosidase Inhibition: Probing the Influence of Valency, Peripheral Ligand Structure, and Topology with Cyclodextrin-Based Iminosugar Click Clusters. <i>ChemBioChem</i> , 2013, 14, 2038-2049.	2.6	56

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19	General Access to Iminosugar C-Glycoside Building Blocks by Means of Cross-Metathesis: A Gateway to Glycoconjugate Mimetics. <i>Organic Letters</i> , 2003, 5, 3269-3272.	4.6	55
20	1-C-Alkyl-1-deoxyojirimycin derivatives as potent and selective inhibitors of intestinal isomaltase: remarkable effect of the alkyl chain length on glycosidase inhibitory profile. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2004, 14, 5991-5995.	2.2	51
21	Iminosugar-Cyclopeptoid Conjugates Raise Multivalent Effect in Glycosidase Inhibition at Unprecedented High Levels. <i>Chemistry - A European Journal</i> , 2016, 22, 5151-5155.	3.3	50
22	Multivalent Effect in Glycosidase Inhibition: The End of the Beginning. <i>Chemical Record</i> , 2020, 20, 10-22.	5.8	49
23	Design and synthesis of iminosugar-based inhibitors of glucosylceramide synthase: the search for new therapeutic agents against Gaucher disease. <i>Tetrahedron: Asymmetry</i> , 2005, 16, 1747-1756.	1.8	47
24	Structural Basis of Outstanding Multivalent Effects in Jack Bean α -Mannosidase Inhibition. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 8002-8006.	13.8	44
25	Palladium(II)-catalyzed formation of β -butyrolactones from 4-trimethylsilyl-3-alkyn-1-ols: Synthetic and mechanistic aspects. <i>Tetrahedron</i> , 1996, 52, 10405-10416.	1.9	42
26	A Convergent Strategy for the Synthesis of Second-Generation Iminosugar Clusters Using "Clickable" Trivalent Dendrons. <i>European Journal of Organic Chemistry</i> , 2014, 2014, 1866-1872.	2.4	42
27	General synthesis and biological evaluation of 1-C-substituted derivatives of fagomine (2-deoxyojirimycin-1-C-glycosides). <i>Bioorganic and Medicinal Chemistry</i> , 2005, 13, 2313-2324.	3.0	40
28	Rescue of Functional CFTR Channels in Cystic Fibrosis: A Dramatic Multivalent Effect Using Iminosugar Cluster-Based Correctors. <i>ChemBioChem</i> , 2013, 14, 2050-2058.	2.6	39
29	Synthesis of the first examples of iminosugar clusters based on cyclopeptoid cores. <i>Beilstein Journal of Organic Chemistry</i> , 2014, 10, 1406-1412.	2.2	38
30	Reaction of the lithio-derivative of methoxy allene with SAMP-hydrazones: Access to enantiopure 3-pyrrolines. <i>Tetrahedron Letters</i> , 1999, 40, 5009-5012.	1.4	36
31	Rearrangement of β -hydroxy imines to β -amino ketones: Mechanistic aspects and synthetic applications. <i>Tetrahedron</i> , 1996, 52, 6647-6664.	1.9	33
32	Synthesis and biological evaluation of the first example of an eight-membered iminoalditol. <i>Tetrahedron Letters</i> , 2004, 45, 579-581.	1.4	33
33	Giant Glycosidase Inhibitors: First- and Second-Generation Fullerodendrimers with a Dense Iminosugar Shell. <i>Chemistry - A European Journal</i> , 2018, 24, 2483-2492.	3.3	33
34	Iterative Multifunctionalization of Unactivated C-H Bonds in Piperidines by Way of Intramolecular Rh(II)-Catalyzed Aminations. <i>Journal of Organic Chemistry</i> , 2008, 73, 2155-2162.	3.2	32
35	Iminosugars as a new class of cholinesterase inhibitors. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2015, 25, 830-833.	2.2	31
36	Square sugars: challenges and synthetic strategies. <i>Organic and Biomolecular Chemistry</i> , 2017, 15, 3806-3827.	2.8	31

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37	Lewis acid promoted cyclocondensations of $\hat{\text{I}}^{\pm}$ -ketophosphonoenoates with dienes from Diels-Alder to hetero Diels-Alder reactions. <i>Tetrahedron</i> , 2002, 58, 6521-6529.	1.9	30
38	Synthesis of new $\hat{\text{I}}^{\pm}$ -1-C-alkylated imino-liditols: A comparative study of their activity as $\hat{\text{I}}^{\pm}$ -glucocerebrosidase inhibitors. <i>Bioorganic and Medicinal Chemistry</i> , 2010, 18, 2645-2650.	3.0	30
39	Intramolecular metal-catalyzed amination of pseudo-anomeric C-H bonds. <i>Tetrahedron Letters</i> , 2005, 46, 4731-4735.	1.4	29
40	Stereoselective Synthesis of C,C-Glycosides from exo-Glycals Enabled by Iron-Mediated Hydrogen Atom Transfer. <i>Organic Letters</i> , 2019, 21, 7262-7267.	4.6	28
41	First stereocontrolled synthesis and biological evaluation of 1,6-dideoxy-l-nojirimycin. <i>Tetrahedron: Asymmetry</i> , 2003, 14, 47-51.	1.8	27
42	Searching for Glycomimetics That Target Protein Misfolding in Rare Diseases: Successes, Failures, and Unexpected Progress Made in Organic Synthesis. <i>Synlett</i> , 2014, 25, 1215-1240.	1.8	26
43	Construction of giant glycosidase inhibitors from iminosugar-substituted fullerene macromonomers. <i>Journal of Materials Chemistry B</i> , 2017, 5, 6546-6556.	5.8	26
44	A facile synthesis of 3-alkoxy and 3-amino pyrroles. <i>Tetrahedron Letters</i> , 1999, 40, 8789-8792.	1.4	25
45	Synthesis of spirocyclopropyl $\hat{\text{I}}^{\pm}$ -lactams by tandem intramolecular azetidene ring-opening/closing cascade reaction: synthetic and mechanistic aspects. <i>Tetrahedron</i> , 2012, 68, 4117-4128.	1.9	25
46	Metal-Free One-Pot Oxidative Amidation of Aldoses with Functionalized Amines. <i>Journal of Organic Chemistry</i> , 2008, 73, 8647-8650.	3.2	24
47	Stereodivergent Access to Polyhydroxylated 10-Azabicyclo[4.3.1]decanes as New Calystegine Analogues. <i>Journal of Organic Chemistry</i> , 2009, 74, 3179-3182.	3.2	24
48	Design, synthesis and photochemical properties of the first examples of iminosugar clusters based on fluorescent cores. <i>Beilstein Journal of Organic Chemistry</i> , 2015, 11, 659-667.	2.2	22
49	Toward a Molecular Lego Approach for the Diversity-Oriented Synthesis of Cyclodextrin Analogues Designed as Scaffolds for Multivalent Systems. <i>Journal of Organic Chemistry</i> , 2015, 80, 10719-10733.	3.2	22
50	Investigation of original multivalent iminosugars as pharmacological chaperones for the treatment of Gaucher disease. <i>Carbohydrate Research</i> , 2016, 429, 98-104.	2.3	22
51	Ring-opening reactions of iminosugar-derived aziridines: application to the general synthesis of $\hat{\text{I}}^{\pm}$ -1-C-substituted derivatives of fagomine. <i>Tetrahedron: Asymmetry</i> , 2003, 14, 1969-1972.	1.8	21
52	Intramolecular rhodium-catalyzed activation of $\hat{\text{I}}^{\pm}$ -amino C-H bonds: decisive influence of conformational factors in the synthesis of bicyclic amins from N-sulfamoyloxyacetyl azacycloalkanes. <i>Tetrahedron Letters</i> , 2007, 48, 8531-8535.	1.4	21
53	Synthesis of 4-Membered Carbasugars by Way of Stereoselective SmI ₂ -Mediated Aldehyde-Alkene Cyclization. <i>Journal of Organic Chemistry</i> , 2013, 78, 6751-6757.	3.2	21
54	Understanding multivalent effects in glycosidase inhibition using C-glycoside click clusters as molecular probes. <i>New Journal of Chemistry</i> , 2016, 40, 7421-7430.	2.8	20

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55	Thermal rearrangement of enantioenriched β -hydroxy imines -I. Enantiocontrolled synthesis of β -substituted β -amino ketones. <i>Tetrahedron Letters</i> , 1995, 36, 4059-4062.	1.4	19
56	A stereodivergent approach to 1-deoxynojirimycin, 1-deoxygalactonojirimycin and 1-deoxymannojirimycin derivatives. <i>Tetrahedron Letters</i> , 2006, 47, 3081-3084.	1.4	19
57	Glycomimetics: Design, Synthesis, and Therapeutic Applications. <i>Molecules</i> , 2018, 23, 1658.	3.8	19
58	A New Synthesis of β -Butyrolactones via Palladium(II)-Catalyzed Cyclization of Trimethylsilylalkynes. <i>Synlett</i> , 1994, 1994, 943-945.	1.8	18
59	Revised structure of a homonojirimycin isomer from <i>Aglaonema treubii</i> : First example of a naturally occurring β -homoallonojirimycin. <i>Bioorganic and Medicinal Chemistry Letters</i> , 1999, 9, 3171-3174.	2.2	18
60	Synthesis of Spirocyclopropyl β -Lactams by a Highly Stereoselective Tandem Intramolecular Azetidine Ring-Opening/Closing Cascade Reaction. <i>European Journal of Organic Chemistry</i> , 2011, 2011, 6619-6623.	2.4	18
61	Stereoselective Synthesis of β -Glycosyl Azides by TMSOTf-Mediated Ring Opening of 1,6-Anhydro Sugars. <i>European Journal of Organic Chemistry</i> , 2013, 2013, 1963-1972.	2.4	17
62	A New, Stereocontrolled Approach to Iminosugar C-Glycosides from l-Sorbose. <i>Organic Letters</i> , 2000, 2, 2971-2974.	4.6	16
63	Synthesis of Azide-armed β -1-C-Alkyl-imino-d-xylitol Derivatives as Key Building Blocks for the Preparation of Iminosugar Click Conjugates. <i>Journal of Carbohydrate Chemistry</i> , 2011, 30, 559-574.	1.1	16
64	Metal-Free Iodine-Mediated Deoxygenation of Alcohols in the Position β to Electron-Withdrawing Groups. <i>European Journal of Organic Chemistry</i> , 2018, 2018, 1538-1545.	2.4	16
65	Thermal rearrangement of enantioenriched β -hydroxy imines -II. Formal synthesis of (α^*)-perhydrohistrionicotoxin. <i>Tetrahedron Letters</i> , 1995, 36, 4063-4064.	1.4	15
66	1,3-Dipolar cycloaddition of nitrilimines to 2,4-disubstituted-3H-1,5-benzodiazepines: remarkable effect of C4-substituent on diastereoselectivity. <i>New Journal of Chemistry</i> , 2003, 27, 1644.	2.8	15
67	Synthesis of 4-O-glycosylated 1-deoxynojirimycin derivatives as disaccharide mimics-based inhibitors of human β -glucocerebrosidase. <i>Carbohydrate Research</i> , 2007, 342, 1960-1965.	2.3	14
68	1-C-Alkyl imino-d-xylitol and l-arabinitol derivatives obtained via nucleophilic addition to pentose-derived N-tert-butanesulfinyl imines: sugar- versus chiral auxiliary-induced stereoselectivity. <i>Tetrahedron: Asymmetry</i> , 2011, 22, 609-612.	1.8	14
69	Synthesis of Amine-Containing Heterocycles by Metathesis Reactions: Recent Advances and Opportunities. <i>Topics in Heterocyclic Chemistry</i> , 2014, , 111-153.	0.2	14
70	Synthesis of a new class of iminosugars based on constrained azaspirocyclic scaffolds by way of catalytic C-H amination. <i>Organic and Biomolecular Chemistry</i> , 2015, 13, 9176-9180.	2.8	14
71	Synthesis of a novel heterocyclic ring system by way of highly regio- and chemoselective 1,3-dipolar cycloaddition of nitrilimines to 1,3,4-benzotriazepin-5-one derivatives. <i>New Journal of Chemistry</i> , 2002, 26, 1545-1548.	2.8	13
72	Glucocerebrosidase Enhancers for Selected Gaucher Disease Genotypes by Modification of β -Substituted Imino-D-Xylitols (DIXs) by Click Chemistry. <i>ChemMedChem</i> , 2014, 9, 2 1744-1754.		13

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73	Pushing the limits of catalytic C-H amination in polyoxygenated cyclobutanes. <i>Organic and Biomolecular Chemistry</i> , 2016, 14, 2780-2796.	2.8	13
74	Stereocontrolled synthesis of polyhydroxylated bicyclic azetidines as a new class of iminosugars. <i>Organic and Biomolecular Chemistry</i> , 2018, 16, 4688-4700.	2.8	13
75	Iminosugar-based ceramide mimicry for the design of new CERT START domain ligands. <i>Bioorganic and Medicinal Chemistry</i> , 2017, 25, 1984-1989.	3.0	12
76	Metal-Free Deoxygenation of α -Hydroxy Carbonyl Compounds and Beyond. <i>European Journal of Organic Chemistry</i> , 2019, 2019, 6320-6332.	2.4	12
77	Looking forward: a glance into the future of organic chemistry. <i>New Journal of Chemistry</i> , 2006, 30, 823-831.	2.8	11
78	Peri and Regioselective Synthesis of New Heterocyclic Compounds from 1,5-Benzodiazepines. <i>Synthetic Communications</i> , 2003, 33, 19-27.	2.1	10
79	Tight-binding inhibition of jack bean α -mannosidase by glycoimidazole clusters. <i>Organic and Biomolecular Chemistry</i> , 2019, 17, 5801-5817.	2.8	10
80	A Convenient, Gram-Scale Synthesis of 1-Deoxymannojirimycin. <i>Synthesis</i> , 2016, 48, 1177-1180.	2.3	9
81	Stereodivergent synthesis of right- and left-handed iminoxylitol heterodimers and monomers. Study of their impact on β -glucocerebrosidase activity. <i>Organic and Biomolecular Chemistry</i> , 2017, 15, 3681-3705.	2.8	9
82	One-Pot, Highly Stereoselective Synthesis of Dithioacetal- α , β -Diglycosides. <i>Molecules</i> , 2018, 23, 914.	3.8	9
83	Conformationally constrained fused bicyclic iminosugars: synthetic challenges and opportunities. <i>Arkivoc</i> , 2020, 2019, 4-43.	0.5	9
84	Synthesis and Glycosidase Inhibition Properties of Calix[8]arene-Based Iminosugar Click Clusters. <i>Pharmaceuticals</i> , 2020, 13, 366.	3.8	8
85	Naturally Occurring Iminosugars and Related Alkaloids: Structure, Activity and Applications. , 0, , 7-24.		7
86	An Expedient Synthesis of 1-Thiotrehalose. <i>Synthesis</i> , 2018, 50, 3927-3930.	2.3	7
87	Hybrid Multivalent Jack Bean α -Mannosidase Inhibitors: The First Example of Gold Nanoparticles Decorated with Deoxynojirimycin Inhibitors. <i>Molecules</i> , 2021, 26, 5864.	3.8	7
88	N,O-Dialkyl deoxynojirimycin derivatives as CERT START domain ligands. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2020, 30, 126796.	2.2	6
89	Highly peri-, regio- and diastereoselective 1,3-dipolar cycloaddition of mesitronitrile oxide to 1,7-dimethyl-2,3-dihydro-1H-1,4-diazepines: unexpected one-step formation of a new triheterocyclic framework. <i>New Journal of Chemistry</i> , 0, , .	2.8	5
90	Tables of Iminosugars, Their Biological Activities and their Potential as Therapeutic Agents. , 0, , 327-455.		5

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91	Iminosugar-Based Glycosyltransferase Inhibitors. , 0, , 153-176.		5
92	Concise Synthesis of Bicyclic Aminals by Way of Catalytic Intramolecular C-H Amination and Evaluation of Their Reactivity as Iminium Precursors. Letters in Organic Chemistry, 2011, 8, 155-162.	0.5	5
93	Structural Basis of Outstanding Multivalent Effects in Jack Bean Î±-Mannosidase Inhibition. Angewandte Chemie, 2018, 130, 8134-8138.	2.0	5
94	Selective Targeting of the Interconversion between Glucosylceramide and Ceramide by Scaffold Tailoring of Iminosugar Inhibitors. Molecules, 2019, 24, 354.	3.8	5
95	Nucleophilic Ring-Opening of 1,6-Anhydrosugars: Recent Advances and Applications in Organic Synthesis. European Journal of Organic Chemistry, 2021, 2021, 3501-3515.	2.4	5
96	A New and Convenient Synthesis of 1-Benzyl-1-azaspiro [5.5]-undecan-7-one: A Formal Synthesis of (±)-Perhydrohistri-nicotoin. Synthetic Communications, 1995, 25, 3075-3080.	2.1	3
97	Spiro Iminosugars: Structural Diversity and Synthetic Strategies. Topics in Heterocyclic Chemistry, 2019, , 261-290.	0.2	2
98	Synthesis of a Novel Heterocyclic Ring System by Way of Highly Regio- and Chemoselective 1,3-Dipolar Cycloaddition of Nitrilimines to 1,3,4-Benzotriazepin-5-one Derivatives.. ChemInform, 2003, 34, no.	0.0	0
99	2-Naphthylmethyl (NAP) as a Versatile Amino Protecting Group, Chemo-Selective Removal under Mild Conditions. Synlett, 2003, 2003, 2065-2067.	1.8	0
100	1,3-Dipolar Cycloaddition of Nitrilimines to 2,4-Disubstituted-3H-1, 5-Benzodiazepines: Remarkable Effect of C4-Substituent on Diastereoselectivity.. ChemInform, 2004, 35, no.	0.0	0
101	Inside Cover: Combating Cystic Fibrosis: In Search for CF Transmembrane Conductance Regulator (CFTR) Modulators / Second-Generation Iminoxylitol-Based Pharmacological Chaperones for the Treatment of Gaucher Disease (ChemMedChem 2/2011). ChemMedChem, 2011, 6, 210-210.	3.2	0