

Interactive comment on “Considering the future of anthropogenic gas-phase organic compound emissions and the increasing influence of non-combustion sources on urban air quality” by Peeyush Khare and Drew R. Gentner

Anonymous Referee #2

Received and published: 28 February 2018

Following on from the detailed reviewer comments added on the 15th of February, I have only a few things to add. I think this paper is a valuable contribution to the literature and nicely complements the paper by McDonald et al. recently published in Science (I was surprised there was no reference to this paper here).

Line 124: Should furnishings be added to your list? There are emissions of VOCs from e.g carpets that I'm not entirely clear are included in your list. Is it also worth somewhere making the distinction between primary and secondary emissions from surface sources, as these will vary over time – so primary emissions from furnishings/building

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materials are high in the first instance and then decrease over time, whilst secondary emissions are ozone dependent and may even increase over time if outdoor ozone concentrations (and hence indoor concentrations) increase.

Line 261: The products you investigated have 'hidden' ingredients (varying from 30-60% of the total). Is it similar for similar types of products, so you could potentially estimate the amount that is missing from your inventory, or is it manufacturer rather than product dependent or random ?

Line 498: There is some literature that suggests siloxanes may have health impacts - see review of such by Tran and Kannan in Science of the Total Environment 511 (2015) 138–144.

Section 4.2: I agree with the first reviewer that this section is too long. I wasn't clear from your response whether you had shortened this section significantly, but if not, would urge you to make it shorter and more focused.

Table 1: I was a bit confused by some of the footnotes. You need to tie them more specifically to the information in the table so we know which fraction the footnotes refer to (e.g. footnote f refers to the emitted fraction presumably?).

The authors might also want to consider the increasing use of so-called 'green' materials indoors that typically have lower emission rates than more traditional materials. If such materials become more widely adopted, it may be that indoor sources of VOCs decrease over the considered period of time as well (or at least those from some of the sources considered).

Edits

Line 322: Sentence too long and grammar needs improving.

Line 703: grammar needs improving.

Interactive comment on Atmos. Chem. Phys. Discuss., <https://doi.org/10.5194/acp-2017-761>,

2017.

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