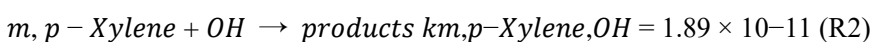


Point-by-point response to comments by editor

We thank the editor for the detailed and constructive review comments. Below is our point-by-point response to each comment, marked in blue.

Comments:

(1) For this section on page 9 in the revised MS



Please insert the units of the rate coefficients.

Response: Thanks for raising this issue. We have inserted the units of these rate coefficients ($\text{cm}^3 \text{ molecule}^{-1} \text{ s}^{-1}$) in the revised manuscript. Please refer to Page 9:



$$k_{\text{Ethylbenzene,OH}} = 7.0 \times 10^{-12} (\text{cm}^3 \text{ molecule}^{-1} \text{ s}^{-1})$$



$$k_{m,p\text{-Xylene,OH}} = 1.89 \times 10^{-11} (\text{cm}^3 \text{ molecule}^{-1} \text{ s}^{-1})$$

(2) Also, in Table 2, caption, spelling of Heterogenous should be "Heterogeneous".

Response: Thanks for raising this issue. We have revised this spelling error. Please refer to Page 7, Line 143: "Table 2. Heterogeneous reactions and associated rate constants used in the OBM model."