Margaret Ahmad

List of Publications by Year
in descending order

76 papers	8,984 citations	47006 47 h-index	66911 78 g-index
79 all docs	79 docs citations	79 times ranked	5066 citing authors

#	Article	IF	Citations
1	HY4 gene of A. thaliana encodes a protein with characteristics of a blue-light photoreceptor. Nature, 1993, 366, 162-166.	27.8	1,198
2	The Cryptochromes: Blue Light Photoreceptors in Plants and Animals. Annual Review of Plant Biology, 2011, 62, 335-364.	18.7	723
3	Association of flavin adenine dinucleotide with the Arabidopsis blue light receptor CRY1. Science, 1995, 269, 968-970.	12.6	423
4	Cryptochrome Blue Light Photoreceptors Are Activated through Interconversion of Flavin Redox States. Journal of Biological Chemistry, 2007, 282, 9383-9391.	3.4	349
5	The CRY1 Blue Light Photoreceptor of Arabidopsis Interacts with Phytochrome A In Vitro. Molecular Cell, 1998, 1, 939-948.	9.7	308
6	Magnetically sensitive light-induced reactions in cryptochrome are consistent with its proposed role as a magnetoreceptor. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 4774-4779.	7.1	290
7	Light-induced electron transfer in a cryptochrome blue-light photoreceptor. Nature Structural and Molecular Biology, 2003, 10, 489-490.	8.2	248
8	The Signaling State of Arabidopsis Cryptochrome 2 Contains Flavin Semiquinone. Journal of Biological Chemistry, 2007, 282, 14916-14922.	3.4	227
9	Arabidopsis cryptochrome 1 is a soluble protein mediating blue light-dependent regulation of plant growth and development. Plant Journal, 1996, 10, 893-902.	5.7	220
10	Cryptochrome Mediates Light-Dependent Magnetosensitivity of Drosophila's Circadian Clock. PLoS Biology, 2009, 7, e1000086.	5.6	197
11	Mutations throughout an Arabidopsis blue-light photoreceptor impair blue-light-responsive anthocyanin accumulation and inhibition of hypocotyl elongation. Plant Journal, 1995, 8, 653-658.	5.7	194
12	The blue-light receptor cryptochrome 1 shows functional dependence on phytochrome A or phytochrome B in Arabidopsis thaliana. Plant Journal, 1997, 11, 421-427.	5.7	191
13	Expression of an Arabidopsis cryptochrome gene in transgenic tobacco results in hypersensitivity to blue, UV-A, and green light.. Proceedings of the National Academy of Sciences of the United States of America, 1995, 92, 8423-8427.	7.1	189
14	Action Spectrum for Cryptochrome-Dependent Hypocotyl Growth Inhibition in Arabidopsis. Plant Physiology, 2002, 129, 774-785.	4.8	188
15	HY5 is a point of convergence between cryptochrome and cytokinin signalling pathways in Arabidopsis thaliana. Plant Journal, 2007, 49, 428-441.	5.7	172
16	Magnetic intensity affects cryptochrome-dependent responses in Arabidopsis thaliana. Planta, 2007, 225, 615-624.	3.2	172
17	Cryptochrome blue-light photoreceptors of Arabidopsis implicated in phototropism. Nature, 1998, 392, 720-723.	27.8	168
18	Chimeric Proteins between cry1 and cry2 Arabidopsis Blue Light Photoreceptors Indicate Overlapping Functions and Varying Protein Stability. Plant Cell, 1998, 10, 197-207.	6.6	158

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19	Seeing blue: the discovery of cryptochrome. Plant Molecular Biology, 1996, 30, 851-861.	3.9	153
20	Light-induced Electron Transfer in Arabidopsis Cryptochrome-1 Correlates with in Vivo Function. Journal of Biological Chemistry, 2005, 280, 19437-19440.	3.4	138
21	Light-activated Cryptochrome Reacts with Molecular Oxygen to Form a Flavinâ€“Superoxide Radical Pair Consistent with Magnetoreception. Journal of Biological Chemistry, 2011, 286, 21033-21040.	3.4	137
22	Human and Drosophila Cryptochromes Are Light Activated by Flavin Photoreduction in Living Cells. PLoS Biology, 2008, 6, e160.	5.6	136
23	An enzyme similar to animal type II photolyases mediates photoreactivation in Arabidopsis.. Plant Cell, 1997, 9, 199-207.	6.6	128
24	Overexpression of AtWRKY30 Transcription Factor Enhances Heat and Drought Stress Tolerance in Wheat (Triticum aestivum L.). Genes, 2019, 10, 163.	2.4	126
25	Photoreceptor-based magnetoreception: optimal design of receptor molecules, cells, and neuronal processing. Journal of the Royal Society Interface, 2010, 7, S135-46.	3.4	110
26	Serratia liquefaciens KM4 Improves Salt Stress Tolerance in Maize by Regulating Redox Potential, Ion Homeostasis, Leaf Gas Exchange and Stress-Related Gene Expression. International Journal of Molecular Sciences, 2018, 19, 3310.	4.1	109
27	Cryptochrome photoreceptors cry1 and cry2 antagonistically regulate primary root elongation in Arabidopsis thaliana. Planta, 2006, 224, 995-1003.	3.2	105
28	Blue-Light-Induced Changes in Arabidopsis Cryptochrome 1 Probed by FTIR Difference Spectroscopy. Biochemistry, 2006, 45, 2472-2479.	2.5	103
29	Blueâ€light dependent reactive oxygen species formation by <i>Arabidopsis</i> cryptochrome may define a novel evolutionarily conserved signaling mechanism. New Phytologist, 2015, 206, 1450-1462.	7.3	101
30	Yeast arginine permease: nucleotide sequence of the CAN1 gene. Current Genetics, 1986, 10, 587-592.	1.7	95
31	Magnetoreception: activated cryptochrome 1a concurs with magnetic orientation in birds. Journal of the Royal Society Interface, 2013, 10, 20130638.	3.4	91
32	Blue-light induced biosynthesis of ROS contributes to the signaling mechanism of Arabidopsis cryptochrome. Scientific Reports, 2017, 7, 13875.	3.3	91
33	Novel ATP-binding and autophosphorylation activity associated with Arabidopsis and human cryptochrome-1. FEBS Journal, 2003, 270, 2921-2928.	0.2	89
34	Cryptochrome 1 controls tomato development in response to blue light. Plant Journal, 1999, 18, 551-556.	5.7	87
35	The pef mutants of Arabidopsis thaliana define lesions early in the phytochrome signaling pathway. Plant Journal, 1996, 10, 1103-1110.	5.7	85
36	Low-intensity electromagnetic fields induce human cryptochrome to modulate intracellular reactive oxygen species. PLoS Biology, 2018, 16, e2006229.	5.6	75

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37	Photocycle and signaling mechanisms of plant cryptochromes. Current Opinion in Plant Biology, 2016, 33, 108-115.	7.1	70
38	What Makes the Difference between a Cryptochrome and DNA Photolyase? A Spectroelectrochemical Comparison of the Flavin Redox Transitions. Journal of the American Chemical Society, 2009, 131, 426-427.	13.7	68
39	Light-Induced Conformational Changes in Full-Length Arabidopsis thaliana Cryptochrome. Journal of Molecular Biology, 2011, 413, 128-137.	4.2	65
40	Ethylene-induced Arabidopsis hypocotyl elongation is dependent on but not mediated by gibberellins. Journal of Experimental Botany, 2007, 58, 4269-4281.	4.8	64
41	Magnetic sensitivity mediated by the Arabidopsis blue-light receptor cryptochrome occurs during flavin reoxidation in the dark. Planta, 2019, 249, 319-332.	3.2	63
42	Light-dependent magnetoreception in birds: the crucial step occurs in the dark. Journal of the Royal Society Interface, 2016, 13, 20151010.	3.4	61
43	Cellular Metabolites Enhance the Light Sensitivity of <i>Arabidopsis</i> Cryptochrome through Alternate Electron Transfer Pathways Â Â. Plant Cell, 2014, 26, 4519-4531.	6.6	58
44	Blue-light dependent ROS formation by Arabidopsis cryptochrome-2 may contribute toward its signaling role. Plant Signaling and Behavior, 2015, 10, e1042647.	2.4	58
45	Genetic Transformation and Hairy Root Induction Enhance the Antioxidant Potential of <i>Lactuca serriola</i> L.. Oxidative Medicine and Cellular Longevity, 2017, 2017, 1-8.	4.0	58
46	Seeing the world in red and blue: insight into plant vision and photoreceptors. Current Opinion in Plant Biology, 1999, 2, 230-235.	7.1	57
47	Genetic Variation and Alleviation of Salinity Stress in Barley (Hordeum vulgare L.). Molecules, 2018, 23, 2488.	3.8	55
48	The blue light-induced interaction of cryptochrome 1 with COP1 requires SPA proteins during Arabidopsis light signaling. PLoS Genetics, 2017, 13, e1007044.	3.5	51
49	Lifetimes of Arabidopsis cryptochrome signaling states <i>in vivo</i>. Plant Journal, 2013, 74, 583-592.	5.7	48
50	Multiple interactions between cryptochrome and phototropin blue-light signalling pathways in Arabidopsis thaliana. Planta, 2008, 227, 1091-1099.	3.2	46
51	Cryptochrome mediated magnetic sensitivity in Arabidopsis occurs independently of light-induced electron transfer to the flavin. Photochemical and Photobiological Sciences, 2020, 19, 341-352.	2.9	46
52	Analysis of Genetic Variation and Enhancement of Salt Tolerance in French Pea (Pisum Sativum L.). International Journal of Molecular Sciences, 2018, 19, 2433.	4.1	45
53	Evidence of a Light-Sensing Role for Folate in Arabidopsis Cryptochrome Blue-Light Receptors. Molecular Plant, 2008, 1, 68-74.	8.3	44
54	Cellular metabolites modulate in vivo signaling of Arabidopsis cryptochrome-1. Plant Signaling and Behavior, 2015, 10, e1063758.	2.4	40

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55	Cryptochrome. Communicative and Integrative Biology, 2010, 3, 24-27.	1.4	39
56	Blue-light induced accumulation of reactive oxygen species is a consequence of the Drosophila cryptochrome photocycle. PLoS ONE, 2017, 12, e0171836.	2.5	38
57	Conformational change induced by ATP binding correlates with enhanced biological function of <i>Arabidopsis</i> cryptochrome. FEBS Letters, 2009, 583, 1427-1433.	2.8	36
58	Single Amino Acid Substitution Reveals Latent Photolyase Activity in <i>Arabidopsis</i> cry1. Angewandte Chemie - International Edition, 2012, 51, 9356-9360.	13.8	31
59	Analysis of the Genetic Diversity and Population Structure of Austrian and Belgian Wheat Germplasm within a Regional Context Based on DArT Markers. Genes, 2018, 9, 47.	2.4	26
60	Human Cryptochrome-1 Confers Light Independent Biological Activity in Transgenic Drosophila Correlated with Flavin Radical Stability. PLoS ONE, 2012, 7, e31867.	2.5	25
61	Topology of membrane insertion in vitro and plasma membrane assembly in vivo of the yeast arginine permease. Molecular Microbiology, 1988, 2, 627-635.	2.5	20
62	An Enzyme Similar to Animal Type II Photolyases Mediates Photoreactivation in Arabidopsis. Plant Cell, 1997, 9, 199.	6.6	20
63	Kinetic Modeling of the Arabidopsis Cryptochrome Photocycle: FADHo Accumulation Correlates with Biological Activity. Frontiers in Plant Science, 2016, 7, 888.	3.6	20
64	HEK293 cell response to static magnetic fields via the radical pair mechanism may explain therapeutic effects of pulsed electromagnetic fields. PLoS ONE, 2020, 15, e0243038.	2.5	20
65	Arabidopsis cryptochrome is responsive to Radiofrequency (RF) electromagnetic fields. Scientific Reports, 2020, 10, 11260.	3.3	19
66	Effect of temperature on the <i>Arabidopsis</i> cryptochrome photocycle. Physiologia Plantarum, 2021, 172, 1653-1661.	5.2	18
67	Mutations in the Nâ€terminal kinaseâ€like domain of the repressor of photomorphogenesis <scp>SPA</scp>1 severely impair <scp>SPA</scp>1 function but not light responsiveness in Arabidopsis. Plant Journal, 2016, 88, 205-218.	5.7	17
68	Therapeutic application of light and electromagnetic fields to reduce hyper-inflammation triggered by COVID-19. Communicative and Integrative Biology, 2021, 14, 66-77.	1.4	12
69	Heterologous Expression of Photoactivated Adenylyl Cyclase (PAC) Genes from the Flagellate Euglena gracilis in Insect Cells. Photochemistry and Photobiology, 2006, 82, 1601-1605.	2.5	11
70	Chimeric Proteins between cry1 and cry2 Arabidopsis Blue Light Photoreceptors Indicate Overlapping Functions and Varying Protein Stability. Plant Cell, 1998, 10, 197.	6.6	10
71	The functional divergence between SPA1 and SPA2 in Arabidopsis photomorphogenesis maps primarily to the respective N-terminal kinase-like domain. BMC Plant Biology, 2016, 16, 165.	3.6	10
72	Arabidopsis cryptochrome and Quantum Biology: new insights for plant science and crop improvement. Journal of Plant Biochemistry and Biotechnology, 2020, 29, 636-651.	1.7	10

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73	Infrared light therapy relieves TLR-4 dependent hyper-inflammation of the type induced by COVID-19. Communicative and Integrative Biology, 2021, 14, 200-211.	1.4	8
74	Heterologous Expression of Photoactivated Adenylyl Cyclase (PAC) Genes from the Flagellate Euglena gracilis in Insect Cells. Photochemistry and Photobiology, 2006, 82, 1601.	2.5	6
75	Exposure to 1.8 GHz radiofrequency field modulates ROS in human HEK293 cells as a function of signal amplitude. Communicative and Integrative Biology, 2022, 15, 54-66.	1.4	6
76	Stop CRYing! Inhibition of cryptochrome function by small proteins. Biochemical Society Transactions, 2022, 50, 773-782.	3.4	4