# JosÃ© I GarcÃ-a-Plazaola

List of Publications by Year
in descending order

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|---|---|---|---|
| 125<br>papers | 4,790<br>citations | 71097<br>41<br>h-index | 118840<br>62<br>g-index |
| 125<br>all docs | 125<br>docs citations | 125<br>times ranked | 4987<br>citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Internal and external factors affecting photosynthetic pigment composition in plants: a metaâ€analytical approach. New Phytologist, 2015, 206, 268-280. | 7.3 | 202 |
| 2 | A rapid high-performance liquid chromatography method to measure lipophilic antioxidants in stressed plants: simultaneous determination of carotenoids and tocopherols. Phytochemical Analysis, 1999, 10, 307-313. | 2.4 | 172 |
| 3 | Versatility of carotenoids: An integrated view on diversity, evolution, functional roles and environmental interactions. Environmental and Experimental Botany, 2015, 119, 63-75. | 4.2 | 124 |
| 4 | The lutein epoxide cycle in higher plants: its relationships to other xanthophyll cycles and possible functions. Functional Plant Biology, 2007, 34, 759. | 2.1 | 120 |
| 5 | Physiology of the seasonal relationship between the photochemical reflectance index and photosynthetic light use efficiency. Oecologia, 2012, 170, 313-323. | 2.0 | 119 |
| 6 | Diurnal changes in photoprotective mechanisms in leaves of cork oak (Quercus suber) during summer. Tree Physiology, 1996, 16, 115-123. | 3.1 | 115 |
| 7 | New Insights on Glyphosate Mode of Action in Nodular Metabolism:Â Role of Shikimate Accumulation. Journal of Agricultural and Food Chemistry, 2006, 54, 2621-2628. | 5.2 | 111 |
| 8 | Autofluorescence: Biological functions and technical applications. Plant Science, 2015, 236, 136-145. | 3.6 | 106 |
| 9 | Effectiveness of arbuscular mycorrhizal fungi (AMF) for inducing the accumulation of major carotenoids, chlorophylls and tocopherol in green and red leaf lettuces. Applied Microbiology and Biotechnology, 2013, 97, 3119-3128. | 3.6 | 98 |
| 10 | Effects of drought on photoprotective mechanisms in European beech (Fagus sylvatica L.) seedlings from different provenances. Trees - Structure and Function, 2000, 14, 485-490. | 1.9 | 97 |
| 11 | Thermal energy dissipation and xanthophyll cycles beyond the Arabidopsis model. Photosynthesis Research, 2012, 113, 89-103. | 2.9 | 97 |
| 12 | Diurnal changes in antioxidant and carotenoid composition in the Mediterranean schlerophyll tree Quercus ilex (L) during winter. Plant Science, 1999, 143, 125-133. | 3.6 | 94 |
| 13 | Seasonal changes in xanthophyll composition and photosynthesis of cork oak (Quercus suberL.) leaves under mediterranean climate. Journal of Experimental Botany, 1997, 48, 1667-1674. | 4.8 | 91 |
| 14 | Chlorophyll a fluorescence illuminates a path connecting plant molecular biology to Earth-system science. Nature Plants, 2021, 7, 998-1009. | 9.3 | 88 |
| 15 | Evidence for the absence of enzymatic reactions in the glassy state. A case study of xanthophyll cycle pigments in the desiccation-tolerant moss Syntrichia ruralis. Journal of Experimental Botany, 2013, 64, 3033-3043. | 4.8 | 86 |
| 16 | Do the capacity and kinetics for modification of xanthophyll cycle pool size depend on growth irradiance in temperate trees?. Plant, Cell and Environment, 2003, 26, 1787-1801. | 5.7 | 83 |
| 17 | Native Plant Communities in an Abandoned Pb-Zn Mining Area of Northern Spain: Implications for Phytoremediation and Germplasm Preservation. International Journal of Phytoremediation, 2011, 13, 256-270. | 3.1 | 80 |
| 18 | Physical factors driving intertidal macroalgae distribution: physiological stress of a dominant fucoid at its southern limit. Oecologia, 2012, 170, 341-353. | 2.0 | 79 |

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|---|---|---|---|
| 19 | The operation of the lutein epoxide cycle correlates with energy dissipation. Functional Plant Biology, 2003, 30, 319. | 2.1 | 76 |
| 20 | Glyphosate Effects on Phenolic Metabolism of Nodulated Soybean (Glycine maxL. Merr.). Journal of Agricultural and Food Chemistry, 1999, 47, 2920-2925. | 5.2 | 69 |
| 21 | Functional role of red (retro)-carotenoids as passive light filters in the leaves of Buxus sempervirens L.: increased protection of photosynthetic tissues?. Journal of Experimental Botany, 2005, 56, 2629-2636. | 4.8 | 69 |
| 22 | Side-effects of domestication: cultivated legume seeds contain similar tocopherols and fatty acids but less carotenoids than their wild counterparts. BMC Plant Biology, 2014, 14, 1599. | 3.6 | 68 |
| 23 | Low light grown duckweed plants are more protected against the toxicity induced by Zn and Cd. Plant Physiology and Biochemistry, 2002, 40, 859-863. | 5.8 | 66 |
| 24 | Phytoextraction potential of two Rumex acetosa L. accessions collected from metalliferous and non-metalliferous sites: Effect of fertilization. Chemosphere, 2009, 74, 259-264. | 8.2 | 64 |
| 25 | Differences in EDTA-assisted metal phytoextraction between metallicolous and non-metallicolous accessions of Rumex acetosa L.. Environmental Pollution, 2010, 158, 1710-1715. | 7.5 | 64 |
| 26 | Synthesis of low molecular weight thiols in response to Cd exposure in Thlaspi caerulescens. Plant, Cell and Environment, 2006, 29, 1422-1429. | 5.7 | 62 |
| 27 | Photoprotective implications of leaf variegation in E. dens-canis L. and P. officinalis L.. Journal of Plant Physiology, 2008, 165, 1255-1263. | 3.5 | 62 |
| 28 | Photoprotective Responses to Winter Stress in Evergreen Mediterranean Ecosystems. Plant Biology, 2000, 2, 530-535. | 3.8 | 57 |
| 29 | Distribution and evolutionary trends of photoprotective isoprenoids (xanthophylls and) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 3 | 5.2 | 56 |
| 30 | Photoprotective responses of Mediterranean and Atlantic trees to the extreme heat-wave of summer 2003 in Southwestern Europe. Trees - Structure and Function, 2008, 22, 385-392. | 1.9 | 55 |
| 31 | Activation of photoprotective winter photoinhibition in plants from different environments: a literature compilation and metaâ€analysis. Physiologia Plantarum, 2015, 155, 414-423. | 5.2 | 54 |
| 32 | Unravelling the roles of desiccation-induced xanthophyll cycle activity in darkness: a case study in Lobaria pulmonaria. Planta, 2010, 231, 1335-1342. | 3.2 | 53 |
| 33 | Differential responses of three fungal species to environmental factors and their role in the mycorrhization of Pinus radiata D. Don. Mycorrhiza, 2004, 14, 11-18. | 2.8 | 50 |
| 34 | Occurrence and operation of the lutein epoxide cycle in Quercus species. Functional Plant Biology, 2002, 29, 1075. | 2.1 | 48 |
| 35 | Antioxidant and Pigment Composition during Autumnal Leaf Senescence in Woody Deciduous Species Differing in their Ecological Traits. Plant Biology, 2003, 5, 557-566. | 3.8 | 48 |
| 36 | Carotenoid composition in Rhodophyta: insights into xanthophyll regulation inCorallina elongata. European Journal of Phycology, 2009, 44, 221-230. | 2.0 | 48 |

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|---|---|---|---|
| 37 | Acclimation of antioxidant pools to the light environment in a natural forest canopy. New Phytologist, 2004, 163, 87-97. | 7.3 | 47 |
| 38 | Role of Red Carotenoids in Photoprotection During Winter Acclimation inBuxus sempervirensLeaves. Plant Biology, 2004, 6, 325-332. | 3.8 | 47 |
| 39 | Activation of violaxanthin cycle in darkness is a common response to different abiotic stresses: a case study in Pelvetia canaliculata. BMC Plant Biology, 2011, 11, 181. | 3.6 | 44 |
| 40 | Shared mechanisms of photoprotection in photosynthetic organisms tolerant to desiccation or to low temperature. Environmental and Experimental Botany, 2018, 154, 66-79. | 4.2 | 44 |
| 41 | Seasonal changes in photosynthetic pigments and antioxidants in beech (Fagus sylvatica) in a Mediterranean climate: implications for tree decline diagnosis. Functional Plant Biology, 2001, 28, 225. | 2.1 | 43 |
| 42 | High irradiance induces photoprotective mechanisms and a positive effect on NH4+ stress in Pisum sativum L.. Journal of Plant Physiology, 2010, 167, 1038-1045. | 3.5 | 43 |
| 43 | Dehydration-mediated activation of the xanthophyll cycle in darkness: is it related to desiccation tolerance?. Planta, 2011, 234, 579-588. | 3.2 | 42 |
| 44 | Photoprotective Strategies of Mediterranean Plants in Relation to Morphological Traits and Natural Environmental Pressure: A Meta-Analytical Approach. Frontiers in Plant Science, 2017, 8, 1051. | 3.6 | 42 |
| 45 | How do vascular plants perform photosynthesis in extreme environments? An integrative ecophysiological and biochemical story. Plant Journal, 2020, 101, 979-1000. | 5.7 | 42 |
| 46 | Dark induction of the photoprotective xanthophyll cycle in response to dehydration. Journal of Plant Physiology, 2009, 166, 1734-1744. | 3.5 | 40 |
| 47 | Does plant colour matter? Wax accumulation as an indicator of decline in Juniperus thurifera. Tree Physiology, 2014, 34, 267-274. | 3.1 | 39 |
| 48 | Photoprotection mechanisms in Quercus ilex under contrasting climatic conditions. Flora: Morphology, Distribution, Functional Ecology of Plants, 2012, 207, 557-564. | 1.2 | 38 |
| 49 | Beyond Non-Photochemical Fluorescence Quenching: The Overlapping Antioxidant Functions of Zeaxanthin and Tocopherols. Advances in Photosynthesis and Respiration, 2014, , 583-603. | 1.0 | 38 |
| 50 | Shedding light on the dark side of xanthophyll cycles. New Phytologist, 2021, 230, 1336-1344. | 7.3 | 37 |
| 51 | Plasticity of Photoprotective Mechanisms ofBuxus sempervirensL. Leaves in Response to Extreme Temperatures. Plant Biology, 2007, 9, 59-68. | 3.8 | 34 |
| 52 | First evidence of freezing tolerance in a resurrection plant: insights into molecular mobility and zeaxanthin synthesis in the dark. Physiologia Plantarum, 2018, 163, 472-489. | 5.2 | 34 |
| 53 | Born to revive: molecular and physiological mechanisms of double tolerance in a paleotropical and resurrection plant. New Phytologist, 2020, 226, 741-759. | 7.3 | 34 |
| 54 | Photoprotection in evergreen Mediterranean plants during sudden periods of intense cold weather. Trees - Structure and Function, 2003, 17, 285-291. | 1.9 | 33 |

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|---|---|---|---|
| 55 | Emissions of carotenoid cleavage products upon heat shock and mechanical wounding from a foliose lichen. Environmental and Experimental Botany, 2017, 133, 87-97. | 4.2 | 32 |
| 56 | Effect of low nitrate supply to nodulated lucerne on time course of activites of enzymes involved in inorganic nitrogen metabolism. Physiologia Plantarum, 1990, 80, 185-190. | 5.2 | 31 |
| 57 | The lutein epoxide cycle in vegetative buds of woody plants. Functional Plant Biology, 2004, 31, 815. | 2.1 | 31 |
| 58 | Diversity of winter photoinhibitory responses: a case study in coâ€occurring lichens, mosses, herbs and woody plants from subalpine environments. Physiologia Plantarum, 2017, 160, 282-296. | 5.2 | 31 |
| 59 | Two Hymenophyllaceae species from contrasting natural environments exhibit a homoiochlorophyllous strategy in response to desiccation stress. Journal of Plant Physiology, 2016, 191, 82-94. | 3.5 | 29 |
| 60 | Resilience of a semi-deciduous shrub, Cistus salvifolius, to severe summer drought and heat stress. Functional Plant Biology, 2015, 42, 219. | 2.1 | 27 |
| 61 | Leaf functional plasticity decreases the water consumption without further consequences for carbon uptake inQuercus cocciferaL. under Mediterranean conditions. Tree Physiology, 2016, 36, 356-367. | 3.1 | 27 |
| 62 | Seed Carotenoid and Tocochromanol Composition of Wild Fabaceae Species Is Shaped by Phylogeny and Ecological Factors. Frontiers in Plant Science, 2017, 8, 1428. | 3.6 | 27 |
| 63 | Endogenous circadian rhythms in pigment composition induce changes in photochemical efficiency in plant canopies. Plant, Cell and Environment, 2017, 40, 1153-1162. | 5.7 | 26 |
| 64 | Denitrifying ability of thirteen Rhizobium meliloti strains. Plant and Soil, 1993, 149, 43-50. | 3.7 | 25 |
| 65 | Alternative methods for sampling and preservation of photosynthetic pigments and tocopherols in plant material from remote locations. Photosynthesis Research, 2009, 101, 77-88. | 2.9 | 25 |
| 66 | Photosynthetic responses of trees in high-elevation forests: comparing evergreen species along an elevation gradient in the Central Andes. AoB PLANTS, 2015, 7, plv058. | 2.3 | 25 |
| 67 | Gas-exchange, photo- and antioxidant protection, and metal accumulation in I-214 and Eridano Populus sp. clones subjected to elevated zinc concentrations. Environmental and Experimental Botany, 2014, 107, 144-153. | 4.2 | 24 |
| 68 | Photoprotection mechanisms in European beech (Fagus sylvatica L.) seedlings from diverse climatic origins. Trees - Structure and Function, 2000, 14, 339-343. | 1.9 | 23 |
| 69 | Regulation of the xanthophyll cycle pool size in duckweed (Lemna minor ) plants. Physiologia Plantarum, 2002, 116, 121-126. | 5.2 | 23 |
| 70 | Leaf functional and micro-morphological photoprotective attributes in two ecotypes of Colobanthus quitensis from the Andes and Maritime Antarctic. Polar Biology, 2010, 33, 885-896. | 1.2 | 23 |
| 71 | Operation and regulation of the lutein epoxide cycle in seedlings of Ocotea foetens. Functional Plant Biology, 2010, 37, 859. | 2.1 | 23 |
| 72 | Ageing and irradiance enhance vitamin E content in green edible tissues from crop plants. Journal of the Science of Food and Agriculture, 2010, 90, n/a-n/a. | 3.5 | 22 |

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|---|---|---|---|
| 73 | Dynamics of violaxanthin and lutein epoxide xanthophyll cycles in Lauraceae tree species under field conditions. Tree Physiology, 2007, 27, 1407-1414. | 3.1 | 21 |
| 74 | Shortâ€•and longâ€•term modulation of the lutein epoxide and violaxanthin cycles in two species of the Lauraceae: sweet bay laurel (Laurus nobilis L.) and avocado (Persea americana Mill.). Plant Biology, 2008, 10, 288-297. | 3.8 | 21 |
| 75 | Dynamics of the alpha-tocopherol pool as affected by external (environmental) and internal (leaf age) factors in Buxus sempervirens leaves. Physiologia Plantarum, 2005, 125, 333-344. | 5.2 | 18 |
| 76 | Lutein epoxide cycle, more than just a forest tale. Plant Signaling and Behavior, 2009, 4, 342-344. | 2.4 | 18 |
| 77 | Rapid colour changes inEuglena sanguinea(Euglenophyceae) caused by internal lipid globule migration. European Journal of Phycology, 2019, 54, 91-101. | 2.0 | 18 |
| 78 | A field portable method for the semiâ€•quantitative estimation of dehydration tolerance of photosynthetic tissues across distantly related land plants. Physiologia Plantarum, 2019, 167, 540-555. | 5.2 | 18 |
| 79 | The contribution of Rhizobium meliloti to soil denitrification. Plant and Soil, 1993, 157, 207-213. | 3.7 | 17 |
| 80 | Salt crystal deposition as a reversible mechanism to enhance photoprotection in black mangrove. Trees - Structure and Function, 2013, 27, 229-237. | 1.9 | 17 |
| 81 | Involvement of a Second Xanthophyll Cycle in Non-Photochemical Quenching of Chlorophyll Fluorescence: The Lutein Epoxide Story. Advances in Photosynthesis and Respiration, 2014, , 277-295. | 1.0 | 17 |
| 82 | Enhancement of zeaxanthin in two-steps by environmental stress induction in rocket and spinach. Food Research International, 2014, 65, 207-214. | 6.2 | 17 |
| 83 | Tree size and light availability increase photochemical instead of non-photochemical capacities of Nothofagus nitida trees growing in an evergreen temperate rain forest. Tree Physiology, 2011, 31, 1128-1141. | 3.1 | 16 |
| 84 | Antioxidant and photoprotective responses to elevated CO<sub>2</sub> and heat stress during holm oak regeneration by resprouting, evaluated with NIRS (nearâ€•infrared reflectance spectroscopy). Plant Biology, 2013, 15, 5-17. | 3.8 | 16 |
| 85 | Patterns of spatioâ€•temporal distribution of winter chronic photoinhibition in leaves of three evergreen Mediterranean species with contrasting acclimation responses. Physiologia Plantarum, 2012, 144, 289-301. | 5.2 | 15 |
| 86 | On the recalcitrant use of Arnon's method for chlorophyll determination. New Phytologist, 2018, 217, 474-476. | 7.3 | 15 |
| 87 | Photoprotective compounds as early markers to predict holm oak crown defoliation in declining Mediterranean savannahs. Tree Physiology, 2022, 42, 208-224. | 3.1 | 15 |
| 88 | Differences in biochemical, gas exchange and hydraulic response to water stress in desiccation tolerant and sensitive fronds of the fern Anemia caffrorum. New Phytologist, 2021, 231, 1415-1430. | 7.3 | 15 |
| 89 | Distribution of nitrate reductase activity in nodulated lucerne plants. Plant and Soil, 1991, 131, 107-113. | 3.7 | 14 |
| 90 | Ecophysiological roles of abaxial anthocyanins in a perennial understorey herb from temperate deciduous forests. AoB PLANTS, 2015, 7, plv042. | 2.3 | 14 |

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|---|---|---|---|
| 91 | Acclimation of leaf cohorts expanded under light and water stresses: an adaptive mechanism of Eucryphia cordifolia to face changes in climatic conditions?. Tree Physiology, 2014, 34, 1305-1320. | 3.1 | 13 |
| 92 | Symbiosis at its limits: ecophysiological consequences of lichenization in the genus Prasiola in Antarctica. Annals of Botany, 2019, 124, 1211-1226. | 2.9 | 13 |
| 93 | 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. | 1.0 | 13 |
| 94 | | | |

| # | Article | IF | Citations |
|---|---|---|---|
| 109 | Ecophysiological changes and spore formation: two strategies in response to lowâ€temperature and highâ€light stress in Klebsormidium cf. flaccidum (Klebsormidiophyceae,) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 | | |
| 110 | Denitrification in lucerne nodules is not involved in nitrite detoxification. Plant and Soil, 1996, 182, 149-155. | 3.7 | 7 |
| 111 | Evolution, biosynthesis and protective roles of oligogalactolipids: Key molecules for terrestrial photosynthesis?. Environmental and Experimental Botany, 2019, 164, 135-148. | 4.2 | 7 |
| 112 | Do fern gametophytes have the capacity for irradiance acclimation?. Biologia Plantarum, 2012, 56, 351-356. | 1.9 | 6 |
| 113 | Does age matter under winter photoinhibitory conditions? A case study in stems and leaves of European mistletoe (Viscum album). Functional Plant Biology, 2015, 42, 175. | 2.1 | 6 |
| 114 | Photoprotective Mechanisms in the Genus Quercus in Response to Winter Cold and Summer Drought. Tree Physiology, 2017, , 361-391. | 2.5 | 6 |
| 115 | Can Parietin Transfer Energy Radiatively to Photosynthetic Pigments?. Molecules, 2018, 23, 1741. | 3.8 | 5 |
| 116 | Modified Atmosphere Packaging and Dark/Light Refrigerated Storage in Green Leafy Vegetables Have an Impact on Nutritional Value. Plant Foods for Human Nutrition, 2019, 74, 99-106. | 3.2 | 5 |
| 117 | Do light acclimation mechanisms reduce the effects of light-dependent herbicides in duckweed (Lemna) Tj ETQq1 1 0.784314 rgBT /Ov | 1.5 | 4 |
| 118 | Life after Harvest: Circadian Regulation in Photosynthetic Pigments of Rocket Leaves during Supermarket Storage Affects the Nutritional Quality. Nutrients, 2019, 11, 1519. | 4.1 | 4 |
| 119 | A rapid highâ€performance liquid chromatography method to measure lipophilic antioxidants in stressed plants: simultaneous determination of carotenoids and tocopherols. Phytochemical Analysis, 1999, 10, 307-313. | 2.4 | 4 |
| 120 | Title is missing!. Plant and Soil, 1999, 216, 139-145. | 3.7 | 3 |
| 121 | Tocochromanols in wood: a potential new tool for dendrometabolomics. Tree Physiology, 2014, 34, 1411-1418. | 3.1 | 2 |
| 122 | Effect of low nitrate supply to nodulated lucerne on time course of activites of enzymes involved in inorganic nitrogen metabolism. Physiologia Plantarum, 1990, 80, 185-190. | 5.2 | 2 |
| 123 | Cell-level anatomy explains leaf age-dependent declines in mesophyll conductance and photosynthetic capacity in the evergreen Mediterranean oak Quercus ilex subsp. rotundifolia. Tree Physiology, 2022, , . | 3.1 | 2 |
| 124 | Assessing Plant Pigment Regulation in Circadian Experiments. Methods in Molecular Biology, 2022, 2494, 135-148. | 0.9 | 1 |
| 125 | Non-invasive diagnosis of viability in seeds and lichens by infrared thermography under controlled environmental conditions. Plant Methods, 2019, 15, 147. | 4.3 | 0 |