Niels Agerbirk

List of Publications by Year
in descending order

54 papers	3,384 citations	172457 29 h-index	161849 54 g-index
58 all docs	58 docs citations	58 times ranked	2729 citing authors

#	Article	IF	Citations
1	Successful herbivore attack due to metabolic diversion of a plant chemical defense. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 4859-4864.	7.1	440
2	Glucosinolate structures in evolution. Phytochemistry, 2012, 77, 16-45.	2.9	437
3	Glucosinolate structural diversity, identification, chemical synthesis and metabolism in plants. Phytochemistry, 2020, 169, 112100.	2.9	315
4	Indole glucosinolate breakdown and its biological effects. Phytochemistry Reviews, 2009, 8, 101-120.	6.5	202
5	Sequestration of host plant glucosinolates in the defensive hemolymph of the sawfly Athalia rosae. Journal of Chemical Ecology, 2001, 27, 2505-2516.	1.8	146
6	Flower vs. Leaf Feeding by Pieris brassicae: Glucosinolate-Rich Flower Tissues are Preferred and Sustain Higher Growth Rate. Journal of Chemical Ecology, 2007, 33, 1831-1844.	1.8	135
7	Seasonal variation in leaf glucosinolates and insect resistance in two types of Barbarea vulgaris . arcuata. Phytochemistry, 2001, 58, 91-100.	2.9	119
8	A recycling pathway for cyanogenic glycosides evidenced by the comparative metabolic profiling in three cyanogenic plant species. Biochemical Journal, 2015, 469, 375-389.	3.7	109
9	Initial and Final Products, Nitriles, and Ascorbigens Produced in Myrosinase-Catalyzed Hydrolysis of Indole Glucosinolates. Journal of Agricultural and Food Chemistry, 1998, 46, 1563-1571.	5.2	100
10	A saponin correlated with variable resistance of Barbarea vulgaris to the diamondback moth Plutella xylostella. Journal of Chemical Ecology, 2003, 29, 1417-1433.	1.8	85
11	Glucosinolate diversity within a phylogenetic framework of the tribeÂCardamineae (Brassicaceae) unraveled with HPLC-MS/MS andÂNMR-based analytical distinction of 70 desulfoglucosinolates. Phytochemistry, 2016, 132, 33-56.	2.9	68
12	Sinapis phylogeny and evolution of glucosinolates and specific nitrile degrading enzymes. Phytochemistry, 2008, 69, 2937-2949.	2.9	67
13	Methyl Transfer in Glucosinolate Biosynthesis Mediated by Indole Glucosinolate <i>O</i>-Methyltransferase 5. Plant Physiology, 2016, 172, 2190-2203.	4.8	66
14	Glucosinolates, flea beetle resistance, and leaf pubescence as taxonomic characters in the genus Barbarea (Brassicaceae). Phytochemistry, 2003, 63, 69-80.	2.9	61
15	1,4-Dimethoxyglucobrassicin inBarbareaand 4-Hydroxyglucobrassicin inArabidopsisandBrassica. Journal of Agricultural and Food Chemistry, 2001, 49, 1502-1507.	5.2	59
16	Responses of the flea beetles Phyllotreta nemorum and P. cruciferae to metabolically engineered Arabidopsis thaliana with an altered glucosinolate profile. Chemoecology, 2001, 11, 75-83.	1.1	59
17	Aromatic Glucosinolate Biosynthesis Pathway in Barbarea vulgaris and its Response to Plutella xylostella Infestation. Frontiers in Plant Science, 2016, 7, 83.	3.6	50
18	Lack of sequestration of host plant glucosinolates in Pieris rapae and P. grarricae. Chemoecology, 2003, 13, 47-54.	1.1	46

#	Article	IF	Citations
19	Characterization of transgenic Arabidopsis thaliana with metabolically engineered high levels of p -hydroxybenzylglucosinolate. Planta, 2001, 212, 612-618.	3.2	45
20	Multiple hydroxyphenethyl glucosinolate isomers and their tandem mass spectrometric distinction in a geographically structured polymorphism in the crucifer Barbarea vulgaris. Phytochemistry, 2015, 115, 130-142.	2.9	40
21	Taste detection of the non-volatile isothiocyanate moringin results in deterrence to glucosinolate-adapted insect larvae. Phytochemistry, 2015, 118, 139-148.	2.9	40
22	Glucosinolate hydrolysis products in the crucifer Barbarea vulgaris include a thiazolidine-2-one from a specific phenolic isomer as well as oxazolidine-2-thiones. Phytochemistry, 2015, 115, 143-151.	2.9	37
23	Specific Glucosinolate Analysis Reveals Variable Levels of Epimeric Glucobarbarins, Dietary Precursors of 5-Phenyloxazolidine-2-thiones, in Watercress Types with Contrasting Chromosome Numbers. Journal of Agricultural and Food Chemistry, 2014, 62, 9586-9596.	5.2	36
24	Acylated glucosinolates with diverse acyl groups investigated by high resolution mass spectrometry and infrared multiphoton dissociation. Phytochemistry, 2014, 100, 92-102.	2.9	36
25	Complex metabolism of aromatic glucosinolates in Pieris rapae caterpillars involving nitrile formation, hydroxylation, demethylation, sulfation, and host plant dependent carboxylic acid formation. Insect Biochemistry and Molecular Biology, 2010, 40, 126-137.	2.7	35
26	Isoferuloyl derivatives of five seed glucosinolates in the crucifer genus Barbarea. Phytochemistry, 2011, 72, 610-623.	2.9	35
27	A common pathway for metabolism of 4-hydroxybenzylglucosinolate in Pieris and Anthocaris (Lepidoptera: Pieridae). Biochemical Systematics and Ecology, 2006, 34, 189-198.	1.3	34
28	The genome sequence of Barbarea vulgaris facilitates the study of ecological biochemistry. Scientific Reports, 2017, 7, 40728.	3.3	33
29	A tandem array of UDP-glycosyltransferases from the UGT73C subfamily glycosylate sapogenins, forming a spectrum of mono- and bisdesmosidic saponins. Plant Molecular Biology, 2018, 97, 37-55.	3.9	31
30	Variable Glucosinolate Profiles of Cardamine pratensis (Brassicaceae) with Equal Chromosome Numbers. Journal of Agricultural and Food Chemistry, 2010, 58, 4693-4700.	5.2	29
31	Different Geographical Distributions of Two Chemotypes of Barbarea vulgaris that Differ in Resistance to Insects and a Pathogen. Journal of Chemical Ecology, 2014, 40, 491-501.	1.8	29
32	Characterization of Arabidopsis CYP79C1 and CYP79C2 by Glucosinolate Pathway Engineering in Nicotiana benthamiana Shows Substrate Specificity Toward a Range of Aliphatic and Aromatic Amino Acids. Frontiers in Plant Science, 2020, 11, 57.	3.6	28
33	Host plant-dependent metabolism of 4-hydroxybenzylglucosinolate in Pieris rapae: Substrate specificity and effects of genetic modification and plant nitrile hydratase. Insect Biochemistry and Molecular Biology, 2007, 37, 1119-1130.	2.7	24
34	Glucosinolate-Related Glucosides in Alliaria petiolata: Sources of Variation in the Plant and Different Metabolism in an Adapted Specialist Herbivore, Pieris rapae. Journal of Chemical Ecology, 2014, 40, 1063-1079.	1.8	23
35	Diversified glucosinolate metabolism: biosynthesis of hydrogen cyanide and of the hydroxynitrile glucoside alliarinoside in relation to sinigrin metabolism in Alliaria petiolata. Frontiers in Plant Science, 2015, 6, 926.	3.6	23
36	Polymorphism for Novel Tetraglycosylated Flavonols in an Eco-model Crucifer, Barbarea vulgaris. Journal of Agricultural and Food Chemistry, 2011, 59, 6947-6956.	5.2	21

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37	Kinetic investigation of the transformations of indol-3-ylcarbinol into oligomeric indolyl compounds based on micellar electrokinetic capillary chromatography. Journal of Chromatography A, 1996, 745, 239-248.	3.7	20
38	Transient abiotic stresses lead to latent defense and reproductive responses over the Brassica rapa life cycle. Chemoecology, 2012, 22, 239-250.	1.1	20
39	Leaf and Floral Parts Feeding by Orange Tip Butterfly Larvae Depends on Larval Position but Not on Glucosinolate Profile or Nitrogen Level. Journal of Chemical Ecology, 2010, 36, 1335-1345.	1.8	19
40	Hydroxyl and Methoxyl Derivatives of Benzylglucosinolate in <i>Lepidium densiflorum</i> with Hydrolysis to Isothiocyanates and non-Isothiocyanate Products: Substitution Governs Product Type and Mass Spectral Fragmentation. Journal of Agricultural and Food Chemistry, 2017, 65, 3167-3178.	5.2	19
41	Glucosinolate turnover in Brassicales species to an oxazolidin-2-one, formed via the 2-thione and without formation of thioamide. Phytochemistry, 2018, 153, 79-93.	2.9	19
42	Different herbivore responses to two co-occurring chemotypes of the wild crucifer Barbarea vulgaris. Arthropod-Plant Interactions, 2019, 13, 19-30.	1.1	19
43	The Role of the Glucosinolate-Myrosinase System in Mediating Greater Resistance of Barbarea verna than B. vulgaris to Mamestra brassicae Larvae. Journal of Chemical Ecology, 2018, 44, 1190-1205.	1.8	18
44	Comparison of glucosinolate diversity in the crucifer tribe Cardamineae and the remaining order Brassicales highlights repetitive evolutionary loss and gain of biosynthetic steps. Phytochemistry, 2021, 185, 112668.	2.9	18
45	Expression patterns, molecular markers and genetic diversity of insect-susceptible and resistant Barbarea genotypes by comparative transcriptome analysis. BMC Genomics, 2015, 16, 486.	2.8	16
46	Derivatization of isothiocyanates and their reactive adducts for chromatographic analysis. Phytochemistry, 2015, 118, 109-115.	2.9	15
47	Glucosinolate profiles and phylogeny in Barbarea compared to other tribe Cardamineae (Brassicaceae) and Reseda (Resedaceae), based on a library of ion trap HPLC-MS/MS data of reference desulfoglucosinolates. Phytochemistry, 2021, 185, 112658.	2.9	12
48	Engineering and optimization of the 2â€phenylethylglucosinolate production in <i>Nicotiana benthamiana</i> by combining biosynthetic genes from <i>Barbarea vulgaris</i> and <i>Arabidopsis thaliana</i>. Plant Journal, 2021, 106, 978-992.	5.7	11
49	Ecotypic differentiation of two sympatric chemotypes of Barbarea vulgaris (Brassicaceae) with different biotic resistances. Plant Ecology, 2016, 217, 1055-1068.	1.6	9
50	A high-density genetic map and QTL mapping of leaf traits and glucosinolates in Barbarea vulgaris. BMC Genomics, 2019, 20, 371.	2.8	9
51	Ancient Biosyntheses in an Oil Crop: Glucosinolate Profiles in <i>Limnanthes alba</i> and Its Relatives (Limnanthaceae, Brassicales). Journal of Agricultural and Food Chemistry, 2022, 70, 1134-1147.	5.2	5
52	Development and application of a virus-induced gene silencing protocol for the study of gene function in narrow-leafed lupin. Plant Methods, 2021, 17, 131.	4.3	4
53	Indol-3-ylmethylglucosinolates and products thereof as potential anticarcinogens. European Journal of Cancer Prevention, 1997, 6, 487.	1.3	0
54	Making use of surplus sugar. Nature Chemical Biology, 2020, 16, 1283-1284.	8.0	0