

Page 5: The value of  $1.0 \text{ g cm}^{-3}$  is rarely used for SOA densities, which are believed to be around  $1.4 \text{ g cm}^{-3}$ . Therefore, after "... the density of the organic material was assumed to be  $1.0 \text{ g cm}^{-3}$ ." I would add a statement like that: "While this choice of density affects the estimated mass of collected SOA, the major conclusions of this work are not sensitive to the actual value of SOA density."

Page 5: "...of  $\text{H}_2\text{O}_2$  (60% w/v, Fisher Scientific)." "...of  $\text{H}_2\text{O}_2$  (produced by evaporation of a 60% w/v solution, Fisher Scientific)."

Page 6: "d3-carene" -> " $\Delta_3$ -carene" and " $\Delta 3$ -carene" -> " $\Delta_3$ -carene"

Page 6: Unusual units are used for the OH exposure in " $1.3 \times 10^7 \text{ molecule cm}^{-3} \text{ h}^{-1}$ ". Exposure is normally measured in concentration\*time. You use a unit of a reaction rate instead, concentration per unit time. Should this be corrected?

Page 7: "NOx monitored" -> "NOx was monitored"

Page 8: Since I am a co-author on the Bateman (2008) paper, I should point out that hemiacetals formed very fast upon mixing SOA and methanol while esters formed very slowly. Therefore I would suggest using: "Bateman et al. (2008) observed facile formation of hemiacetals in reactions of SOA carbonyls with methanol and slow formation of esters in reactions of SOA carboxylic acids with methanol."

Page 9: "MSn" -> " $\text{MS}^n$ "

Page 11: "areduction" -> "a reduction"

Page 11: " $m/z$   $m/z$  357.15509" -> " $m/z$  357.15509"

Page 12: abbreviation "nC" is introduced twice. Also in Eq. 1, C is entered as a subscript. Use subscripts everywhere for consistency?

Page 13: " $\Delta 3$ -carene" -> " $\Delta_3$ -carene"

Page 17: if these are actual collision energy values than the unit should be "eV" instead of "V". If this is just a system voltage, "V" is OK.

Page 16: "reaction(Fig. 7a)." -> "reaction (Fig. 7a)." (insert space)

Page 16: "Fig 7b" -> "Fig. 7b"

Page 18: Fix "294001 K" in the Atkinson (1996) reference

Page 20: Healy (2012) reference has the name of the journal mis-abbreviated and name one of the authors underlined for some reason.

Page 20: Henry (2012) reference has an unnecessary underscore sign

Page 22: Shilling (2009) reference has an underscore instead of  $\alpha$