

# Adrian Hills

## List of Publications by Year in descending order

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Version: 2024-02-01

27  
papers

2,239  
citations

361413

20  
h-index

552781

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28  
all docs

28  
docs citations

28  
times ranked

2493  
citing authors

#	ARTICLE	IF	CITATIONS
1	What can mechanistic models tell us about guard cells, photosynthesis, and water use efficiency?. Trends in Plant Science, 2022, 27, 166-179.	8.8	18
2	Guard cell endomembrane Ca <sup>2+</sup> -ATPases underpin a "carbon memory"™ of photosynthetic assimilation that impacts on water-use efficiency. Nature Plants, 2021, 7, 1301-1313.	9.3	28
3	Guard Cell Starch Degradation Yields Glucose for Rapid Stomatal Opening in Arabidopsis. Plant Cell, 2020, 32, 2325-2344.	6.6	62
4	Communication between the Plasma Membrane and Tonoplast Is an Emergent Property of Ion Transport. Plant Physiology, 2020, 182, 1833-1835.	4.8	21
5	Predicting the unexpected in stomatal gas exchange: not just an open-and-shut case. Biochemical Society Transactions, 2020, 48, 881-889.	3.4	3
6	A constraint"relaxation"recovery mechanism for stomatal dynamics. Plant, Cell and Environment, 2019, 42, 2399-2410.	5.7	23
7	Evolution of chloroplast retrograde signaling facilitates green plant adaptation to land. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 5015-5020.	7.1	138
8	Bridging Scales from Protein Function to Whole-Plant Water Relations with the OnGuard Platform. , 2018, , 69-86.		0
9	EZ-Root-VIS: A Software Pipeline for the Rapid Analysis and Visual Reconstruction of Root System Architecture. Plant Physiology, 2018, 177, 1368-1381.	4.8	38
10	Evolutionary Conservation of ABA Signaling for Stomatal Closure. Plant Physiology, 2017, 174, 732-747.	4.8	158
11	Global Sensitivity Analysis of OnGuard Models Identifies Key Hubs for Transport Interaction in Stomatal Dynamics. Plant Physiology, 2017, 174, 680-688.	4.8	23
12	Unexpected Connections between Humidity and Ion Transport Discovered Using a Model to Bridge Guard Cell-to-Leaf Scales. Plant Cell, 2017, 29, 2921-2939.	6.6	39
13	Molecular Evolution of Grass Stomata. Trends in Plant Science, 2017, 22, 124-139.	8.8	202
14	Nitrate reductase mutation alters potassium nutrition as well as nitric oxide-mediated control of guard cell ion channels in <i>Arabidopsis</i> . New Phytologist, 2016, 209, 1456-1469.	7.3	93
15	An Optimal Frequency in Ca <sup>2+</sup> Oscillations for Stomatal Closure Is an Emergent Property of Ion Transport in Guard Cells. Plant Physiology, 2016, 170, 33-42.	4.8	51
16	A vesicle-trafficking protein commandeers Kv channel voltage sensors for voltage-dependent secretion. Nature Plants, 2015, 1, 15108.	9.3	53
17	Systems Analysis of Guard Cell Membrane Transport for Enhanced Stomatal Dynamics and Water Use Efficiency. Plant Physiology, 2014, 164, 1593-1599.	4.8	57
18	Exploring emergent properties in cellular homeostasis using OnGuard to model K <sup>+</sup> and other ion transport in guard cells. Journal of Plant Physiology, 2014, 171, 770-778.	3.5	49

#	ARTICLE	IF	CITATIONS
19	The conceptual approach to quantitative modeling of guard cells. <i>Plant Signaling and Behavior</i> , 2013, 8, e22747.	2.4	2
20	PYR/PYL/RCAR Abscisic Acid Receptors Regulate K <sup>+</sup> and Cl <sup>-</sup> Channels through Reactive Oxygen Species-Mediated Activation of Ca <sup>2+</sup> Channels at the Plasma Membrane of Intact Arabidopsis Guard Cells. <i>Plant Physiology</i> , 2013, 163, 566-577.	4.8	82
21	Systems Dynamic Modeling of a Guard Cell Cl <sup>-</sup> Channel Mutant Uncovers an Emergent Homeostatic Network Regulating Stomatal Transpiration. <i>Plant Physiology</i> , 2012, 160, 1956-1967.	4.8	83
22	Systems Dynamic Modeling of the Stomatal Guard Cell Predicts Emergent Behaviors in Transport, Signaling, and Volume Control. <i>Plant Physiology</i> , 2012, 159, 1235-1251.	4.8	136
23	OnGuard, a Computational Platform for Quantitative Kinetic Modeling of Guard Cell Physiology. <i>Plant Physiology</i> , 2012, 159, 1026-1042.	4.8	153
24	Protocol: optimised electrophysiological analysis of intact guard cells from Arabidopsis. <i>Plant Methods</i> , 2012, 8, 15.	4.3	13
25	Dynamic regulation of guard cell anion channels by cytosolic free Ca <sup>2+</sup> concentration and protein phosphorylation. <i>Plant Journal</i> , 2010, 61, 816-825.	5.7	115
26	EZ <sup>hizo</sup> : integrated software for the fast and accurate measurement of root system architecture. <i>Plant Journal</i> , 2009, 57, 945-956.	5.7	228
27	Nitric oxide regulates K <sup>+</sup> and Cl <sup>-</sup> channels in guard cells through a subset of abscisic acid-evoked signaling pathways. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2003, 100, 11116-11121.	7.1	371