Albert Porcar-Castell

List of Publications by Year
in descending order

57 papers	3,493 citations	159358 30 h-index	189595 50 g-index
60 all docs	60 docs citations	60 times ranked	3852 citing authors

#	Article	IF	Citations
1	Linking chlorophyll a fluorescence to photosynthesis for remote sensing applications: mechanisms and challenges. Journal of Experimental Botany, 2014, 65, 4065-4095.	2.4	770
2	OCO-2 advances photosynthesis observation from space via solar-induced chlorophyll fluorescence. Science, 2017, 358, .	6.0	438
3	PRI assessment of long-term changes in carotenoids/chlorophyll ratio and short-term changes in de-epoxidation state of the xanthophyll cycle. International Journal of Remote Sensing, 2009, 30, 4443-4455.	1.3	210
4	Physiology of the seasonal relationship between the photochemical reflectance index and photosynthetic light use efficiency. Oecologia, 2012, 170, 313-323.	0.9	119
5	A highâ€resolution portrait of the annual dynamics of photochemical and nonâ€photochemical quenching in needles of Pinus sylvestris. Physiologia Plantarum, 2011, 143, 139-153.	2.6	108
6	Interpreting canopy development and physiology using a European phenology camera network at flux sites. Biogeosciences, 2015, 12, 5995-6015.	1.3	98
7	Thermal energy dissipation and xanthophyll cycles beyond the Arabidopsis model. Photosynthesis Research, 2012, 113, 89-103.	1.6	97
8	Estimating leaf mass per area and equivalent water thickness based on leaf optical properties: Potential and limitations of physical modeling and machine learning. Remote Sensing of Environment, 2019, 231, 110959.	4.6	92
9	Chlorophyll a fluorescence illuminates a path connecting plant molecular biology to Earth-system science. Nature Plants, 2021, 7, 998-1009.	4.7	88
10	Reduction of structural impacts and distinction of photosynthetic pathways in a global estimation of GPP from space-borne solar-induced chlorophyll fluorescence. Remote Sensing of Environment, 2020, 240, 111722.	4.6	83
11	A new monitoring PAM fluorometer (MONI-PAM) to study the short- and long-term acclimation of photosystem II in field conditions. Photosynthesis Research, 2008, 96, 173-179.	1.6	80
12	Disentangling Changes in the Spectral Shape of Chlorophyll Fluorescence: Implications for Remote Sensing of Photosynthesis. Journal of Geophysical Research G: Biogeosciences, 2019, 124, 1491-1507.	1.3	73
13	The handbook for standardized field and laboratory measurements in terrestrial climate change experiments and observational studies (ClimEx). Methods in Ecology and Evolution, 2020, 11, 22-37.	2.2	68
14	Structural and photosynthetic dynamics mediate the response of SIF to water stress in a potato crop. Remote Sensing of Environment, 2021, 263, 112555.	4.6	60
15	Field and controlled environment measurements show strong seasonal acclimation in photosynthesis and respiration potential in boreal Scots pine. Frontiers in Plant Science, 2014, 5, 717.	1.7	57
16	Using spectral chlorophyll fluorescence and the photochemical reflectance index to predict physiological dynamics. Remote Sensing of Environment, 2016, 176, 17-30.	4.6	55
17	Heatwave breaks down the linearity between sunâ€induced fluorescence and gross primary production. New Phytologist, 2022, 233, 2415-2428.	3.5	51
18	Warmer spring alleviated the impacts of 2018 European summer heatwave and drought on vegetation photosynthesis. Agricultural and Forest Meteorology, 2020, 295, 108195.	1.9	48

#	Article	IF	Citations
19	Seasonal acclimation of photosystem II in Pinus sylvestris. II. Using the rate constants of sustained thermal energy dissipation and photochemistry to study the effect of the light environment. Tree Physiology, 2008, 28, 1483-1491.	1.4	47
20	EUROSPEC: at the interface between remote-sensing and ecosystem CO₂ flux measurements in Europe. Biogeosciences, 2015, 12, 6103-6124.	1.3	47
21	Seasonal variation in boreal pine forest albedo and effects of canopy snow on forest reflectance. Agricultural and Forest Meteorology, 2012, 164, 53-60.	1.9	45
22	Detecting Inter-Annual Variations in the Phenology of Evergreen Conifers Using Long-Term MODIS Vegetation Index Time Series. Remote Sensing, 2017, 9, 49.	1.8	44
23	Compensation of Oxygen Transmittance Effects for Proximal Sensing Retrieval of Canopyâ€“Leaving Sunâ€“Induced Chlorophyll Fluorescence. Remote Sensing, 2018, 10, 1551.	1.8	44
24	Improving Estimates of Gross Primary Productivity by Assimilating Solarâ€Induced Fluorescence Satellite Retrievals in a Terrestrial Biosphere Model Using a Processâ€Based SIF Model. Journal of Geophysical Research G: Biogeosciences, 2019, 124, 3281-3306.	1.3	44
25	Assessing bi-directional effects on the diurnal cycle of measured solar-induced chlorophyll fluorescence in crop canopies. Agricultural and Forest Meteorology, 2020, 295, 108147.	1.9	43
26	Dynamic response of plant chlorophyll fluorescence to light, water and nutrient availability. Functional Plant Biology, 2015, 42, 746.	1.1	42
27	Simulating solar-induced chlorophyll fluorescence in a boreal forest stand reconstructed from terrestrial laser scanning measurements. Remote Sensing of Environment, 2019, 232, 111274.	4.6	37
28	Dynamics of the energy flow through photosystem II under changing light conditions: a model approach. Functional Plant Biology, 2006, 33, 229.	1.1	33
29	Onset of photosynthesis in spring speeds up monoterpene synthesis and leads to emission bursts. Plant, Cell and Environment, 2015, 38, 2299-2312.	2.8	33
30	A temperature-controlled spectrometer system for continuous and unattended measurements of canopy spectral radiance and reflectance. International Journal of Remote Sensing, 2014, 35, 1769-1785.	1.3	32
31	Spatial Variation of Leaf Optical Properties in a Boreal Forest Is Influenced by Species and Light Environment. Frontiers in Plant Science, 2017, 8, 309.	1.7	32
32	Sustained Nonphotochemical Quenching Shapes the Seasonal Pattern of Solarâ€Induced Fluorescence at a Highâ€Elevation Evergreen Forest. Journal of Geophysical Research G: Biogeosciences, 2019, 124, 2005-2020.	1.3	32
33	Tree variables related to growth response and acclimation of advance regeneration of Norway spruce and other coniferous species after release. Forest Ecology and Management, 2007, 250, 56-63.	1.4	30
34	Seasonal acclimation of photosystem II in Pinus sylvestris. I. Estimating the rate constants of sustained thermal energy dissipation and photochemistry. Tree Physiology, 2008, 28, 1475-1482.	1.4	30
35	Solar eclipse demonstrating the importance of photochemistry in new particle formation. Scientific Reports, 2017, 7, 45707.	1.6	29
36	Diurnal and Seasonal Solar Induced Chlorophyll Fluorescence and Photosynthesis in a Boreal Scots Pine Canopy. Remote Sensing, 2019, 11, 273.	1.8	29

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37	UV-screening and springtime recovery of photosynthetic capacity in leaves of Vaccinium vitis-idaea above and below the snow pack. Plant Physiology and Biochemistry, 2019, 134, 40-52.	2.8	23
38	Modelling photosynthesis in highly dynamic environments: the case of sunflecks. Tree Physiology, 2012, 32, 1062-1065.	1.4	22
39	Cavitation induced by a surfactant leads to a transient release of water stress and subsequent â€˜run awayâ€™ embolism in Scots pine (Pinus sylvestris) seedlings. Journal of Experimental Botany, 2012, 63, 1057-1067.	2.4	21
40	Do all chlorophyll fluorescence emission wavelengths capture the spring recovery of photosynthesis in boreal evergreen foliage?. Plant, Cell and Environment, 2019, 42, 3264-3279.	2.8	18
41	A comparison of methods to estimate photosynthetic light absorption in leaves with contrasting morphology. Tree Physiology, 2016, 36, 368-379.	1.4	17
42	Tracking the Seasonal Dynamics of Boreal Forest Photosynthesis Using EO-1 Hyperion Reflectance: Sensitivity to Structural and Illumination Effects. IEEE Transactions on Geoscience and Remote Sensing, 2016, 54, 5105-5116.	2.7	15
43	Leaf-Level Spectral Fluorescence Measurements: Comparing Methodologies for Broadleaves and Needles. Remote Sensing, 2019, 11, 532.	1.8	14
44	Dynamics of leaf gas exchange, chlorophyll fluorescence and stem diameter changes during freezing and thawing of Scots pine seedlings. Tree Physiology, 2015, 35, 1314-1324.	1.4	13
45	Combined dynamics of the 500â€“600Ânm leaf absorption and chlorophyll fluorescence changes in vivo: Evidence for the multifunctional energy quenching role of xanthophylls. Biochimica Et Biophysica Acta - Bioenergetics, 2021, 1862, 148351.	0.5	13
46	When the sun never sets: daily changes in pigment composition in three subarctic woody plants during the summer solstice. Trees - Structure and Function, 2018, 32, 615-630.	0.9	12
47	Nocturnal Light Emitting Diode Induced Fluorescence (LEDIF): A new technique to measure the chlorophyll a fluorescence emission spectral distribution of plant canopies in situ. Remote Sensing of Environment, 2019, 231, 111137.	4.6	10
48	Drone Measurements of Solar-Induced Chlorophyll Fluorescence Acquired with a Low-Weight DFOV Spectrometer System. , 2018, , .		7
49	UAS spherical photography for the vertical characterisation of canopy structural traits. New Phytologist, 2022, , .	3.5	5
50	Sun-induced chlorophyll fluorescence is more strongly related to photosynthesis with hemispherical than nadir measurements: Evidence from field observations and model simulations. Remote Sensing of Environment, 2022, 279, 113118.	4.6	4
51	UPSCALING OF SOLAR INDUCED CHLOROPHYLL FLUORESCENCE FROM LEAF TO CANOPY USING THE DART MODEL AND A REALISTIC 3D FOREST SCENE. International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences - ISPRS Archives, 0, XLII-3/W3, 107-111.	0.2	3
52	Processes in Living Structures. , 2013, , 43-223.		2
53	Investigating Forest Photosynthetic Response to Elevated CO<inf>2</inf> Using Uav-Based Measurements of Solar Induced Fluorescence. , 2018, , .		2
54	On the Estimation of the Leaf Angle Distribution from Drone Based Photogrammetry. , 2020, , .		2

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55	What Does the NDVI Really Tell Us About Crops? Insight from Proximal Spectral Field Sensors. Springer Optimization and Its Applications, 2022, , 251-265.	0.6	1
56	Beyond APAR and NPQ: Factors Coupling and Decoupling SIF and GPP Across Scales. , 2021, , .		0
57	Preliminary Study of Wavelength Positions of Leaf Fluorescence Peaks with Experimental Data. , 2020, , .		0