# Arnold J Bloom

List of Publications by Year
in descending order



| 72 | 7,632 | 36 | 67 |
|---|---|---|---|
| papers | citations | h-index | g-index |
| | | 101496 | 98753 |

| 77 | 77 | 77 | 7518 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Plant Responses to Multiple Environmental Factors. BioScience, 1987, 37, 49-57. | 2.2 | 1,109 |
| 2 | Increasing CO2 threatens human nutrition. Nature, 2014, 510, 139-142. | 13.7 | 1,024 |
| 3 | Photorespiratory Metabolism: Genes, Mutants, Energetics, and Redox Signaling. Annual Review of Plant Biology, 2009, 60, 455-484. | 8.6 | 518 |
| 4 | Carbon Dioxide Enrichment Inhibits Nitrate Assimilation in Wheat and <i>Arabidopsis</i>. Science, 2010, 328, 899-903. | 6.0 | 487 |
| 5 | Root Respiration Associated with Ammonium and Nitrate Absorption and Assimilation by Barley. Plant Physiology, 1992, 99, 1294-1301. | 2.3 | 400 |
| 6 | Easy Leaf Area: Automated digital image analysis for rapid and accurate measurement of leaf area. Applications in Plant Sciences, 2014, 2, 1400033. | 0.8 | 344 |
| 7 | Nitrate assimilation in plant shoots depends on photorespiration. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 11506-11510. | 3.3 | 279 |
| 8 | The increasing importance of distinguishing among plant nitrogen sources. Current Opinion in Plant Biology, 2015, 25, 10-16. | 3.5 | 199 |
| 9 | Nitrogen assimilation and growth of wheat under elevated carbon dioxide. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 1730-1735. | 3.3 | 193 |
| 10 | Photorespiration and nitrate assimilation: a major intersection between plant carbon and nitrogen. Photosynthesis Research, 2015, 123, 117-128. | 1.6 | 189 |
| 11 | Nitrate assimilation is inhibited by elevated CO2 in field-grown wheat. Nature Climate Change, 2014, 4, 477-480. | 8.1 | 186 |
| 12 | Climate-smart agriculture global research agenda: scientific basis for action. Agriculture and Food Security, 2014, 3, . | 1.6 | 165 |
| 13 | Rapid decline in nitrate uptake and respiration with age in fine lateral roots of grape: implications for root efficiency and competitive effectiveness. New Phytologist, 2005, 165, 493-502. | 3.5 | 159 |
| 14 | Root Development and Absorption of Ammonium and Nitrate from the Rhizosphere. Journal of Plant Growth Regulation, 2002, 21, 416-431. | 2.8 | 144 |
| 15 | Oxygen and Carbon Dioxide Fluxes from Barley Shoots Depend on Nitrate Assimilation. Plant Physiology, 1989, 91, 352-356. | 2.3 | 141 |
| 16 | CO<sub>2</sub> enrichment inhibits shoot nitrate assimilation in C<sub>3</sub> but not C<sub>4</sub> plants and slows growth under nitrate in C<sub>3</sub> plants. Ecology, 2012, 93, 355-367. | 1.5 | 132 |
| 17 | CO<sub>2</sub> Inhibits Respiration in Leaves of <i>Rumex crispus</i> L.. Plant Physiology, 1992, 98, 757-760. | 2.3 | 127 |
| 18 | Water relations under root chilling in a sensitive and tolerant tomato species. Plant, Cell and Environment, 2004, 27, 971-979. | 2.8 | 112 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Root Excision Decreases Nutrient Absorption and Gas Fluxes. Plant Physiology, 1988, 87, 794-796. | 2.3 | 80 |
| 20 | Root distribution in relation to soil nitrogen availability in field-grown tomatoes. Plant and Soil, 1990, 128, 115-126. | 1.8 | 77 |
| 21 | Measurement of Net Fluxes of Ammonium and Nitrate at the Surface of Barley Roots Using Ion-Selective Microelectrodes. Plant Physiology, 1990, 93, 271-280. | 2.3 | 77 |
| 22 | Materials and methods for carbon dioxide and water exchange analysis<sup>Â§</sup>. Plant, Cell and Environment, 1980, 3, 371-376. | 2.8 | 71 |
| 23 | Differences in Steady-State Net Ammonium and Nitrate Influx by Cold- and Warm-Adapted Barley Varieties. Plant Physiology, 1981, 68, 1064-1067. | 2.3 | 67 |
| 24 | Impacts of elevated atmospheric CO2 on nutrient content of important food crops. Scientific Data, 2015, 2, 150036. | 2.4 | 66 |
| 25 | Effects of Exposure to Ammonium and Transplant Shock upon the Induction of Nitrate Absorption. Plant Physiology, 1990, 94, 85-90. | 2.3 | 65 |
| 26 | The Effects of Inorganic Nitrogen form and CO2 Concentration on Wheat Yield and Nutrient Accumulation and Distribution. Frontiers in Plant Science, 2012, 3, 195. | 1.7 | 65 |
| 27 | Manganese binding to Rubisco could drive a photorespiratory pathway that increases the energy efficiency of photosynthesis. Nature Plants, 2018, 4, 414-422. | 4.7 | 63 |
| 28 | High productivity and photosynthetic flexibility in a CAM plant. Oecologia, 1979, 38, 35-43. | 0.9 | 55 |
| 29 | The Influence of Ammonium and Chloride on Potassium and Nitrate Absorption by Barley Roots Depends on Time of Exposure and Cultivar. Plant Physiology, 1986, 81, 67-69. | 2.3 | 55 |
| 30 | Responses of Arabidopsis and Wheat to Rising CO<sub>2</sub> Depend on Nitrogen Source and Nighttime CO<sub>2</sub> Levels. Plant Physiology, 2015, 168, 156-163. | 2.3 | 55 |
| 31 | Relationship between Mineral Nitrogen Influx and Transpiration in Radish and Tomato. Plant Physiology, 1984, 76, 827-828. | 2.3 | 53 |
| 32 | Kinetics of ammonium and nitrate uptake among wild and cultivated tomatoes. Oecologia, 1988, 76, 336-340. | 0.9 | 53 |
| 33 | Wild and cultivated barleys show similar affinities for mineral nitrogen. Oecologia, 1985, 65, 555-557. | 0.9 | 51 |
| 34 | Inorganic nitrogen form: a major player in wheat and Arabidopsis responses to elevated CO2. Journal of Experimental Botany, 2016, 68, erw465. | 2.4 | 48 |
| 35 | A major QTL introgressed from wild Lycopersicon hirsutum confers chilling tolerance to cultivated tomato (Lycopersicon esculentum). Theoretical and Applied Genetics, 2005, 111, 898-905. | 1.8 | 45 |
| 36 | Nitrogen as a Limiting Factor: Crop Acquisition of Ammonium and Nitrate. , 1997, , 145-172. | | 41 |

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|---|---|---|---|
| 37 | Varietal differences in salt-induced respiration in barley. Plant Science Letters, 1984, 35, 1-3. | 1.9 | 39 |
| 38 | Influence of Inorganic Nitrogen and pH on the Elongation of Maize Seminal Roots. Annals of Botany, 2006, 97, 867-873. | 1.4 | 39 |
| 39 | Interactions between Inorganic Nitrogen Nutrition and Root Development. Zeitschrift Fur Pflanzenernahrung Und Bodenkunde = Journal of Plant Nutrition and Plant Science, 1997, 160, 253-259. | 0.4 | 33 |
| 40 | Photorespiration: The Futile Cycle?. Plants, 2021, 10, 908. | 1.6 | 33 |
| 41 | Rising atmospheric CO<sub>2</sub> concentration inhibits nitrate assimilation in shoots but enhances it in roots of C<sub>3</sub> plants. Physiologia Plantarum, 2020, 168, 963-972. | 2.6 | 32 |
| 42 | High-resolution mapping of a major effect QTL from wild tomato Solanum habrochaites that influences water relations under root chilling. Theoretical and Applied Genetics, 2015, 128, 1713-1724. | 1.8 | 30 |
| 43 | Ammonium and nitrate as nitrogen sources in two Eriophorum species. Oecologia, 1991, 88, 570-573. | 0.9 | 29 |
| 44 | Deposition of ammonium and nitrate in the roots of maize seedlings supplied with different nitrogen salts. Journal of Experimental Botany, 2012, 63, 1997-2006. | 2.4 | 28 |
| 45 | Relative association of Rubisco with manganese and magnesium as a regulatory mechanism in plants. Physiologia Plantarum, 2017, 161, 545-559. | 2.6 | 27 |
| 46 | Salt Requirement for Crassulacean Acid Metabolism in the Annual Succulent, <i>Mesembryanthemum crystallinum</i>. Plant Physiology, 1979, 63, 749-753. | 2.3 | 26 |
| 47 | Continuous and Steady-State Nutrient Absorption by Intact Plants. , 1989, , 147-163. | | 26 |
| 48 | As carbon dioxide rises, food quality will decline without careful nitrogen management. California Agriculture, 2009, 63, 67-72. | 0.5 | 25 |
| 49 | Rising carbon dioxide concentrations and the future of crop production. Journal of the Science of Food and Agriculture, 2006, 86, 1289-1291. | 1.7 | 22 |
| 50 | Absorption and Assimilation of Foliarly Applied Urea in Tomato. Journal of the American Society for Horticultural Science, 1996, 121, 1117-1121. | 0.5 | 21 |
| 51 | Influence of Root NH4+ and NO3- Content on the Temperature Response of Net NH4+ and NO3- Uptake in Chilling Sensitive and Chilling ResistantLycopersiconTaxa. Journal of Experimental Botany, 1991, 42, 331-338. | 2.4 | 20 |
| 52 | Metal regulation of metabolism. Current Opinion in Chemical Biology, 2019, 49, 33-38. | 2.8 | 20 |
| 53 | Estimating nitrogen uptake of individual roots in container- and field-grown plants using a 15N-depletion approach. Functional Plant Biology, 2009, 36, 621. | 1.1 | 19 |
| 54 | Nickel Supplements Improve Growth when Foliar Urea is the Sole Nitrogen Source for Tomato. Journal of the American Society for Horticultural Science, 1998, 123, 556-559. | 0.5 | 18 |

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|---|---|---|---|
| 55 | Plant economics. Trends in Ecology and Evolution, 1986, 1, 98-100. | 4.2 | 16 |
| 56 | Nitrate reductase 15N discrimination in Arabidopsis thaliana, Zea mays, Aspergillus niger, Pichea angusta, and Escherichia coli. Frontiers in Plant Science, 2014, 5, 317. | 1.7 | 16 |
| 57 | Does Low Stomatal Conductance or Photosynthetic Capacity Enhance Growth at Elevated CO2 in Arabidopsis?. Plant Physiology, 2015, 167, 793-799. | 2.3 | 16 |
| 58 | Chillingâ€induced water stress: Variation in shoot turgor maintenance among wild tomato species from diverse habitats. American Journal of Botany, 2013, 100, 1991-1999. | 0.8 | 13 |
| 59 | Diurnal Ion Fluctuations in the Mesophyll Tissue of the Crassulacean Acid Metabolism Plant Mesembryanthemum crystallinum. Plant Physiology, 1979, 64, 919-923. | 2.3 | 12 |
| 60 | The effects of rising atmospheric carbon dioxide on shoot-root nitrogen and water signaling. Frontiers in Plant Science, 2013, 4, 304. | 1.7 | 10 |
| 61 | Quantitative Trait Loci for Waterâ€Stress Tolerance Traits Localize on Chromosome 9 of Wild Tomato. Crop Science, 2016, 56, 1514-1525. | 0.8 | 10 |
| 62 | Wheat grain yield decreased over the past 35 years, but protein content did not change. Journal of Experimental Botany, 2021, 72, 6811-6821. | 2.4 | 10 |
| 63 | An Introgression from Wild Tomato (<i>Solanum habrochaites</i>) Affects Tomato Photosynthesis and Water Relations. Crop Science, 2014, 54, 779-784. | 0.8 | 7 |
| 64 | Root Strategies for Nitrate Assimilation. Soil Biology, 2014, , 251-267. | 0.6 | 7 |
| 65 | Complex Relationships among Water Use Efficiencyâ€Related Traits, Yield, and Maturity in Tomato Lines Subjected to Deficit Irrigation in the Field. Crop Science, 2016, 56, 1698-1710. | 0.8 | 6 |
| 66 | Assessment of methylammonium as an analog for ammonium in plant uptake from soil. Plant and Soil, 1994, 164, 195-202. | 1.8 | 4 |
| 67 | Investigations of ion absorption during NH4+ exposure I. Relationship between H+ efflux and NO3â^’ absorption. , 0, . | | 4 |
| 68 | Ammonium Does Not Induce Ammonium Absorption in Tomatoes. Journal of the American Society for Horticultural Science, 1998, 123, 787-790. | 0.5 | 4 |
| 69 | Coordination Between Shoots and Roots. , 2005, , 241-256. | | 3 |
| 70 | Root Structure and Function. Journal of Plant Growth Regulation, 2002, 21, 245-246. | 2.8 | 0 |
| 71 | Crossroads of Animal, Plant, and Microbial Physiological Ecology. BioScience, 2003, 53, 256. | 2.2 | 0 |
| 72 | Easy as piadcs: A lowâ€cost, ultraâ€highâ€resolution data acquisition system using a Raspberry Pi. Applications in Plant Sciences, 2022, 10, . | 0.8 | 0 |