

# Rafael Villar

## List of Publications by Year in Descending Order

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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 | 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         |
| 87 | The Economics Spectrum Drives Root Trait Strategies in Mediterranean Vegetation. <i>Frontiers in Plant Science</i> , <b>2021</b> , 12, 773118   | 6.2  | 3         |
| 86 | 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         |
| 85 | Leaf nutrients in <i>Prosopis pallida</i> 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         |
| 84 | Applying the economic concept of profitability to leaves. <i>Scientific Reports</i> , <b>2021</b> , 11, 49  | 4.9  | 4         |
| 83 | 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         |
| 82 | Linking functional traits with tree growth and forest productivity in <i>Quercus ilex</i> forests along a climatic gradient. <i>Science of the Total Environment</i> , <b>2021</b> , 786, 147468                                | 10.2 | 4         |
| 81 | An ecological overview of <i>Prosopis pallida</i> , 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         |
| 80 | 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         |
| 79 | 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        |
| 78 | 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         |
| 77 | 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        |
| 76 | 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         |
| 75 | 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        |
| 74 | 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        |
| 73 | 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        |
| 72 | 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        |

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|----|---|------|-----|
| 71 | 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  |
| 70 | 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  |
| 69 | 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  |
| 68 | The anatomical and compositional basis of leaf mass per area. <i>Ecology Letters</i> , <b>2017</b> , 20, 412-425  | 10   | 87  |
| 67 | Global climatic drivers of leaf size. <i>Science</i> , <b>2017</b> , 357, 917-921   | 33.3 | 334 |
| 66 | Growth and Growth-Related Traits for a Range of Quercus Species Grown as Seedlings Under Controlled Conditions and for Adult Plants from the Field. <i>Tree Physiology</i> , <b>2017</b> , 393-417  |      | 4   |
| 65 | 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   |
| 64 | 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  |
| 63 | Changes in soil nutrient availability explain biochar impact on wheat root development. <i>Plant and Soil</i> , <b>2016</b> , 399, 333-343  | 4.2  | 100 |
| 62 | 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  |
| 61 | 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  |
| 60 | 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 |
| 59 | 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  |
| 58 | 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  |
| 57 | 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  |
| 56 | 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  |
| 55 | 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 |
| 54 | Soil nutrients and microbial biomass in three contrasting Mediterranean forests. <i>Plant and Soil</i> , <b>2014</b> , 380, 57-72   | 4.2  | 10  |

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|----|---|-----|-----|
| 53 | 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  |
| 52 | 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  |
| 51 | 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  |
| 50 | Functional traits predict drought performance and distribution of Mediterranean woody species. <i>Acta Oecologica</i> , <b>2014</b> , 56, 10-18   | 1.7 | 60  |
| 49 | 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 |
| 48 | 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  |
| 47 | 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  |
| 46 | 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  |
| 45 | Within-population variability influences early seedling establishment in four Mediterranean oaks. <i>Acta Oecologica</i> , <b>2012</b> , 41, 82-89  | 1.7 | 13  |
| 44 | 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  |
| 43 | 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  |
| 42 | 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  |
| 41 | Maternal influences on seed mass effect and initial seedling growth in four <i>Quercus</i> species. <i>Acta Oecologica</i> , <b>2011</b> , 37, 1-9  | 1.7 | 38  |
| 40 | 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  |
| 39 | Artificial regeneration with <i>Quercus ilex</i> L. and <i>Quercus suber</i> L. by direct seeding and planting in southern Spain. <i>Annals of Forest Science</i> , <b>2011</b> , 68, 637-646                   | 3.1 | 27  |
| 38 | 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  |
| 37 | 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  |
| 36 | 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  |

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|----|---|------|------|
| 35 | Effects of soil compaction and light on growth of <i>Quercus pyrenaica</i> Willd. (Fagaceae) seedlings. <i>Soil and Tillage Research</i> , <b>2010</b> , 110, 108-114   | 6.5  | 29   |
| 34 | 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   |
| 33 | 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 |
| 32 | 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   |
| 31 | Respuesta plántica a la luz y al agua en cuatro especies mediterráneas del género <i>Quercus</i> (Fagaceae). <i>Revista Chilena De Historia Natural</i> , <b>2008</b> , 81,   | 1.8  | 4    |
| 30 | 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   |
| 29 | 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    |
| 28 | 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  |
| 27 | 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  |
| 26 | 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   |
| 25 | Assessing the generality of global leaf trait relationships. <i>New Phytologist</i> , <b>2005</b> , 166, 485-96   | 9.8  | 1343 |
| 24 | 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   |
| 23 | The worldwide leaf economics spectrum. <i>Nature</i> , <b>2004</b> , 428, 821-7   | 50.4 | 4915 |
| 22 | 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  |
| 21 | 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    |
| 20 | 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    |
| 19 | Relative growth rate in phylogenetically related deciduous and evergreen woody species. <i>Oecologia</i> , <b>2001</b> , 128, 172-180   | 2.9  | 116  |
| 18 | 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  |

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|----|--|------|-----|
| 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 | 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   |
| 15 | 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   |
| 14 | 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   |
| 13 | Relative growth rate and biomass allocation in 20 Aegilops (Poaceae) species. <i>New Phytologist</i> , <b>1998</b> , 140, 425-437  | 9.8  | 41  |
| 12 | Relative growth rate and biomass allocation in 20 Aegilops (Poaceae) species. <i>New Phytologist</i> , <b>1998</b> , 140, 425-437  | 9.8  | 39  |
| 11 | The Fate of Acquired Carbon in Plants: Chemical Composition and Construction Costs <b>1997</b> , 39-72   |      | 124 |
| 10 | 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   |
| 9  | 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  |
| 8  | 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 |
| 7  | 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  |
| 6  | . <i>IEEE Transactions on Magnetics</i> , <b>1995</b> , 31, 1670-1673  | 2    | 1   |
| 5  | 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 |
| 4  | 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  |
| 3  | Graphic Displays In Radiation Models For Satellites. <i>International Journal of Modelling and Simulation</i> , <b>1992</b> , 12, 131-133  | 1.5  |     |
| 2  | 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   |
| 1  | . <i>IEEE Transactions on Magnetics</i> , <b>1991</b> , 27, 3880-3882  | 2    | 2   |