# Robert Edward Sharwood

List of Publications by Year
in descending order



| | | | |
|---|---|---|---|
| 48 papers | 2,592 citations | 201674 27 h-index | 223800 46 g-index |
| 51 all docs | 51 docs citations | 51 times ranked | 2358 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Elucidating the role of SWEET13 in phloem loading of the C<sub>4</sub> grass <i>Setaria viridis</i>. Plant Journal, 2022, 109, 615-632. | 5.7 | 7 |
| 2 | Mining for allelic gold: finding genetic variation in photosynthetic traits in crops and wild relatives. Journal of Experimental Botany, 2022, 73, 3085-3108. | 4.8 | 16 |
| 3 | Synthetic biology and opportunities within agricultural crops. , 2022, 1, 89-107. | | 13 |
| 4 | Chapter 11 Engineering Photosynthetic CO2 Assimilation to Develop New Crop Varieties to Cope with Future Climates. Advances in Photosynthesis and Respiration, 2021, , 333-354. | 1.0 | 2 |
| 5 | Rubisco Engineering by Plastid Transformation and Protocols for Assessing Expression. Methods in Molecular Biology, 2021, 2317, 195-214. | 0.9 | 5 |
| 6 | Expression of a CO2-permeable aquaporin enhances mesophyll conductance in the C4 species Setaria viridis. ELife, 2021, 10, . | 6.0 | 33 |
| 7 | Increased Rubisco content in maize mitigates chilling stress and speeds recovery. Plant Biotechnology Journal, 2020, 18, 1409-1420. | 8.3 | 28 |
| 8 | Modifying Plant Photosynthesis and Growth via Simultaneous Chloroplast Transformation of Rubisco Large and Small Subunits. Plant Cell, 2020, 32, 2898-2916. | 6.6 | 79 |
| 9 | Impacts of growth temperature, water deficit and heatwaves on carbon assimilation and growth of cotton plants (Gossypium hirsutum L.). Environmental and Experimental Botany, 2020, 179, 104204. | 4.2 | 16 |
| 10 | Mix-and-match Rubisco subunits. Nature Plants, 2020, 6, 1199-1200. | 9.3 | 4 |
| 11 | Photons to food: genetic improvement of cereal crop photosynthesis. Journal of Experimental Botany, 2020, 71, 2226-2238. | 4.8 | 54 |
| 12 | The role of leaf width and conductances to <scp>CO</scp><sub>2</sub> in determining water use efficiency in C<sub>4</sub> grasses. New Phytologist, 2019, 223, 1280-1295. | 7.3 | 34 |
| 13 | Shade compromises the photosynthetic efficiency of NADP-ME less than that of PEP-CK and NAD-ME C4 grasses. Journal of Experimental Botany, 2018, 69, 3053-3068. | 4.8 | 42 |
| 14 | <i>Rht18</i> Semidwarfism in Wheat Is Due to Increased <i>GA 2-oxidaseA9</i> Expression and Reduced GA Content. Plant Physiology, 2018, 177, 168-180. | 4.8 | 128 |
| 15 | Overexpression of Rubisco subunits with RAF1 increases Rubisco content in maize. Nature Plants, 2018, 4, 802-810. | 9.3 | 143 |
| 16 | Carboxysome encapsulation of the CO2-fixing enzyme Rubisco in tobacco chloroplasts. Nature Communications, 2018, 9, 3570. | 12.8 | 196 |
| 17 | Photosynthetic capacity and leaf nitrogen decline along a controlled climate gradient in provenances of two widely distributed <i>Eucalyptus</i> species. Global Change Biology, 2018, 24, 4626-4644. | 9.5 | 47 |
| 18 | Investigating the NAD-ME biochemical pathway within C4 grasses using transcript and amino acid variation in C4 photosynthetic genes. Photosynthesis Research, 2018, 138, 233-248. | 2.9 | 13 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Diffusion of CO<sub>2</sub> across the Mesophyll-Bundle Sheath Cell Interface in a C<sub>4</sub> Plant with Genetically Reduced PEP Carboxylase Activity. Plant Physiology, 2018, 178, 72-81. | 4.8 | 27 |
| 20 | Loss of the Chloroplast Transit Peptide from an Ancestral C<sub>3</sub> Carbonic Anhydrase Is Associated with C<sub>4</sub> Evolution in the Grass Genus <i>Neurachne</i>. Plant Physiology, 2017, 173, 1648-1658. | 4.8 | 12 |
| 21 | A step forward to building an algal pyrenoid in higher plants. New Phytologist, 2017, 214, 496-499. | 7.3 | 4 |
| 22 | Engineering chloroplasts to improve Rubisco catalysis: prospects for translating improvements into food and fiber crops. New Phytologist, 2017, 213, 494-510. | 7.3 | 136 |
| 23 | The Rubisco Chaperone BSD2 May Regulate Chloroplast Coverage in Maize Bundle Sheath Cells. Plant Physiology, 2017, 175, 1624-1633. | 4.8 | 21 |
| 24 | The role of Rubisco kinetics and pyrenoid morphology in shaping the CCM of haptophyte microalgae. Journal of Experimental Botany, 2017, 68, 3959-3969. | 4.8 | 54 |
| 25 | Linking photosynthesis and leaf N allocation under future elevated CO2and climate warming inEucalyptus globulus. Journal of Experimental Botany, 2017, 68, erw484. | 4.8 | 32 |
| 26 | Effects of reduced carbonic anhydrase activity on CO<sub>2</sub>assimilation rates in<i>Setaria viridis</i>: a transgenic analysis. Journal of Experimental Botany, 2017, 68, 299-310. | 4.8 | 52 |
| 27 | Short-term thermal photosynthetic responses of C4 grasses are independent of the biochemical subtype. Journal of Experimental Botany, 2017, 68, 5583-5597. | 4.8 | 28 |
| 28 | Rubisco Extraction and Purification from Diatoms. Bio-protocol, 2017, 7, e2191. | 0.4 | 0 |
| 29 | Variations in nitrogen use efficiency reflect the biochemical subtype while variations in water use efficiency reflect the evolutionary lineage of C<sub>4</sub> grasses at interâ€glacial CO<sub>2</sub>. Plant, Cell and Environment, 2016, 39, 514-526. | 5.7 | 36 |
| 30 | Improved analysis of C<sub>4</sub>and C<sub>3</sub>photosynthesis via refined<i>in vitro</i>assays of their carbon fixation biochemistry. Journal of Experimental Botany, 2016, 67, 3137-3148. | 4.8 | 81 |
| 31 | Prospects for improving CO2 fixation in C3-crops through understanding C4-Rubisco biogenesis and catalytic diversity. Current Opinion in Plant Biology, 2016, 31, 135-142. | 7.1 | 86 |
| 32 | Temperature responses of Rubisco from Paniceae grasses provide opportunities for improving C3 photosynthesis. Nature Plants, 2016, 2, 16186. | 9.3 | 115 |
| 33 | Large variation in the Rubisco kinetics of diatoms reveals diversity among their carbon-concentrating mechanisms. Journal of Experimental Botany, 2016, 67, 3445-3456. | 4.8 | 176 |
| 34 | Correlating <scp>R</scp>ubisco catalytic and sequence diversity within <scp>C</scp><sub>3</sub> plants with changes in atmospheric <scp>CO</scp><sub>2</sub> concentrations. Plant, Cell and Environment, 2014, 37, 1981-1984. | 5.7 | 11 |
| 35 | Photosynthesis of C3, C3â€“C4, and C4 grasses at glacial CO2. Journal of Experimental Botany, 2014, 65, 3669-3681. | 4.8 | 67 |
| 36 | Photosynthetic flexibility in maize exposed to salinity and shade. Journal of Experimental Botany, 2014, 65, 3715-3724. | 4.8 | 68 |

| # | ARTICLE | IF | CITATIONS |
|---|---|---|---|
| 37 | Plastid Transformation for Rubisco Engineering and Protocols for Assessing Expression. Methods in Molecular Biology, 2014, 1132, 245-262. | 0.9 | 14 |
| 38 | RNase J participates in a pentatricopeptide repeat protein-mediated 5â€² end maturation of chloroplast mRNAs. Nucleic Acids Research, 2013, 41, 9141-9151. | 14.5 | 29 |
| 39 | Chloroplast RNase J compensates for inefficient transcription termination by removal of antisense RNA. Rna, 2011, 17, 2165-2176. | 3.5 | 68 |
| 40 | Isoleucine 309 acts as a C <sub>4</sub> catalytic switch that increases ribulose-1,5-bisphosphate carboxylase/oxygenase (rubisco) carboxylation rate in <i>Flaveria</i>. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 14688-14693. | 7.1 | 129 |
| 41 | Overaccumulation of the chloroplast antisense RNA AS5 is correlated with decreased abundance of 5S rRNA in vivo and inefficient 5S rRNA maturation in vitro. Rna, 2011, 17, 230-243. | 3.5 | 34 |
| 42 | Chapter 19 Engineering the Sunflower Rubisco Subunits into Tobacco Chloroplasts: New Considerations. Advances in Photosynthesis and Respiration, 2010, , 285-306. | 1.0 | 2 |
| 43 | Rubisco Oligomers Composed of Linked Small and Large Subunits Assemble in Tobacco Plastids and Have Higher Affinities for CO2 and O2 Â Â Â Â. Plant Physiology, 2009, 149, 1887-1895. | 4.8 | 39 |
| 44 | The RNA-binding proteins CSP41a and CSP41b may regulate transcription and translation of chloroplast-encoded RNAs in Arabidopsis. Plant Molecular Biology, 2009, 69, 541-552. | 3.9 | 63 |
| 45 | The Catalytic Properties of Hybrid Rubisco Comprising Tobacco Small and Sunflower Large Subunits Mirror the Kinetically Equivalent Source Rubiscos and Can Support Tobacco Growth. Plant Physiology, 2008, 146, 83-96. | 4.8 | 109 |
| 46 | Construction of a tobacco master line to improve Rubisco engineering in chloroplasts. Journal of Experimental Botany, 2008, 59, 1909-1921. | 4.8 | 81 |
| 47 | Linked Rubisco Subunits Can Assemble into Functional Oligomers without Impeding Catalytic Performance. Journal of Biological Chemistry, 2007, 282, 3809-3818. | 3.4 | 40 |
| 48 | Using Deubiquitylating Enzymes as Research Tools. Methods in Enzymology, 2005, 398, 540-554. | 1.0 | 114 |