

# Rafael Villar

## List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

88

papers

11,714

citations

37

h-index

94

g-index

94

ext. papers

13,817

ext. citations

5.1

avg, IF

5.85

L-index

#	Paper	IF	Citations
88	The worldwide leaf economics spectrum. <i>Nature</i> , <b>2004</b> , 428, 821-7	50.4	4915
87	Causes and consequences of variation in leaf mass per area (LMA): a meta-analysis. <i>New Phytologist</i> , <b>2009</b> , 182, 565-588	9.8	1547
86	Assessing the generality of global leaf trait relationships. <i>New Phytologist</i> , <b>2005</b> , 166, 485-96	9.8	1343
85	Global climatic drivers of leaf size. <i>Science</i> , <b>2017</b> , 357, 917-921	33.3	334
84	Enhanced wheat yield by biochar addition under different mineral fertilization levels. <i>Agronomy for Sustainable Development</i> , <b>2013</b> , 33, 475-484	6.8	197
83	Interactions of drought and shade effects on seedlings of four <i>Quercus</i> species: physiological and structural leaf responses. <i>New Phytologist</i> , <b>2006</b> , 170, 819-33	9.8	184
82	Comparison of leaf construction costs in woody species with differing leaf life-spans in contrasting ecosystems. <i>New Phytologist</i> , <b>2001</b> , 151, 213-226	9.8	174
81	Effects of biochars produced from different feedstocks on soil properties and sunflower growth. <i>Journal of Plant Nutrition and Soil Science</i> , <b>2014</b> , 177, 16-25	2.3	159
80	Dark Leaf Respiration in Light and Darkness of an Evergreen and a Deciduous Plant Species. <i>Plant Physiology</i> , <b>1995</b> , 107, 421-427	6.6	151
79	Comparison of FDTD-calculated specific absorption rate in adults and children when using a mobile phone at 900 and 1800 MHz. <i>Physics in Medicine and Biology</i> , <b>2004</b> , 49, 345-54	3.8	150
78	The Fate of Acquired Carbon in Plants: Chemical Composition and Construction Costs <b>1997</b> , 39-72		124
77	Relative growth rate in phylogenetically related deciduous and evergreen woody species. <i>Oecologia</i> , <b>2001</b> , 128, 172-180	2.9	116
76	Comparison of Methods to Estimate Dark Respiration in the Light in Leaves of Two Woody Species. <i>Plant Physiology</i> , <b>1994</b> , 105, 167-172	6.6	113
75	Leaf Mass per Area (LMA) and Its Relationship with Leaf Structure and Anatomy in 34 Mediterranean Woody Species along a Water Availability Gradient. <i>PLoS ONE</i> , <b>2016</b> , 11, e0148788	3.7	110
74	Differences in construction costs and chemical composition between deciduous and evergreen woody species are small as compared to differences among families. <i>Plant, Cell and Environment</i> , <b>2006</b> , 29, 1629-43	8.4	101
73	Changes in soil nutrient availability explain biochar's impact on wheat root development. <i>Plant and Soil</i> , <b>2016</b> , 399, 333-343	4.2	100
72	Water-use strategies of six co-existing Mediterranean woody species during a summer drought. <i>Oecologia</i> , <b>2011</b> , 166, 45-57	2.9	95

71	A plant economics spectrum in Mediterranean forests along environmental gradients: is there coordination among leaf, stem and root traits?. <i>Journal of Vegetation Science</i> , <b>2016</b> , 27, 187-199	3.1	94
70	Seed-mass effects in four Mediterranean <i>Quercus</i> species (Fagaceae) growing in contrasting light environments. <i>American Journal of Botany</i> , <b>2007</b> , 94, 1795-803	2.7	92
69	The anatomical and compositional basis of leaf mass per area. <i>Ecology Letters</i> , <b>2017</b> , 20, 412-425	10	87
68	Wheat growth and yield responses to biochar addition under Mediterranean climate conditions. <i>Biology and Fertility of Soils</i> , <b>2014</b> , 50, 1177-1187	6.1	71
67	Exploring variation in leaf mass per area (LMA) from leaf to cell: an anatomical analysis of 26 woody species. <i>American Journal of Botany</i> , <b>2013</b> , 100, 1969-80	2.7	69
66	Linking root traits to plant physiology and growth in <i>Fraxinus angustifolia</i> Vahl seedlings under soil compaction conditions. <i>Environmental and Experimental Botany</i> , <b>2012</b> , 79, 49-57	5.9	64
65	Functional traits predict drought performance and distribution of Mediterranean woody species. <i>Acta Oecologica</i> , <b>2014</b> , 56, 10-18	1.7	60
64	Relating leaf photosynthetic rate to whole-plant growth: drought and shade effects on seedlings of four <i>Quercus</i> species. <i>Functional Plant Biology</i> , <b>2008</b> , 35, 725-737	2.7	59
63	Relationships between leaf morphological traits, nutrient concentrations and isotopic signatures for Mediterranean woody plant species and communities. <i>Plant and Soil</i> , <b>2012</b> , 357, 407-424	4.2	57
62	Seedling growth and morphology of three oak species along field resource gradients and seed mass variation: a seedling age-dependent response. <i>Journal of Vegetation Science</i> , <b>2010</b> , 21, 419-437	3.1	57
61	Drought changes the structure and elemental composition of very fine roots in seedlings of ten woody tree species. Implications for a drier climate. <i>Plant and Soil</i> , <b>2014</b> , 384, 113-129	4.2	55
60	Variation in relative growth rate of 20 <i>Aegilops</i> species (Poaceae) in the field: The importance of net assimilation rate or specific leaf area depends on the time scale. <i>Plant and Soil</i> , <b>2005</b> , 272, 11-27	4.2	51
59	Moderate soil compaction: Implications on growth and architecture in seedlings of 17 woody plant species. <i>Soil and Tillage Research</i> , <b>2009</b> , 103, 325-331	6.5	48
58	Disentangling the relative importance of species occurrence, abundance and intraspecific variability in community assembly: a trait-based approach at the whole-plant level in Mediterranean forests. <i>Oikos</i> , <b>2016</b> , 125, 354-363	4	48
57	Soil compaction effects on growth and root traits of tobacco depend on light, water regime and mechanical stress. <i>Soil and Tillage Research</i> , <b>2012</b> , 120, 121-129	6.5	47
56	Climatic events inducing die-off in Mediterranean shrublands: are species' responses related to their functional traits?. <i>Oecologia</i> , <b>2016</b> , 180, 961-73	2.9	43
55	Relative growth rate and biomass allocation in 20 <i>Aegilops</i> (Poaceae) species. <i>New Phytologist</i> , <b>1998</b> , 140, 425-437	9.8	41
54	Relative growth rate and biomass allocation in ten woody species with different leaf longevity using phylogenetic independent contrasts (PICs). <i>Plant Biology</i> , <b>2005</b> , 7, 484-94	3.7	40

53	Relative growth rate and biomass allocation in 20 Aegilops (Poaceae) species. <i>New Phytologist</i> , <b>1998</b> , 140, 425-437	9.8	39
52	Maternal influences on seed mass effect and initial seedling growth in four Quercus species. <i>Acta Oecologica</i> , <b>2011</b> , 37, 1-9	1.7	38
51	Root traits across environmental gradients in Mediterranean woody communities: are they aligned along the root economics spectrum?. <i>Plant and Soil</i> , <b>2018</b> , 424, 35-48	4.2	34
50	Partitioning of Electrons between the Cytochrome and Alternative Pathways in Intact Roots. <i>Plant Physiology</i> , <b>1995</b> , 108, 1179-1183	6.6	33
49	Fall fertilization of Holm oak affects N and P dynamics, root growth potential, and post-planting phenology and growth. <i>Annals of Forest Science</i> , <b>2011</b> , 68, 647-656	3.1	32
48	Drought responses, phenotypic plasticity and survival of Mediterranean species in two different microclimatic sites. <i>Plant Biology</i> , <b>2017</b> , 19, 386-395	3.7	31
47	Effects of soil compaction and light on growth of Quercus pyrenaica Willd. (Fagaceae) seedlings. <i>Soil and Tillage Research</i> , <b>2010</b> , 110, 108-114	6.5	29
46	Short-term effects of litter from 21 woody species on plant growth and root development. <i>Plant and Soil</i> , <b>2014</b> , 381, 177-191	4.2	28
45	Artificial regeneration with Quercus ilex L. and Quercus suber L. by direct seeding and planting in southern Spain. <i>Annals of Forest Science</i> , <b>2011</b> , 68, 637-646	3.1	27
44	A Multidimensional Functional Trait Approach Reveals the Imprint of Environmental Stress in Mediterranean Woody Communities. <i>Ecosystems</i> , <b>2018</b> , 21, 248-262	3.9	26
43	Climate variability and community stability in Mediterranean shrublands: the role of functional diversity and soil environment. <i>Journal of Ecology</i> , <b>2017</b> , 105, 1335-1346	6	25
42	Projected climate changes are expected to decrease the suitability and production of olive varieties in southern Spain. <i>Science of the Total Environment</i> , <b>2020</b> , 709, 136161	10.2	25
41	Effects of global environmental change on carbon partitioning in vegetative plants of Triticum aestivum and closely related Aegilops species. <i>Global Change Biology</i> , <b>1995</b> , 1, 397-406	11.4	23
40	Spatial heterogeneity of soil biochar content affects soil quality and wheat growth and yield. <i>Science of the Total Environment</i> , <b>2016</b> , 562, 690-700	10.2	23
39	The ability of several high arctic plant species to utilize nitrate nitrogen under field conditions. <i>Oecologia</i> , <b>1993</b> , 96, 239-245	2.9	21
38	Relationships between leaf mass per area and nutrient concentrations in 98 Mediterranean woody species are determined by phylogeny, habitat and leaf habit. <i>Trees - Structure and Function</i> , <b>2018</b> , 32, 497-510	2.6	21
37	Biogeochemical and Ecomorphological Niche Segregation of Mediterranean Woody Species along a Local Gradient. <i>Frontiers in Plant Science</i> , <b>2017</b> , 8, 1242	6.2	19
36	Spatial pattern of soil compaction: Trees' footprint on soil physical properties. <i>Forest Ecology and Management</i> , <b>2012</b> , 283, 128-137	3.9	18

35	Spatio-temporal heterogeneity effects on seedling growth and establishment in four <i>Quercus</i> species. <i>Annals of Forest Science</i> , <b>2011</b> , 68, 1217-1232	3.1	18
34	Tree size and leaf traits determine the fertility island effect in <i>Prosopis pallida</i> dryland forest in Northern Peru. <i>Plant and Soil</i> , <b>2019</b> , 437, 117-135	4.2	16
33	Intraspecific leaf functional trait variability of eight <i>Prosopis pallida</i> tree populations along a climatic gradient of the dry forests of northern Peru. <i>Journal of Arid Environments</i> , <b>2018</b> , 152, 12-20	2.5	16
32	Functional responses of Mediterranean plant communities to soil resource heterogeneity: a mycorrhizal trait-based approach. <i>Journal of Vegetation Science</i> , <b>2016</b> , 27, 1243-1253	3.1	16
31	Post-dispersal seed removal in four Mediterranean oaks: species and microhabitat selection differ depending on large herbivore activity. <i>Ecological Research</i> , <b>2012</b> , 27, 587-594	1.9	16
30	Within-population variability influences early seedling establishment in four Mediterranean oaks. <i>Acta Oecologica</i> , <b>2012</b> , 41, 82-89	1.7	13
29	The importance of functional diversity in the stability of Mediterranean shrubland communities after the impact of extreme climatic events. <i>Journal of Plant Ecology</i> , <b>2016</b> , rtw027	1.7	12
28	The leaf economic spectrum drives leaf litter decomposition in Mediterranean forests. <i>Plant and Soil</i> , <b>2019</b> , 435, 353-366	4.2	11
27	Soil nutrients and microbial biomass in three contrasting Mediterranean forests. <i>Plant and Soil</i> , <b>2014</b> , 380, 57-72	4.2	10
26	Variation in morphological and chemical traits of Mediterranean tree roots: linkage with leaf traits and soil conditions. <i>Plant and Soil</i> , <b>2020</b> , 449, 389-403	4.2	9
25	Diurnal patterns of respiration in the leaves of four forest tree species. <i>Physiologia Plantarum</i> , <b>1992</b> , 84, 361-366	4.6	9
24	Variability in growth and biomass allocation and the phenotypic plasticity of seven <i>Prosopis pallida</i> populations in response to water availability. <i>Trees - Structure and Function</i> , <b>2019</b> , 33, 1409-1422	2.6	7
23	Near-field time-domain physical-optics and FDTD method for safety assessment near a base-station antenna. <i>Microwave and Optical Technology Letters</i> , <b>2003</b> , 39, 393-395	1.2	7
22	Root economics spectrum and construction costs in Mediterranean woody plants: The role of symbiotic associations and the environment. <i>Journal of Ecology</i> , <b>2021</b> , 109, 1873-1885	6	7
21	Changes in root traits explain the variability of biochar effects on fruit production in eight agronomic species. <i>Organic Agriculture</i> , <b>2019</b> , 9, 139-153	1.7	6
20	Coexistence of Deciduous and Evergreen Oak Species in Mediterranean Environments: Costs Associated with the Leaf and Root Traits of Both Habits. <i>Tree Physiology</i> , <b>2017</b> , 195-237		6
19	FDTD analysis of the maximum SAR when operating a mobile phone near a human eye and a wall. <i>Microwave and Optical Technology Letters</i> , <b>2001</b> , 28, 83-85	1.2	5
18	Growth and Growth-Related Traits for a Range of <i>Quercus</i> Species Grown as Seedlings Under Controlled Conditions and for Adult Plants from the Field. <i>Tree Physiology</i> , <b>2017</b> , 393-417		4

17	A combination of time-domain versions of PO and PTD with the FDTD method to evaluate human exposure to an electromagnetic field in an urban environment. <i>Microwave and Optical Technology Letters</i> , <b>2001</b> , 31, 371-374	1.2	4
16	Using a combination of FDTD with a surface integration method for electromagnetic scattering analysis in large regions. <i>Microwave and Optical Technology Letters</i> , <b>1999</b> , 22, 74-78	1.2	4
15	Respuesta plástica a la luz y al agua en cuatro especies mediterráneas del género Quercus (Fagaceae). <i>Revista Chilena De Historia Natural</i> , <b>2008</b> , 81,	1.8	4
14	Applying the economic concept of profitability to leaves. <i>Scientific Reports</i> , <b>2021</b> , 11, 49	4.9	4
13	Linking functional traits with tree growth and forest productivity in Quercus ilex forests along a climatic gradient. <i>Science of the Total Environment</i> , <b>2021</b> , 786, 147468	10.2	4
12	GMT study of the telephone-operator interaction in mobile communications. <i>Microwave and Optical Technology Letters</i> , <b>1997</b> , 15, 123-127	1.2	3
11	On the calculation of safety distances for human exposure to electromagnetic fields from base-station antennas. <i>Microwave and Optical Technology Letters</i> , <b>2002</b> , 34, 364-367	1.2	3
10	The Economics Spectrum Drives Root Trait Strategies in Mediterranean Vegetation. <i>Frontiers in Plant Science</i> , <b>2021</b> , 12, 773118	6.2	3
9	An efficient FDTD time-domain equivalent currents method for safety assessment in human exposure to base-station antennas in presence of obstacles. <i>Microwave and Optical Technology Letters</i> , <b>2006</b> , 48, 1987-1991	1.2	2
8	. <i>IEEE Transactions on Magnetics</i> , <b>1991</b> , 27, 3880-3882	2	2
7	High-frequency approximation for cone-tip backscattering at arbitrary aspects from bodies of revolution. <i>IEEE Transactions on Magnetics</i> , <b>1999</b> , 35, 1514-1517	2	1
6	. <i>IEEE Transactions on Magnetics</i> , <b>1995</b> , 31, 1670-1673	2	1
5	Functional Traits of Olive Varieties and Their Relationship with the Tolerance Level towards Verticillium Wilt. <i>Plants</i> , <b>2021</b> , 10,	4.5	1
4	Leaf nutrients in Prosopis pallida are determined by soil chemical attributes under eutric conditions in a dryland forest. <i>Trees - Structure and Function</i> , <b>2021</b> , 35, 375-386	2.6	0
3	An ecological overview of Prosopis pallida, one of the most adapted dryland species to extreme climate events. <i>Journal of Arid Environments</i> , <b>2021</b> , 193, 104576	2.5	0
2	Unveiling Differences in Root Defense Mechanisms Between Tolerant and Susceptible Olive Cultivars to .. <i>Frontiers in Plant Science</i> , <b>2022</b> , 13, 863055	6.2	0
1	Graphic Displays In Radiation Models For Satellites. <i>International Journal of Modelling and Simulation</i> , <b>1992</b> , 12, 131-133	1.5	