Klaas J Van Wijk

List of Publications by Year
in descending order

106 papers	11,815 citations	23567 58 h-index	30922 102 g-index
109 all docs	109 docs citations	109 times ranked	10567 citing authors

#	Article	IF	Citations
1	Redesigning photosynthesis to sustainably meet global food and bioenergy demand. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 8529-8536.	7.1	751
2	Sorting Signals, N-Terminal Modifications and Abundance of the Chloroplast Proteome. PLoS ONE, 2008, 3, e1994.	2.5	583
3	In-Depth Analysis of the Thylakoid Membrane Proteome of Arabidopsis thaliana Chloroplasts: New Proteins, New Functions, and a Plastid Proteome Database[W]. Plant Cell, 2004, 16, 478-499.	6.6	444
4	Central Functions of the Lumenal and Peripheral Thylakoid Proteome of Arabidopsis Determined by Experimentation and Genome-Wide Prediction. Plant Cell, 2002, 14, 211-236.	6.6	439
5	Protein Profiling of Plastoglobules in Chloroplasts and Chromoplasts. A Surprising Site for Differential Accumulation of Metabolic Enzymes. Plant Physiology, 2006, 140, 984-997.	4.8	414
6	Tuning <i>Escherichia coli</i> for membrane protein overexpression. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 14371-14376.	7.1	378
7	PPDB, the Plant Proteomics Database at Cornell. Nucleic Acids Research, 2009, 37, D969-D974.	14.5	356
8	Consequences of Membrane Protein Overexpression in Escherichia coli. Molecular and Cellular Proteomics, 2007, 6, 1527-1550.	3.8	302
9	The Oligomeric Stromal Proteome of Arabidopsis thaliana Chloroplasts. Molecular and Cellular Proteomics, 2006, 5, 114-133.	3.8	287
10	New Functions of the Thylakoid Membrane Proteome of Arabidopsis thaliana Revealed by a Simple, Fast, and Versatile Fractionation Strategy. Journal of Biological Chemistry, 2004, 279, 49367-49383.	3.4	238
11	Plastoglobules: versatile lipoprotein particles in plastids. Trends in Plant Science, 2007, 12, 260-266.	8.8	238
12	Plastoglobuli: Plastid Microcompartments with Integrated Functions in Metabolism, Plastid Developmental Transitions, and Environmental Adaptation. Annual Review of Plant Biology, 2017, 68, 253-289.	18.7	238
13	Functional Differentiation of Bundle Sheath and Mesophyll Maize Chloroplasts Determined by Comparative Proteomics. Plant Cell, 2005, 17, 3111-3140.	6.6	221
14	Nucleoid-Enriched Proteomes in Developing Plastids and Chloroplasts from Maize Leaves: A New Conceptual Framework for Nucleoid Functions Â Â Â. Plant Physiology, 2012, 158, 156-189.	4.8	216
15	Challenges and Prospects of Plant Proteomics. Plant Physiology, 2001, 126, 501-508.	4.8	211
16	Structural and Metabolic Transitions of C4 Leaf Development and Differentiation Defined by Microscopy and Quantitative Proteomics in Maize. Plant Cell, 2010, 22, 3509-3542.	6.6	206
17	Expression of tetanus toxin Fragment C in tobacco chloroplasts. Nucleic Acids Research, 2003, 31, 1174-1179.	14.5	204
18	RIP1, a member of an <i>Arabidopsis</i> protein family, interacts with the protein RARE1 and broadly affects RNA editing. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, E1453-61.	7.1	198

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19	Clp Protease Complexes from Photosynthetic and Non-photosynthetic Plastids and Mitochondria of Plants, Their Predicted Three-dimensional Structures, and Functional Implications. Journal of Biological Chemistry, 2004, 279, 4768-4781.	3.4	193
20	The Functional Network of the Arabidopsis Plastoglobule Proteome Based on Quantitative Proteomics and Genome-Wide Coexpression Analysis Â Â Â. Plant Physiology, 2012, 158, 1172-1192.	4.8	193
21	Recent advances in the study of Clp, FtsH and other proteases located in chloroplasts. Current Opinion in Plant Biology, 2006, 9, 234-240.	7.1	186
22	Consequences of C4 Differentiation for Chloroplast Membrane Proteomes in Maize Mesophyll and Bundle Sheath Cells. Molecular and Cellular Proteomics, 2008, 7, 1609-1638.	3.8	181
23	Reconstruction of Metabolic Pathways, Protein Expression, and Homeostasis Machineries across Maize Bundle Sheath and Mesophyll Chloroplasts: Large-Scale Quantitative Proteomics Using the First Maize Genome Assembly. Plant Physiology, 2010, 152, 1219-1250.	4.8	181
24	Megadalton Complexes in the Chloroplast Stroma of Arabidopsis thaliana Characterized by Size Exclusion Chromatography, Mass Spectrometry, and Hierarchical Clustering. Molecular and Cellular Proteomics, 2010, 9, 1594-1615.	3.8	169
25	The Pathogen-Inducible Nitric Oxide Synthase (iNOS) in Plants Is a Variant of the P Protein of the Glycine Decarboxylase Complex. Cell, 2003, 113, 469-482.	28.9	159
26	Meta-Analysis of <i>Arabidopsis thaliana</i> Phospho-Proteomics Data Reveals Compartmentalization of Phosphorylation Motifs. Plant Cell, 2014, 26, 2367-2389.	6.6	158
27	Organization, function and substrates of the essential Clp protease system in plastids. Biochimica Et Biophysica Acta - Bioenergetics, 2015, 1847, 915-930.	1.0	145
28	Update: Post-translational protein modifications in plant metabolism. Plant Physiology, 2015, 169, pp.01378.2015.	4.8	142
29	Protein Maturation and Proteolysis in Plant Plastids, Mitochondria, and Peroxisomes. Annual Review of Plant Biology, 2015, 66, 75-111.	18.7	141
30	Subunits of the Plastid ClpPR Protease Complex Have Differential Contributions to Embryogenesis, Plastid Biogenesis, and Plant Development in<i>Arabidopsis</i>Â Â. Plant Cell, 2009, 21, 1669-1692.	6.6	134
31	Large Scale Comparative Proteomics of a Chloroplast Clp Protease Mutant Reveals Folding Stress, Altered Protein Homeostasis, and Feedback Regulation of Metabolism. Molecular and Cellular Proteomics, 2009, 8, 1789-1810.	3.8	127
32	The Clp protease system; a central component of the chloroplast protease network. Biochimica Et Biophysica Acta - Bioenergetics, 2011, 1807, 999-1011.	1.0	125
33	Chloroplast RH3 DEAD Box RNA Helicases in Maize and Arabidopsis Function in Splicing of Specific Group II Introns and Affect Chloroplast Ribosome Biogenesis Â Â. Plant Physiology, 2012, 159, 961-974.	4.8	122
34	Arabidopsis thaliana deficient in two chloroplast ascorbate peroxidases shows accelerated light-induced necrosis when levels of cellular ascorbate are low. Plant Molecular Biology, 2007, 65, 627-644.	3.9	119
35	Plastid proteomics. Plant Physiology and Biochemistry, 2004, 42, 963-977.	5.8	118
36	A plant-specific RNA-binding domain revealed through analysis of chloroplast group II intron splicing. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 4537-4542.	7.1	116

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37	Downregulation of ClpR2 Leads to Reduced Accumulation of the ClpPRS Protease Complex and Defects in Chloroplast Biogenesis in Arabidopsis. Plant Cell, 2006, 18, 1704-1721.	6.6	110
38	Correlation of <scp>mRNA</scp> and protein abundance in the developing maize leaf. Plant Journal, 2014, 78, 424-440.	5.7	104
39	A Ribonuclease III Domain Protein Functions in Group II Intron Splicing in Maize Chloroplasts. Plant Cell, 2007, 19, 2606-2623.	6.6	100
40	Plastid Proteomics in Higher Plants: Current State and Future Goals. Plant Physiology, 2011, 155, 1578-1588.	4.8	98
41	ClpS1 Is a Conserved Substrate Selector for the Chloroplast Clp Protease System in Arabidopsis. Plant Cell, 2013, 25, 2276-2301.	6.6	98
42	The role of transitory starch in C3, CAM, and C4 metabolism and opportunities for engineering leaf starch accumulation. Journal of Experimental Botany, 2011, 62, 3109-3118.	4.8	94
43	MASCP Gator: An Aggregation Portal for the Visualization of Arabidopsis Proteomics Data. Plant Physiology, 2011, 155, 259-270.	4.8	94
44	A Comprehensive Analysis of the 14-3-3 Interactome in Barley Leaves Using a Complementary Proteomics and Two-Hybrid Approach. Plant Physiology, 2007, 143, 670-683.	4.8	93
45	Cell-type-specific differentiation of chloroplasts in C4 plants. Trends in Plant Science, 2009, 14, 100-109.	8.8	92
46	Loss of Plastoglobule Kinases ABC1K1 and ABC1K3 Causes Conditional Degreening, Modified Prenyl-Lipids, and Recruitment of the Jasmonic Acid Pathway. Plant Cell, 2013, 25, 1818-1839.	6.6	92
47	Posttranslational Control of ALA Synthesis Includes GluTR Degradation by Clp Protease and Stabilization by GluTR-Binding Protein. Plant Physiology, 2016, 170, 2040-2051.	4.8	85
48	Construction of Plastid Reference Proteomes for Maize and <i>Arabidopsis</i> and Evaluation of Their Orthologous Relationships; The Concept of Orthoproteomics. Journal of Proteome Research, 2013, 12, 491-504.	3.7	82
49	Analyses of the secretomes of Erwinia amylovora and selected hrp mutants reveal novel type III secreted proteins and an effect of HrpJ on extracellular harpin levels. Molecular Plant Pathology, 2007, 8, 55-67.	4.2	77
50	A New Approach for Plant Proteomics. Molecular and Cellular Proteomics, 2003, 2, 1253-1260.	3.8	73
51	Analysis of Curated and Predicted Plastid Subproteomes of Arabidopsis. Subcellular Compartmentalization Leads to Distinctive Proteome Properties. Plant Physiology, 2004, 135, 723-734.	4.8	73
52	The Arabidopsis Chloroplast stromal N-terminome; complexities of N-terminal protein maturation and stability. Plant Physiology, 2015, 169, pp.01214.2015.	4.8	73
53	Synthesis and Assembly of the D1 Protein into Photosystem II:Â Processing of the C-Terminus and Identification of the Initial Assembly Partners and Complexes during Photosystem II Repairâ€. Biochemistry, 1997, 36, 6178-6186.	2.5	70
54	Quantitative Proteomics of a Chloroplast<i>SRP54</i>Sorting Mutant and Its Genetic Interactions with<i>CLPC1</i>in Arabidopsis Â Â. Plant Physiology, 2008, 148, 156-175.	4.8	69

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55	Subunit Stoichiometry, Evolution, and Functional Implications of an Asymmetric Plant Plastid ClpP/R Protease Complex in Arabidopsis Â Â. Plant Cell, 2011, 23, 2348-2361.	6.6	64
56	Kinetic Resolution of the Incorporation of the D1 Protein into Photosystem II and Localization of Assembly Intermediates in Thylakoid Membranes of Spinach Chloroplasts. Journal of Biological Chemistry, 1996, 271, 9627-9636.	3.4	63
57	Discovery of a Unique Clp Component, ClpF, in Chloroplasts: A Proposed Binary ClpF-ClpS1 Adaptor Complex Functions in Substrate Recognition and Delivery. Plant Cell, 2015, 27, tpc.15.00574.	6.6	63
58	The combined use of photoaffinity labeling and surface plasmon resonanceâ€based technology identifies multiple salicylic acidâ€binding proteins. Plant Journal, 2012, 72, 1027-1038.	5.7	62
59	ABC1K atypical kinases in plants: filling the organellar kinase void. Trends in Plant Science, 2012, 17, 546-555.	8.8	58
60	Transient interaction of cpSRP54 with elongating nascent chains of the chloroplast-encoded D1 protein; â€˜cpSRP54 caught in the actâ€™. FEBS Letters, 2002, 524, 127-133.	2.8	57
61	Modified Clp Protease Complex in the ClpP3 Null Mutant and Consequences for Chloroplast Development and Function in Arabidopsis Â Â Â. Plant Physiology, 2013, 162, 157-179.	4.8	55
62	In Vitro Synthesis and Assembly of Photosystem II Core Proteins. Journal of Biological Chemistry, 1995, 270, 25685-25695.	3.4	53
63	Photoinhibition of photosystem II in vivo is preceded by down-regulation through light-induced acidification of the lumen: Consequences for the mechanism of photoinhibition in vivo. Planta, 1993, 189, 359-368.	3.2	52
64	APO1 Promotes the Splicing of Chloroplast Group II Introns and Harbors a Plant-Specific Zinc-Dependent RNA Binding Domain. Plant Cell, 2011, 23, 1082-1092.	6.6	50
65	Effects of SecE Depletion on the Inner and Outer Membrane Proteomes of <i>Escherichia coli</i>. Journal of Bacteriology, 2008, 190, 3505-3525.	2.2	49
66	Matching the supply of bacterial nutrients to the nutritional demand of the animal host. Proceedings of the Royal Society B: Biological Sciences, 2014, 281, 20141163.	2.6	49
67	Salicylic Acid Inhibits the Replication of <i>Tomato bushy stunt virus</i> by Directly Targeting a Host Component in the Replication Complex. Molecular Plant-Microbe Interactions, 2015, 28, 379-386.	2.6	46
68	Deregulation of Maize C4 Photosynthetic Development in a Mesophyll Cell-Defective Mutant Â Â Â. Plant Physiology, 2008, 146, 1469-1481.	4.8	45
69	Extreme variation in rates of evolution in the plastid Clp protease complex. Plant Journal, 2019, 98, 243-259.	5.7	41
70	MET1 Is a Thylakoid-Associated TPR Protein Involved in Photosystem II Supercomplex Formation and Repair in <i>Arabidopsis</i>. Plant Cell, 2015, 27, 262-285.	6.6	40
71	Structures, Functions, and Interactions of ClpT1 and ClpT2 in the Clp Protease System of Arabidopsis Chloroplasts. Plant Cell, 2015, 27, 1477-1496.	6.6	40
72	Characterization of the Consequences of YidC Depletion on the Inner Membrane Proteome of E. coli Using 2D Blue Native/SDS-PAGE. Journal of Molecular Biology, 2011, 409, 124-135.	4.2	39

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73	The Plastoglobule-Localized Metallopeptidase PGM48 Is a Positive Regulator of Senescence in <i>Arabidopsis thaliana</i>. Plant Cell, 2016, 28, 3020-3037.	6.6	38
74	Workflow for Large Scale Detection and Validation of Peptide Modifications by RPLC-LTQ-Orbitrap: Application to the <i>Arabidopsis thaliana</i> Leaf Proteome and an Online Modified Peptide Library. Analytical Chemistry, 2009, 81, 8015-8024.	6.5	36
75	Consequences of Depletion of the Signal Recognition Particle in Escherichia coli. Journal of Biological Chemistry, 2011, 286, 4598-4609.	3.4	36
76	The Arabidopsis PeptideAtlas: Harnessing worldwide proteomics data to create a comprehensive community proteomics resource. Plant Cell, 2021, 33, 3421-3453.	6.6	36
77	Constitutive expression of pea Lhcb 1?2 in tobacco affects plant development, morphology and photosynthetic capacity. Plant Molecular Biology, 2004, 55, 701-714.	3.9	34
78	Structure, function, and substrates of Clp AAA+ protease systems in cyanobacteria, plastids, and apicoplasts: AÂcomparative analysis. Journal of Biological Chemistry, 2021, 296, 100338.	3.4	32
79	Time to articulate a vision for the future of plant proteomics â€“ A global perspective: An initiative for establishing the International Plant Proteomics Organization (INPPO). Proteomics, 2011, 11, 1559-1568.	2.2	31
80	The Plastid and Mitochondrial Peptidase Network in <i>Arabidopsis thaliana</i>: A Foundation for Testing Genetic Interactions and Functions in Organellar Proteostasis. Plant Cell, 2017, 29, 2687-2710.	6.6	31
81	Vision, challenges and opportunities for a Plant Cell Atlas. ELife, 2021, 10, .	6.0	31
82	The Workflow for Quantitative Proteome Analysis of Chloroplast Development and Differentiation, Chloroplast Mutants, and Protein Interactions by Spectral Counting. Methods in Molecular Biology, 2011, 775, 265-282.	0.9	30
83	Developmental and Subcellular Organization of Single-Cell C4Photosynthesis inBienertia sinuspersiciDetermined by Large-Scale Proteomics and cDNA Assembly from 454 DNA Sequencing. Journal of Proteome Research, 2015, 14, 2090-2108.	3.7	30
84	The Clp protease system is required for copper ionâ€dependent turnover of the <scp>PAA</scp>2/<scp>HMA</scp>8 copper transporter in chloroplasts. New Phytologist, 2015, 205, 511-517.	7.3	29
85	Light is required for efficient translation elongation and subsequent integration of the D1-protein into Photosystem II. FEBS Letters, 1996, 388, 89-93.	2.8	28
86	N-Degron Pathways in Plastids. Trends in Plant Science, 2019, 24, 917-926.	8.8	27
87	Discovery of AAA+ Protease Substrates through Trapping Approaches. Trends in Biochemical Sciences, 2019, 44, 528-545.	7.5	25
88	Kinetic resolution of different recovery phases of photoinhibited photosystem II in cold-acclimated and non-acclimated spinach leaves. Physiologia Plantarum, 1993, 87, 187-198.	5.2	21
89	In Vivo Trapping of Proteins Interacting with the Chloroplast CLPC1 Chaperone: Potential Substrates and Adaptors. Journal of Proteome Research, 2019, 18, 2585-2600.	3.7	19
90	Exploring the proteome associated with the mRNA encoding the D1 reaction center protein of Photosystem II in plant chloroplasts. Plant Journal, 2020, 102, 369-382.	5.7	19

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91	Isolation of Chloroplast Proteins from <i>Arabidopsis thaliana</i> for Proteome Analysis. , 2007, 355, 43-48.		18
92	The purification of the Chlamydomonas reinhardtii chloroplast ClpP complex: additional subunits and structural features. Plant Molecular Biology, 2012, 80, 189-202.	3.9	18
93	The quantum efficiency of photosystem II and its relation to non-photochemical quenching of chlorophyll fluorescence; the effect of measuring-and growth temperature. Photosynthesis Research, 1990, 25, 233-240.	2.9	17
94	Phosphorylation of plastoglobular proteins in<i>Arabidopsis thaliana</i>. Journal of Experimental Botany, 2016, 67, 3975-3984.	4.8	17
95	Nâ€degron specificity of chloroplast ClpS1 in plants. FEBS Letters, 2019, 593, 962-970.	2.8	14
96	Tissue-type specific accumulation of the plastoglobular proteome, transcriptional networks, and plastoglobular functions. Journal of Experimental Botany, 2021, 72, 4663-4679.	4.8	13
97	Functions and substrates of plastoglobule-localized metallopeptidase PGM48. Plant Signaling and Behavior, 2017, 12, e1331197.	2.4	12
98	Consequences of the loss of catalytic triads in chloroplast CLPPR protease core complexes inÂvivo. Plant Direct, 2018, 2, e00086.	1.9	8
99	Kinetic resolution of different recovery phases of photoinhibited photosystem II in cold-acclimated and non-acclimated spinach leaves. Physiologia Plantarum, 1993, 87, 187-198.	5.2	7
100	Autocatalytic Processing and Substrate Specificity of Arabidopsis Chloroplast Glutamyl Peptidase. Plant Physiology, 2020, 184, 110-129.	4.8	7
101	Proteomics, phylogenetics, and coexpression analyses indicate novel interactions in the plastid CLP chaperone-protease system. Journal of Biological Chemistry, 2022, 298, 101609.	3.4	7
102	Plant Proteomics Coming of Age. Journal of Proteome Research, 2012, 11, 2-2.	3.7	3
103	GFS9 Affects Piecemeal Autophagy of Plastids in Young Seedlings of<i>Arabidopsis thaliana</i>. Plant and Cell Physiology, 2021, 62, 1372-1386.	3.1	3
104	Plant Proteomics and Photosynthesis. Advances in Photosynthesis and Respiration, 2012, , 151-173.	1.0	0
105	TreeTuner: A pipeline for minimizing redundancy and complexity in large phylogenetic datasets. STAR Protocols, 2022, 3, 101175.	1.2	0
106	Proteomics, phylogenetics, and coâ€expression analyses indicate novel interactions in the plastid CLP chaperoneâ€protease system. FASEB Journal, 2022, 36, .	0.5	0