

# Mark Hildebrand

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

69  
papers

5,979  
citations

37  
h-index

75  
g-index

75  
ext. papers

6,709  
ext. citations

7.2  
avg, IF

5.89  
L-index

#	Paper	IF	Citations
69	The Effect of the Silica Cell Wall on Diatom Transport and Metabolism <b>2021</b> , 251-260		
68	Dynamic subcellular translocation of V-type H <sup>+</sup> -ATPase is essential for biomineralization of the diatom silica cell wall. <i>New Phytologist</i> , <b>2020</b> , 225, 2411-2422	9.8	10
67	Development of IgLC and GroEL recombinant vaccines for francisellosis in Nile tilapia, <i>Oreochromis niloticus</i> . <i>Fish and Shellfish Immunology</i> , <b>2020</b> , 105, 341-349	4.3	4
66	Bionic 3D printed corals. <i>Nature Communications</i> , <b>2020</b> , 11, 1748	17.4	32
65	Deep data analytics for genetic engineering of diatoms linking genotype to phenotype via machine learning. <i>Npj Computational Materials</i> , <b>2019</b> , 5,	10.9	9
64	Timing is everything: Diel metabolic and physiological changes in the diatom <i>Cyclotella cryptica</i> grown in simulated outdoor conditions. <i>Algal Research</i> , <b>2019</b> , 42, 101598	5	5
63	Understanding Diatom Cell Wall Silicification Moving Forward. <i>Frontiers in Marine Science</i> , <b>2018</b> , 5,	4.5	77
62	Manipulation of a glycolytic regulator alters growth and carbon partitioning in the marine diatom <i>Thalassiosira pseudonana</i> . <i>Algal Research</i> , <b>2018</b> , 32, 250-258	5	6
61	Clarification of Photorespiratory Processes and the Role of Malic Enzyme in Diatoms. <i>Protist</i> , <b>2017</b> , 168, 134-153	2.5	20
60	Effects of chrysolaminarin synthase knockdown in the diatom <i>Thalassiosira pseudonana</i> : Implications of reduced carbohydrate storage relative to green algae. <i>Algal Research</i> , <b>2017</b> , 23, 66-77	5	49
59	Expression of <i>Histophilus somni</i> IbpA DR2 protective antigen in the diatom <i>Thalassiosira pseudonana</i> . <i>Applied Microbiology and Biotechnology</i> , <b>2017</b> , 101, 5313-5324	5.7	17
58	Evaluating <i>Marinichlorella kaistiae</i> KAS603 cell size variation, growth and TAG accumulation resulting from rapid adaptation to highly diverse trophic and salinity cultivation regimes. <i>Algal Research</i> , <b>2017</b> , 25, 12-24	5	7
57	Characterization of a New Protein Family Associated With the Silica Deposition Vesicle Membrane Enables Genetic Manipulation of Diatom Silica. <i>Scientific Reports</i> , <b>2017</b> , 7, 13457	4.9	38
56	Development of a silicon limitation inducible expression system for recombinant protein production in the centric diatoms <i>Thalassiosira pseudonana</i> and <i>Cyclotella cryptica</i> . <i>Microbial Cell Factories</i> , <b>2017</b> , 16, 145	6.4	11
55	Enhancing LC-PUFA production in <i>Thalassiosira pseudonana</i> by overexpressing the endogenous fatty acid elongase genes. <i>Journal of Applied Phycology</i> , <b>2016</b> , 28, 897-905	3.2	37
54	Probing fatty acid metabolism in bacteria, cyanobacteria, green microalgae and diatoms with natural and unnatural fatty acids. <i>Molecular BioSystems</i> , <b>2016</b> , 12, 1299-312		16
53	Applications of Imaging Flow Cytometry for Microalgae. <i>Methods in Molecular Biology</i> , <b>2016</b> , 1389, 47-67	1.4	11

52	Transcript level coordination of carbon pathways during silicon starvation-induced lipid accumulation in the diatom <i>Thalassiosira pseudonana</i> . <i>New Phytologist</i> , <b>2016</b> , 210, 890-904	9.8	47
51	Genome and methylome of the oleaginous diatom reveal genetic flexibility toward a high lipid phenotype. <i>Biotechnology for Biofuels</i> , <b>2016</b> , 9, 258	7.8	61
50	Characterization and manipulation of a DGAT2 from the diatom <i>Thalassiosira pseudonana</i> : Improved TAG accumulation without detriment to growth, and implications for chloroplast TAG accumulation. <i>Algal Research</i> , <b>2015</b> , 12, 239-248	5	36
49	Diatom silica biomineralization: Parallel development of approaches and understanding. <i>Seminars in Cell and Developmental Biology</i> , <b>2015</b> , 46, 27-35	7.5	36
48	Evidence for a regulatory role of diatom silicon transporters in cellular silicon responses. <i>Eukaryotic Cell</i> , <b>2015</b> , 14, 29-40		66
47	Electronically transparent graphene replicas of diatoms: a new technique for the investigation of frustule morphology. <i>Scientific Reports</i> , <b>2014</b> , 4, 6117	4.9	17
46	Morphological Factors Involved in Adhesion of Acid-Cleaned Diatom Silica. <i>Silicon</i> , <b>2014</b> , 6, 95-107	2.4	7
45	Merging Biological Self-Assembly with Synthetic Chemical Tailoring: The Potential for 3-D Genetically Engineered Micro/Nano-Devices (3-D GEMS) <b>2014</b> , 85-94		
44	Metabolic and cellular organization in evolutionarily diverse microalgae as related to biofuels production. <i>Current Opinion in Chemical Biology</i> , <b>2013</b> , 17, 506-14	9.7	70
43	Development of flow cytometric procedures for the efficient isolation of improved lipid accumulation mutants in a sp. microalga. <i>Journal of Applied Phycology</i> , <b>2013</b> , 25, 1643-1651	3.2	31
42	Molecular Genetic Manipulation of Microalgae: Principles and Applications <b>2013</b> , 146-167		4
41	High throughput imaging to the diatom <i>Cyclotella cryptica</i> demonstrates substantial cell-to-cell variability in the rate and extent of triacylglycerol accumulation. <i>Algal Research</i> , <b>2013</b> , 2, 244-252	5	37
40	Characterization and localization of insoluble organic matrices associated with diatom cell walls: insight into their roles during cell wall formation. <i>PLoS ONE</i> , <b>2013</b> , 8, e61675	3.7	67
39	Metabolic engineering of lipid catabolism increases microalgal lipid accumulation without compromising growth. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2013</b> , 110, 19748-53	11.5	327
38	Whole transcriptome analysis of the silicon response of the diatom <i>Thalassiosira pseudonana</i> . <i>BMC Genomics</i> , <b>2012</b> , 13, 499	4.5	81
37	The place of diatoms in the biofuels industry. <i>Biofuels</i> , <b>2012</b> , 3, 221-240	2	180
36	Comparative analysis of diatom genomes reveals substantial differences in the organization of carbon partitioning pathways. <i>Algal Research</i> , <b>2012</b> , 1, 2-16	5	85
35	Expression, purification, and reconstitution of a diatom silicon transporter. <i>Biochemistry</i> , <b>2012</b> , 51, 3776-385	3.5	28

34	Characterization of the small RNA transcriptome of the diatom, <i>Thalassiosira pseudonana</i> . <i>PLoS ONE</i> , <b>2011</b> , 6, e22870	3-7	34
33	Dynamics of silica cell wall morphogenesis in the diatom <i>Cyclotella cryptica</i> : substructure formation and the role of microfilaments. <i>Journal of Structural Biology</i> , <b>2010</b> , 169, 62-74	3-4	73
32	Extensive and intimate association of the cytoskeleton with forming silica in diatoms: control over patterning on the meso- and micro-scale. <i>PLoS ONE</i> , <b>2010</b> , 5, e14300	3-7	74
31	Molecular Processes of Biosilicification in Diatoms <b>2010</b> , 255-294		2
30	3D imaging of diatoms with ion-abrasion scanning electron microscopy. <i>Journal of Structural Biology</i> , <b>2009</b> , 166, 316-28	3-4	65
29	Diatoms, biomineralization processes, and genomics. <i>Chemical Reviews</i> , <b>2008</b> , 108, 4855-74	68.1	318
28	A self-propagating system for Ge incorporation into nanostructured silica. <i>Chemical Communications</i> , <b>2008</b> , 4495-7	5.8	14
27	Silicon uptake in diatoms revisited: a model for saturable and nonsaturable uptake kinetics and the role of silicon transporters. <i>Plant Physiology</i> , <b>2008</b> , 146, 1397-407	6.6	133
26	Biomineralization at the nanoscale learning from diatoms. <i>Methods in Cell Biology</i> , <b>2008</b> , 90, 61-86	1.8	10
25	Application of AFM in understanding biomineral formation in diatoms. <i>Pflugers Archiv European Journal of Physiology</i> , <b>2008</b> , 456, 127-37	4.6	41
24	SYNCHRONIZED GROWTH OF THALASSIOSIRA PSEUDONANA (BACILLARIOPHYCEAE) PROVIDES NOVEL INSIGHTS INTO CELL-WALL SYNTHESIS PROCESSES IN RELATION TO THE CELL CYCLE1. <i>Journal of Phycology</i> , <b>2007</b> , 43, 730-740	3	73
23	Analysis of <i>Thalassiosira pseudonana</i> silicon transporters indicates distinct regulatory levels and transport activity through the cell cycle. <i>Eukaryotic Cell</i> , <b>2007</b> , 6, 271-9		69
22	Identification of proteins from a cell wall fraction of the diatom <i>Thalassiosira pseudonana</i> : insights into silica structure formation. <i>Molecular and Cellular Proteomics</i> , <b>2006</b> , 5, 182-93	7.6	106
21	Gene expression induced by copper stress in the diatom <i>Thalassiosira pseudonana</i> . <i>Eukaryotic Cell</i> , <b>2006</b> , 5, 1157-68		51
20	COMPARATIVE SEQUENCE ANALYSIS OF DIATOM SILICON TRANSPORTERS: TOWARD A MECHANISTIC MODEL OF SILICON TRANSPORT1. <i>Journal of Phycology</i> , <b>2006</b> , 42, 822-834	3	76
19	Nanoscale control of silica morphology and three-dimensional structure during diatom cell wall formation. <i>Journal of Materials Research</i> , <b>2006</b> , 21, 2689-2698	2.5	88
18	Silicic Acid Transport and Its Control During Cell Wall Silicification in Diatoms <b>2005</b> , 159-176		4
17	Prospects of manipulating diatom silica nanostructure. <i>Journal of Nanoscience and Nanotechnology</i> , <b>2005</b> , 5, 146-57	1.3	39

16	Approaches for functional characterization of diatom silicic acid transporters. <i>Journal of Nanoscience and Nanotechnology</i> , <b>2005</b> , 5, 158-66	1.3	14
15	A STRESS-INDUCED PROTEIN ASSOCIATED WITH THE GIRDLE BAND REGION OF THE DIATOM THALASSIOSIRA PSEUDONANA (BACILLARIOPHYTA)1. <i>Journal of Phycology</i> , <b>2005</b> , 41, 577-589	3	45
14	CLONING AND FUNCTIONAL CHARACTERIZATION OF AMMONIUM TRANSPORTERS FROM THE MARINE DIATOM CYLINDROTHECA FUSIFORMIS (BACILLARIOPHYCEAE)1. <i>Journal of Phycology</i> , <b>2005</b> , 41, 105-113	3	75
13	Merging Biological Self-Assembly with Synthetic Chemical Tailoring: The Potential for 3-D Genetically Engineered Micro/Nano-Devices (3-D GEMS). <i>International Journal of Applied Ceramic Technology</i> , <b>2005</b> , 2, 317-326	2	60
12	The genome of the diatom <i>Thalassiosira pseudonana</i> : ecology, evolution, and metabolism. <i>Science</i> , <b>2004</b> , 306, 79-86	33.3	1586
11	bryA: an unusual modular polyketide synthase gene from the uncultivated bacterial symbiont of the marine bryozoan <i>Bugula neritina</i> . <i>Chemistry and Biology</i> , <b>2004</b> , 11, 1543-52		127
10	Approaches to identify, clone, and express symbiont bioactive metabolite genes. <i>Natural Product Reports</i> , <b>2004</b> , 21, 122-42	15.1	84
9	Biological processing of nanostructured silica in diatoms. <i>Progress in Organic Coatings</i> , <b>2003</b> , 47, 256-266	4.8	72
8	Components and control of silicification in diatoms. <i>Progress in Molecular and Subcellular Biology</i> , <b>2003</b> , 33, 11-57	3	28
7	SILICON METABOLISM IN DIATOMS: IMPLICATIONS FOR GROWTH . <i>Journal of Phycology</i> , <b>2000</b> , 36, 821-840	3.4	637
6	NITRATE TRANSPORTER GENES FROM THE DIATOM CYLINDROTHECA FUSIFORMIS (BACILLARIOPHYCEAE): mRNA LEVELS CONTROLLED BY NITROGEN SOURCE AND BY THE CELL CYCLE. <i>Journal of Phycology</i> , <b>2000</b> , 36, 702-713	3	86
5	A gene family of silicon transporters. <i>Nature</i> , <b>1997</b> , 385, 688-9	50.4	277
4	Silicon-responsive cDNA clones isolated from the marine diatom <i>Cylindrotheca fusiformis</i> . <i>Gene</i> , <b>1993</b> , 132, 213-8	3.8	64
3	Nucleotide sequence of diatom plasmids: identification of open reading frames with similarity to site-specific recombinases. <i>Plant Molecular Biology</i> , <b>1992</b> , 19, 759-70	4.6	19
2	Overexpression of <i>Thalassiosira pseudonana</i> violaxanthin de-epoxidase-like 2 (VDL2) increases fucoxanthin while stoichiometrically reducing diadinoxanthin cycle pigment abundance		4
1	Enhanced triacylglycerol (TAG) and protein accumulation in transgenic diatom <i>Thalassiosira pseudonana</i> with altered photosynthetic pigmentation		1