

## Scientific output

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### *International publications with peer review*

Pokorska O., Dewulf J., Amelynck C., Schoon N., Joó E., Šimpraga M., Bloemen J., Steppe K., Van Langenhove H. (2012) Emissions of biogenic volatile organic compounds from *Fraxinus excelsior* and *Quercus robur* under ambient conditions in Flanders (Belgium). *International Journal of Environmental Analytical Chemistry* **92** (15): 1729-1741

Bloemen J., McGuire M.A., Aubrey D.P., Teskey R.O. and Steppe K. (2013) Transport of root-respired CO<sub>2</sub> via the transpiration stream affects aboveground carbon assimilation and CO<sub>2</sub> efflux in trees. *New Phytologist* **197**: 555-565.

Erda F., Bloemen J., Steppe K. (2013) Quantifying the impact of daily and seasonal variation in sap pH on xylem dissolved inorganic carbon estimates in plum trees. *Plant Biology*, **16**:43-8.

Bloemen J., McGuire M.A., Aubrey D.P., Teskey R.O. and Steppe K. (2013) Assimilation of xylem-transported CO<sub>2</sub> is dependent on transpiration rate, but small relative to atmospheric fixation. *Journal of Experimental Botany* **64**: 2129-2138

Šimpraga M., Verbeeck H\*, Bloemen J.\*, Vanhaecke L., Demarcke M., Joó E., Pokorska O., Amelynck C., Schoon N., Dewulf J., Van Langenhove H., Heinesch B., Aubinet M. and Steppe K. (2013) Vertical canopy gradient in photosynthesis and monoterpene emissions: An insight into the chemistry and physiology behind. *Atmospheric Environment* **80**, 85-95

\*equal contributions

Bloemen J., McGuire M.A., Aubrey D.P., Teskey R.O. and Steppe K. (2013) Internal recycling of respired CO<sub>2</sub> may be important for plant functioning under changing climate regimes. *Plant Signaling and behavior* **8**(12): e27530

Bloemen J., Agneessens L., Lieven Van Meulebroek, Aubrey D.P. , McGuire M.A., Teskey R.O. and Steppe K. (2014) Stem girdling affects the quantity of CO<sub>2</sub> transported in the xylem as well as CO<sub>2</sub> efflux from the soil. *New Phytologist* **201**, 897-907

Bloemen J., Bauweraerts I., De Vos F., Vanhove C., Boeckx P., Vandenberghe S. and Steppe K. (2014) Fate of xylem-transport <sup>11</sup>C and <sup>13</sup>C-labeled CO<sub>2</sub> in leaves of poplar. *Physiologia plantarum* **153**:55-564

Bloemen J., Vergeynst L., Overlaet-Michiels L., Steppe K. (2014) How important is woody tissue photosynthesis in poplar during drought stress. *Trees* DOI 10.1007/s00468-014-1132-9 (in press).

Bloemen J., Teskey R.O., McGuire M.A, Aubrey D.P., Steppe K. (2015) Root xylem CO<sub>2</sub> flux: an important but unaccounted-for component of root respiration. *Trees* 10.1007/s00468-015-1185-4 (in press).

Vandegheuchte M.\*, Bloemen J.\*, Vergeynst L.L., Steppe K. (2015) Woody tissue photosynthesis in trees: salve on the wounds of drought? *New Phytologist* **208**: 998-1002

\*equal contributions

#### *proceedings*

Bloemen J., Overlaet-Michiels L. and Steppe K. (2013) Understanding Plant Responses to Drought: How Important Is Woody Tissue Photosynthesis? *Acta Horticulturae* **991**: 149-157

#### *Scientific Reports*

Steppe K., Šimpraga M., Verbeeck H., Bloemen J., Joó E., Pokorska O., Dewulf J., Van Langenhove H., Demarcke M., Amelynck C., Schoon N., Müller J-F., Laffineur Q., Aubinet M., Heinesch B. and Lemeur R. (2009) IMPECVOC: Impact of Phenology and Environmental Conditions on BVOC Emissions from Forest Ecosystems. Final Report Phase 1. Brussels: Belgian Science Policy, 49 p. (Research Programme Science for a Sustainable Development)

Dewulf J., Joó É., Steppe K., Šimpraga M., Verbeeck H., Bloemen J., Pokorska O., Demarcke M., Amelynck C., Schoon N., Müller J-F., Laffineur Q., Aubinet M., Heinesch B., Van Langenhove H. (2009) IMPECVOC: Impact of Phenology and Environmental Conditions on BVOC Emissions from Forest Ecosystems. Annual report phase II. Brussels: Belgian Science Policy, 41 p. (Research Programme Science for a Sustainable Development)

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