

## Publication list of T. Koike in English

### Original paper:

#### >2018

- (1) Shi, C., Nakamura, M. and Koike, T. (submitted) Leaf defense characteristics of deciduous tree species seedlings in different soils exposed to a free-air O<sub>3</sub> enrichment system.
- (2) Wang, X., Agathokleous, E., Qu, L., Fujita, S., Watanabe, M., Tamai, Y., Mao, Q., Koyama, A., Koike, T. (in press). Effects of simulated nitrogen deposition on ectomycorrhizae community structure in hybrid larch and its parents grown in volcanic ash soil: the role of phosphorous. *Science of the Total Environment*.
- (3) Agathokleous, E., Paoletti, E., Manning, W.J., Kitao, M., Saitanis, C.J., Koike, T. (2017). High doses of ethylenediurea (EDU) as soil drenches did not increase leaf N content or cause phytotoxicity in willow grown in fertile soil. [In Revision]
- (4) Qu, LY, Kitaoka, S and Koike, T (2018) Factors controlling soil microbial respiration during the growing season in a mature larch plantation in Northern Japan. *Journal of Soils and Sediments*, DOI: 10.1007/s11368-017-1799-9.
- (5) Sugai, T., Kam, D-G., Agathokleous, E., Watanabe, M., Kita, K. and Koike, T. (2018) Growth and photosynthetic response of two larches exposed to O<sub>3</sub> mixing ratios ranging from pre-industrial to near future. *Photosynthetica* 56: DOI: 10.1007/s11099-017-0747-7.

#### >2017

- (6) Fujita, S., Wang, XN., Kita, K. and Koike, T. (2017) Effects of nitrogen loading under low and high phosphorus conditions on above and belowground growth of hybrid larch F<sub>1</sub> seedlings. *iForests- Biogeosciences and Forestry*
- (7) Choi, D-S., Watanabe, Y., Guy, R.D, Sugai, T., Toda, H., and Koike, T. (2017) Photosynthetic characteristics and nitrogen allocation in the black locust (*Robinia pseudoacacia* L.) grown in a FACE. *Acta Physiologiae Plantarum*, 39, 71. <http://link.springer.com/article/10.1007/s11738-017-2366-0>
- (8) Agathokleous, E., Sakikawa, T., Abu ElEla, S.A., Mochizuki, T., Nakamura, M., Watanabe, M., Kawamura, K., and Koike, T. (2017) Ozone alters the feeding behavior of the leaf beetle *Agelastica coerulea* (Coleoptera: Chrysomelidae) into leaves of Japanese white birch (*Betula platyphylla* var. *japonica*). *Environmental Science and Pollution Research*, DOI 10.1007/s11356-017-9369-7.
- (9) Shi, C., Watanabe, T. and Koike, T (2017) Leaf stoichiometry of deciduous tree species in different soils exposed to free-air O<sub>3</sub> enrichment over two growing seasons. *Environmental and Experimental Botany*. 138:148–163
- (10) Agathokleous, E., Vanderstock, A., Kita, K., and Koike, T. (2017) Stem and crown growth of Japanese larch and its hybrid F<sub>1</sub> grown in two soils and exposed to two free-air O<sub>3</sub> regimes. *Environmental Science and Pollution Research*. 24(7) 6634–6647; DOI 10.1007/s11356-017-8401-2
- (11) Mochizuki T, Watanabe M, Koike T, and Tani A (2017) Monoterpene emissions from needles of hybrid larch F<sub>1</sub> (*Larix gmelinii* var. *japonica* × *Larix kaempferi*) grown under elevated carbon dioxide and ozone. *Atmospheric Environment* 148: 197-202. <http://dx.doi.org/10.1016/j.atmosenv.2016.10.041>.

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- (1) Kitao, M., Y. Yasuda, Y. Kominami, K. Yamanoi, M. Komatsu, T. Miyama, Y. Mizoguchi, S. Kitaoka, K. Yazaki, H. Tobita, K. Yoshimura, T. Koike, and T. Izuta (2016) Increased phytotoxic O<sub>3</sub> dose accelerates autumn senescence in an O<sub>3</sub>-sensitive beech forest even under the present-level O<sub>3</sub>. Scientific Reports, Article number: 32549 (2016) doi:10.1038/srep32549
- (2) Agathokleous, E., Paoletti, E., Saitanis, C.J., Manning, W.J., Sugai, T. and Koike, T. (2016). Impacts of ethylene diurea (EDU) soil drench and foliar spray in *Salix sachalinensis* protection against O<sub>3</sub>-induced injury. Science of the Total Environment 573:1053-1062.
- (3) Shi, C., Eguchi, N., Meng, F, Watanabe, T., Satoh, F. and Koike, T. (2016) Retranslocation of foliar nutrients of deciduous tree seedlings in different soil condition under free-air O<sub>3</sub> fumigation, iForest - Biogeosciences and Forestry (doi: 10.3832/ifor1889-009) on line journal
- (4) Agathokleous, E., Paoletti, E., Saitanis, C.J., Manning, W.J., Shi, C. and Koike, T. (2016). High doses of ethylene diurea (EDU) are not toxic to willow and act as nitrogen fertilizer. Science of the Total Environment 566-567: 841-850. DOI: 10.1016/j.scitotenv.2016.05.122
- (5) Agathokleous, E., Watanabe, M., Eguchi, N., Nakaji, T., Satoh, F., and Koike, T. (2016). Root production of *Fagus crenata* Blume saplings grown in two soils and exposed to elevated CO<sub>2</sub> concentration: an 11-year free-air-CO<sub>2</sub> enrichment (FACE) experiment in northern Japan. Water, Air, & Soil Pollution, 227: 187.DOI: 10.1007/s11270-016-2884-1
- (6) Sakikawa, T., Shi, C., Nakamura, M., Watanabe, M., Oikawa, M., Satoh, F. and Koike, T. (2016) Leaf phenology and insect grazing of Japanese white birch saplings grown under free-air ozone exposure. Journal of Agricultural Meteorology 72: 80-84.
- (7) Shi, C., Kitao, M., Agathokleous, E., Watanabe, M., Tobita, H., Yazaki, K., Kitaoka, S. and Koike, T. (2016) Foliar chemical composition of two oak species grown in a free-air enrichment system with elevated O<sub>3</sub> and CO<sub>2</sub>. Journal of Agricultural Meteorology 72: 50-58
- (8) Wang, XN, Agathokleous, E., Qu, L.Y., Watanabe, M., and Koike, T. (2016) Effects of CO<sub>2</sub> and/or O<sub>3</sub> on the interaction between root of woody plants and ectomycorrhizae. Journal of Agriculture Meteorology 72: 95-105.
- (9) Kitaoka, S. · Matsuki, S., · Kitao, M., · Tobita, H., · Utsugi, H., · Maruyama, Y. and Koike, T. (2016) The photosynthetic response of four seral deciduous broad-leaved tree seedlings grown under elevated CO<sub>2</sub> concentrations. Journal of Agriculture Meteorology 72: 43-49, DOI: 10.2480/agrmet.D-14-00016
- (10) Kitao M, Hida T, Eguchi N, Tobita H, Utsugi H, Uemura A, Kitaoka S and Koike T (2016) Light compensation point in shade-grown seedlings of deciduous broadleaf tree species with different successional traits raised under elevated CO<sub>2</sub> . Plant Biology DOI: 10.1111/plb.12400.
- (11) Agathokleous, E., Saitanis, C.J., Wang X.N., Watanabe M. and Koike, T. (2016) A review study on past 40 years of research on effects of tropospheric O<sub>3</sub> on belowground structure, functioning and processes of trees: a linkage with potential ecological implications. Water, Air, & Soil Pollution 227:33-DOI: 10.1007/s11270-015-2715-9
- (12) Wang, XN., S. Fujita, T. Nakaji, M. Watanabe, F Satoh and T. Koike (2016)

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- (12) Agathokleous E, Watanabe M, Nakaji T, Wang XN, Satoh F, and Koike T. (2016) Impact of elevated CO<sub>2</sub> on root traits of a sapling community of three birches and an oak: A free-air-CO<sub>2</sub> enrichment (FACE) in northern Japan. *Trees* 30: 353-362, DOI: 10.1007/s00468-015-1272-6
- (13) Watanabe M, Kitaoka S, Eguchi N, Watanabe Y, Satomura T, Takagi K, Satoh F and Koike T (2016) Photosynthetic traits of Siebold's beech seedlings in changing light conditions by removal of shading trees under elevated CO<sub>2</sub>. *Plant Biology*, doi:10.1111/plb.12382

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- (14) Agathokleous, E., Koike, T., Saitanis, C.J., Watanabe, M., Satoh, F. and Hoshika, Y. (2015) Ethylenediurea (EDU) as a protectant of plants against O<sub>3</sub>. *Eurasian J. Forest Research* 18:37-50.
- (15) Agathokleous, E., Saitanis, C.J., Satoh, F. and Koike, T. (2015) Wild plant species as subjects in O<sub>3</sub> research. *Eurasian J. Forest Research* 18: 1-36.
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- (17) Kam D-G, Shi, C., Watanabe, M., Kita, K., Satoh, F. and Koike, T. (2015) Growth of Japanese and hybrid larch seedlings grown under free-air O<sub>3</sub> fumigation—an initial assessment of the effects of adequate and excessive nitrogen. *Journal of Agricultural Meteorology* 71: 239-244
- (18) Kayama, M., Qu, L.Y. and Koike T. (2015) Elements and ectomycorrhizal symbiosis affecting the growth of Japanese larch seedlings regenerated on slopes of an active volcano in northern Japan. *Trees* 29: 1567-1579.
- (19) Hoshika, Y., Watanabe, M., Inada, N. and Koike, T. (2015) The effect of ozone-induced stomatal closure on ozone uptake and its changes due to leaf age in sun and shade leaves of Siebold's beech. *Journal of Agricultural Meteorology* 71: 218-226.
- (20) Watanabe, M., Hoshika, Y., Inada, N. and Koike, T. (2015) Difference in photosynthetic responses to free air ozone fumigation between upper and lower canopy leaves of Japanese oak (*Quercus mongolica* var. *crispula*) saplings. *Journal of Agricultural Meteorology* 71: 227-231.
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DOI:10.1016/j.ufug.2015.04.006 ·

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- (24) Kayama, M. and Koike, T. (2015) Differences in growth characteristics and dynamics of elements in seedlings of two birch species grown in serpentine soil in northern Japan. *Trees-structure and function* 29:171-184. DOI: 10.1007/s00468-014-1102-2
- (25) Agathokleous, E., Koike, T., Watanabe, M., Hoshika, Y., and Saitanis, C.J. (2015). Ethylene-di-urea (EDU), the most effective phytoprotectant against O<sub>3</sub> deleterious effects and a valuable research tool: a mystery of decades. *Journal of Agricultural Meteorology* 71: 185-195.
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- (28) Agathokleous, E., Saitanis, C.J., and Koike, T. (2015) Tropospheric O<sub>3</sub>, the nightmare of wild plants –A review study. *Journal of Agricultural Meteorology* 71: 142-152.
- (29) Wang, XN, L Qu, Q Mao, M Watanabe, Y Hoshika, A Koyama, K Kawaguchi, Y Tamai and T Koike (2015) Ectomycorrhizal colonization and growth of the hybrid larch F<sub>1</sub> under elevated CO<sub>2</sub> and O<sub>3</sub>. *Environmental Pollution* 197: 116-126
- (30) Hoshika, Y., Watanabe, M., Kitao, M., Haberle, K-H., Grams, T.E.E., Koike, T. and Matyssek, R. Ozone induces stomatal narrowing in European and Siebold's beeches: a comparison between two experiments of free-air ozone exposure. *Environmental Pollution* 196: 527-533, DOI: 10.1016/j.envpol.2014.07.034.
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- (41) Hoshika, Y., Watanabe, M., Inada, N., Mao, QZ. and Koike, T. (2013) Model analysis of avoidance of ozone stress via stomatal closure for Siebold's beech (*Fagus crenata*). *Annals of Botany* 112: 1149-1158. Doi: 10.1093/aob/mct166.
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- (43) Hoshika, Y., Tatsuta, S., Watanabe, M., Wang XN, Watanabe, Y., Saito, H., and Koike, T. (2013) Effect of ambient ozone at the somma of Lake Mashu on growth and leaf gas exchange in *Betula ermanii* and *B. platyphylla* var. *japonica*. *Environmental and Experimental Botany* 90: 12–16 (DOI:10.1016/j.envexpbot.2012.11.003)

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  - (50) Novriyanti, E., Watanabe, M., Makoto, K., Takeda, T., Hashidoko, Y. And Koike, T. (2012) Photosynthetic nitrogen and water use efficiency of acacia and eucalypt seedlings as afforestation species. *Photosynthetica* 50: 273-281.
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