

Siegfried Jahnke

List of Publications by Year in descending order

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Version: 2024-02-01

26
papers

1,907
citations

430874

18
h-index

580821

25
g-index

28
all docs

28
docs citations

28
times ranked

2553
citing authors

#	ARTICLE	IF	CITATIONS
1	Combined MRI&PET dissects dynamic changes in plant structures and functions. <i>Plant Journal</i> , 2009, 59, 634-644.	5.7	268
2	Direct comparison of MRI and X-ray CT technologies for 3D imaging of root systems in soil: potential and challenges for root trait quantification. <i>Plant Methods</i> , 2015, 11, 17.	4.3	209
3	Temperature responses of roots: impact on growth, root system architecture and implications for phenotyping. <i>Functional Plant Biology</i> , 2009, 36, 947.	2.1	191
4	Quantitative 3D Analysis of Plant Roots Growing in Soil Using Magnetic Resonance Imaging. <i>Plant Physiology</i> , 2016, 170, 1176-1188.	4.8	189
5	Continuous Turnover of Carotenes and Chlorophyll <i>in</i> Mature Leaves of <i>Arabidopsis</i> Revealed by ¹⁴ C-CO ₂ Pulse-Chase Labeling. <i>Plant Physiology</i> , 2010, 152, 2188-2199.	4.8	131
6	Imaging plants dynamics in heterogenic environments. <i>Current Opinion in Biotechnology</i> , 2012, 23, 227-235.	6.6	130
7	Non-invasive approaches for phenotyping of enhanced performance traits in bean. <i>Functional Plant Biology</i> , 2011, 38, 968.	2.1	120
8	Non-invasive imaging of plant roots in different soils using magnetic resonance imaging (MRI). <i>Plant Methods</i> , 2017, 13, 102.	4.3	82
9	MRI links stem water content to stem diameter variations in transpiring trees. <i>Journal of Experimental Botany</i> , 2012, 63, 2645-2653.	4.8	79
10	Root&root interactions: extending our perspective to be more inclusive of the range of theories in ecology and agriculture using in-vivo analyses. <i>Annals of Botany</i> , 2013, 112, 253-266.	2.9	69
11	Lateral diffusion of CO ₂ from shaded to illuminated leaf parts affects photosynthesis inside homobaric leaves. <i>New Phytologist</i> , 2006, 169, 779-788.	7.3	59
12	¹¹ C-PET imaging reveals transport dynamics and sectorial plasticity of oak phloem after girdling. <i>Frontiers in Plant Science</i> , 2013, 4, 200.	3.6	59
13	<i>pheno</i> Seeder - A Robot System for Automated Handling and Phenotyping of Individual Seeds. <i>Plant Physiology</i> , 2016, 172, 1358-1370.	4.8	58
14	Lateral gas diffusion inside leaves. <i>Journal of Experimental Botany</i> , 2005, 56, 857-864.	4.8	51
15	Belowground plant development measured with magnetic resonance imaging (MRI): exploiting the potential for non-invasive trait quantification using sugar beet as a proxy. <i>Frontiers in Plant Science</i> , 2014, 5, 469.	3.6	44
16	Distribution of photoassimilates in the pea plant: chronology of events in non-fertilized ovaries and effects of gibberellic acid. <i>Planta</i> , 1989, 180, 53-60.	3.2	34
17	3D Surface Reconstruction of Plant Seeds by Volume Carving: Performance and Accuracies. <i>Frontiers in Plant Science</i> , 2016, 7, 745.	3.6	30
18	Air pressure in clamp-on leaf chambers: a neglected issue in gas exchange measurements. <i>Journal of Experimental Botany</i> , 2006, 57, 2553-2561.	4.8	21

#	ARTICLE	IF	CITATIONS
19	The root system architecture of wheat establishing in soil is associated with varying elongation rates of seminal roots: quantification using 4D magnetic resonance imaging. <i>Journal of Experimental Botany</i> , 2022, 73, 2050-2060.	4.8	19
20	A Mobile NMR Sensor and Relaxometric Method to Non-destructively Monitor Water and Dry Matter Content in Plants. <i>Frontiers in Plant Science</i> , 2021, 12, 617768.	3.6	18
21	Magnetic resonance imaging of sugar beet taproots in soil reveals growth reduction and morphological changes during foliar <i>Cercospora beticola</i> infestation. <i>Journal of Experimental Botany</i> , 2015, 66, 5543-5553.	4.8	16
22	Photosynthesis can be enhanced by lateral CO ₂ diffusion inside leaves over distances of several millimeters. <i>New Phytologist</i> , 2008, 178, 335-347.	7.3	15
23	Design and Characterization of Microwave Cavity Resonators for Noninvasive Monitoring of Plant Water Distribution. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2016, 64, 2894-2904.	4.6	8
24	Precise Volumetric Measurements of Any Shaped Objects with a Novel Acoustic Volumeter. <i>Sensors</i> , 2020, 20, 760.	3.8	3
25	Count Rate Corrections for the Plant Dedicated PET System phenoPET. , 2018, , .		2
26	In Vivo Imaging and Quantification of Carbon Tracer Dynamics in Nodulated Root Systems of Pea Plants. <i>Plants</i> , 2022, 11, 632.	3.5	2