

Šantrůček – publications in impacted journals 1989-2015

Solárová J., Pospíšilová J., Čatský J., Šantrůček J.: Photosynthesis and growth of tobacco plantlets in dependence on carbon supply. *Photosynthetica* 23 :629-637, 1989.

Šantrůček J., Slavík B.: A method for separating cuticular and stomatal components of gas exchange by amphistomatous leaves. I. Model solution. *J. Exp. Bot.* 41: 795-802, 1990.

Šantrůček J., Slavík B.: A method for separating cuticular and stomatal components of gas exchange by amphistomatous leaves. II. Experimental solution. *J. Exp. Bot.* 41: 803-813, 1990.

Šantrůček J.: Transpiration efficiency and apparent cuticular transpiration in some C₃ and C₄ plants. *Biologia Plantarum* 33: 192-199, 1991.

Šantrůček J., Šiffel P., Polišenská M., Pešková H.: Species specific response of photosynthetic apparatus to closed in vitro conditions. *Photosynthetica* 25: 203-209, 1991.

Šantrůček J.: Patterns of statistical distribution of stomatal resistance over the leaf surface of tobacco plants cultivated *in vitro*. *Photosynthetica* 25: 527-536, 1991.

Šantrůček J., Šiffel P., Lang M., Lichtenthaler H.K., Schindler C., Synková H., Konečná V., Szabo K.: Photosynthetic activity and chlorophyll fluorescence parameters in aurea and green forms of *Nicotiana tabacum*. - *Photosynthetica* 27: 529-543, 1992.

Šiffel P., Šantrůček J., Lang M., Braunová Z., Šimková M., Synková H., Lichtenthaler H.K.: Age dependence of photosynthetic activity, chlorophyll fluorescence and chloroplasts ultrastructure in aurea and green forms of *Nicotiana tabacum* Su/su mutant. - *Photosynthetica* 29: 81-94, 1993.

Šantrůček J., Šantrůčková H., Květoň J., Šimková M., Roháček K.: The effect of elevated CO₂ concentration on photosynthetic CO₂ fixation, respiration and carbon economy of wheat plants - *Rostlinná výroba* (in English), 40: 689-696, 1994.

Pospíšilová J., Šantrůček J.: Stomatal patchiness (Review). - *Biologia Plantarum* 36: 481-510, 1994.

Sage R.F., Šantrůček J., Grise D.J.: Temperature effects on the photosynthetic response of C₃ plants to long-term CO₂ enrichment. - *Vegetatio* 121: 67-77, 1995.

Šantrůček J., Sage R.F.: Acclimation of stomatal conductance to a CO₂-enriched atmosphere and elevated temperature in *Chenopodium album*. - *Aust. J. Plant Physiol.*, 23: 467-478, 1996.

Elhotová D., Tříska J., Šantrůčková H., Květoň J., Šantrůček J., Šimková M.: Rhizosphere microflora of winter wheat plants cultivated under elevated CO₂. *Plant and Soil* 197: 251-259, 1997.

Šantrůčková H., Šantrůček J., Květoň J., Šimková M., Elhottová D., Roháček K.: Carbon balance of winter wheat – root microbiota system under elevated CO₂. *Photosynthetica* 36: 341-354, 1999.

Šantrůček J., Schreiber L., Šimáňová E., Šimková M.: Permeability of intact plant cuticles measured by chlorophyll fluorescence imaging. *Biologické listy* 65: 295-298, 2000.

Šantrůček J., Šantrůčková H.: Využití frakcionace stabilních izotopů ¹³C a ¹⁸O ve fyziologii rostlin, půdní biologii a ekologii (Applications of ¹³C a ¹⁸O stable isotopes fractionation in plant physiology, soil biology and ecology). *Biologické listy* 3-4: 290-295, 2000 (in Czech).

Schreiber L., Skrabs M., Hartmann K.D., Diamantopoulos P., Šimáňová E., Šantrůček J.: Effect of humidity on cuticular transpiration of isolated cuticular membranes and leaf discs. *Planta* 214: 274-282, 2001.

Šantrůček J., Hronková M., Květoň J., Sage R.F. Photosynthesis inhibition during gas exchange oscillations in ABA-treated *Helianthus annuus*: relative role of stomatal patchiness and leaf carboxylation capacity. *Photosynthetica* 41: 241-252, 2003.

Šantrůček J., Šimáňová E., Karbulková J., Šimková M., Schreiber L.: A new technique for measurement water permeability of stomatous cuticular membranes isolated from *Hedera helix* leaves. *Journal of Experimental Botany* 55: 1411-1422, 2004.

Šiffel P., Šantrůček J.: Diurnal course of photosynthetic activity of winter-adapted Scots pine at subzero temperatures. *Photosynthetica* 43: 395-402, 2005.

Schreiber L., Elshatshat S., Koch K., Lin J., Santrucek J.: AgCl precipitates in isolated cuticular membranes reduce rates of cuticular transpiration. *Planta* 223: 283-290, 2006.

Šantrůček J., Květoň J., Šetlík J., Bulíčková L.: Spatial variation of deuterium enrichment in bulk water of *Eucalyptus pauciflora* leaves. *Plant Physiology* 143: 88-97, 2007.

Kubásek J., Šetlík J., Dwyer S., Šantrůček J.: Light and growth temperature alter carbon isotope discrimination and estimated bundle sheath leakiness in C₄ grasses and dicots. *Photosynthesis Research* 91:47-58, 2007.

Šantrůčková H., Šantrůček J., Šetlík J., Svoboda M., Kopáček J.: Carbon isotopes in tree rings of Norway spruce exposed to atmospheric pollution. *Environmental Science & Technology* 41: 5778-5782, 2007.

Karbulková J., Schreiber L., Macek P., Šantrůček J.: Differences between water permeability of astomatous and stomatous cuticular membranes: effects of air humidity in two species of contrasting drought-resistance strategy. *Journal of Experimental Botany* 59: 3987-3995, 2008.

Píšová L., Svoboda M., Šantrůček J., Šantrůčková H.: Can ¹³C stable isotope record of Norway spruce tree rings display the effect of environmental conditions? *Journal of Forest Science* 54: 255-261, 2008.

Vrábl D., Vašková M., Hronková M., Flexas J., Šantrůček J.: Mesophyll conductance to CO₂ transport estimated by two independent methods: effect of variable CO₂ concentration and abscisic acid. *Journal of Experimental Botany* 60: 2315-2323, 2009.

Sirova D., Borovec J., Santruckova H., Santrucek J., Vrba J., Adamec L.: *Utricularia carnivory revisited: plants supply photosynthetic carbon to traps*. *Journal of Experimental Botany* 61: 99-103, 2010; doi: 10.1093/jxb/erp286, 2010.

Pavlovič A., Singerová L., Demko V., Šantrůček J., Hudák J.: Root nutrient uptake enhances photosynthetic assimilation in prey-deprived carnivorous pitcher plant *Nepenthes talangensis*. *Photosynthetica* 48: 227-233, 2010.

Schäufele R., Santrucek J., Schnyder H.: Dynamic changes of canopy-scale mesophyll conductance to CO₂ diffusion of sunflower as affected by CO₂ concentration and abscisic acid. *Plant, Cell and Environment*, 34: 127-136, doi: 10.1111/j.1365-3040.2010.02230.x, 2011.

Pavlovič A., Slovákova L., Šantrůček J.: Nutritional benefit from leaf litter utilization in the pitcher plant *Nepenthes ampularia*. *Plant, Cell and Environment* 34: 1865-1873, 2011.

Macková J., Vašková M., Macek P., Hronková M., Schreiber L., Šantrůček J.: Plant response to drought stress simulated by ABA application: changes in chemical composition of cuticular waxes. *Environmental and Experimental Botany* 86: 70-75, 2013.
doi:10.1016/j.envexpbot.2010.06.005, 2013.
IF 3.53

Kubásek J., Urban O., Šantrůček J.: C4 plants use fluctuating light less efficiently than do C3 plants: a study of growth, photosynthesis and carbon isotope discrimination. *Physiologia Plantarum* 149: 528-539, 2013.
doi:10.1111/ppl.12057
IF 3.656

Voelker S.L., Brooks J.R., Meinzer F.C., Roden J., Pazdur A., Pawelczyk S., Hartsough P., Snyder K., Plavcová L., Šantrůček J.: Isolating relative humidity: dual isotopes $\delta^{18}\text{O}$ and δD as deuterium deviations from the global meteoric water line. *Ecological Applications*, 24: 960-975, 2014.
doi: <http://dx.doi.org/10.1890/13-0988.1>
IF 3.815

Sirová D., Šantrůček J., Adamec L., Bárta J., Borovec J., Pech J., Qwens S.M., Šantrůčková H., Schäufele R., Štorchová H., Vrba J.: Dinitrogen fixation associated with shoots of aquatic carnivorous plants: is it ecologically important? *Annals of Botany*, 114: 125-133, 2014.
doi:10.1093/aob/mcu067, 2014.
IF 3.29

Šantrůček J., Vráblová M., Šimková M., Hronková M., Drtinová M., Květoň J., Vrábl D., Kubásek J., Macková J., Wiesnerová D., Neuwirthová J., Schreiber L.: Stomatal and pavement cell density linked to leaf internal CO₂ concentration. *Annals of Botany*, , 2014.
doi:10.1093/aob/mcu095, 2014.
IF 3.29

Tazoe Y., Santrucek J.: Superimposed behavior of g_m under ABA-induced stomata closing and low CO₂. *Plant, Cell and Environment*, 38: 385-387, 2015.
IF 5.9

Hronková M., Wiesnerová D., Šimková M., Skůpa P., Dewitte, W., Vráblová M., Zažímalová E., Šantrůček J.: Light induced STOMAGEN-mediated stomatal development in *Arabidopsis* leaves. *Journal of Experimental Botany*, Advance Access published May, 2015; doi10.1093/jxb/erv233.
IF 5.526

Rhee J., Hisem D., Šantrůček J.: AtPIP2;5 aquaporin affects mesophyll conductance to CO₂ and stomatal density in *Nicotiana tabacum* leaves. *Physiologia Plantarum*, submitted November 2014.

Hisem D., Vrábl D., Šantrůček J.: Relationship between stomatal and mesophyll conductance for CO₂ in ABA-treated *Helianthus annuus*. *Plant Science*, submitted November 2014.

Book chapters

Pospíšilová J., Šantrůček J.: Stomatal Patchiness: Effects on Photosynthesis. In M. Pessaraki (ed.) *Handbook of Photosynthesis*. Pp. 427-441, Marcel Dekker, New York 1996.

Šantrůček J.: Vodní režim rostlin (Plants water relations). In S. Procházka I., Macháčková J., Krekule J., Šebánek J. (eds.) *Fyziologie rostlin (Plant Physiology)*. Pp. 52-88, Academia, Praha 1998 (textbook, in Czech).

Šantrůček J.: Nové možnosti šlechtění na účinnost využití vody (New plant breeding ways to higher water use efficiency). In: Bláha L., Hnilička F., Martinková (ed.) *Současné možnosti fyziologie a zemědělského výzkumu přispět k produkci rostlin (Current progress in plant production mediated by physiology and agronomy research.)*. Pp. 139-154, Výzkumný ústav rostlinné výroby, v.v.i., Praha, 2010 (in Czech).

Šantrůček J.: Voda v rostlinách. In: Kleczek J. (ed.) *Voda ve vesmíru, na zemi, v životě a v kultuře (Water in Space, on Earth, in Life and in Culture)*. Pp. 402-413. Radioservis, a.s. Praha 2011 (in Czech).

Papers in Czech Scientific Journals (not Indexed in Web of Science)

Šantrůček J.: Atmosféra-List-Fotosyntéza-Člověk. Jak měníme fotosyntézu listu a jak fotosyntéza listu mění nás I. (Atmosphere, Leaf, Photosynthesis and a Man. How a Man Changes Photosynthesis and How Photosynthesis can Change a Man? I). *Živa* 1/2010: -7, 2010.

Šantrůček J.: Atmosféra-List-Fotosyntéza-Člověk. Jak měníme fotosyntézu listu a jak fotosyntéza listu mění nás II. (Atmosphere, Leaf, Photosynthesis and a Man. How a Man Changes Photosynthesis and How Photosynthesis can Change a Man? II). *Živa* 2/2010: -52, 2010.