

Interactive comment on “Short term changes in methanol emission and pectin methylesterase activity are not directly affected by light in *Lycopersicon esculentum*” by P. Y. Oikawa et al.

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The manuscript by Oikawa *et al.* handles possible light responses of methanol (MeOH) emissions in tomato leaves, young and fully developed ones. The goal is to test for a short term light regulation effect of MeOH emissions as suggested elsewhere. The manuscript describes three experiments, two where the emission is measured by cuvette measurements and one by measuring the pectin methylesterase (PME) activity.

Figure 1 shows, that MeOH emissions are following the stomatal conductance, which in turn increases with light. The MeOH emissions normalized to stomatal conductance show that light does not influence the MeOH emission directly. As MeOH is highly

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water soluble, the potential MeOH storage pool within the leaf tissues is big. That suggests, that the emission process is mainly a physical process and MeOH emission follows the stomatal conductance and also the accumulated amount of MeOH stored within the tissue. That result is also confirmed by the third experiment as PME activity was not significantly changed over wide ranges of light intensities.

The proposed experiment by T. Sharkey would indeed strengthen the result that light does not directly affect MeOH emissions. Another possible experiment according to the typical day course of MeOH emissions as shown already in Hüve *et al.* indicating that after closed stomata, a MeOH emission burst should be seen with subsequent decay.

Overall, the paper will help to improve MeOH emission predictions and possible model schemes thereof.

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