Additional comments on acp-2022-294

Based on the comments of two experts in the field, and after my consideration, the manuscript is of adequate atmospheric interest to merit publication in Atmospheric Chemistry and Physics. The authors have thoroughly responded all the questions/comments raised by the reviewers, and modified the manuscript according to the suggestions.

However, I have some additional comments, which are needed to be solved before publication.

1. Please, update also the last section with atmospheric implications (see below)
2. The statement "The data used in this study are available upon request from the corresponding author" needs to be changed. Namely, data should be available in the repositories. Please, check the manuscript preparation guidelines for authors. https://www.atmospheric-chemistry-and-physics.net/policies/data_policy.html.

Technical comments/ errors:

Line 36: Still not ok. Correct as: »Laboratory studies of long-chain alkanes, as representatives of IVOCs, are mainly focused on the case of a single long-chain alkanes or mixture of various precursors, which include long….

Line 42: The sentence needs to be corrected in a way: "For the mixture of various precursors including long-chain alkanes, studies are mainly focused on the chemical composition of the mixture gases, the properties of total organic carbon, the amount of SOA generated, …

Line 86:…than in the ambient environment

Line 90: Correct as:"… as the OH precursor; therefore, NO and HONO experiments were designed, as their pathways for generating OH radicals…."

Line 102: "Gaseous NOx, SO2, and O3 concentrations inside the chamber were monitored in real time by an SO2 analyzer…« Please change as: »…by NOx (),…SO2 () and O3 () analyzers.«

Line 118/119: The sentence can be deleted; but "sulfate and nitrate" can be added in the parentheses after "in aerosols ()" and "nitric acid" after gases ().

Lines 188-191: Can you write more understandable?

Line 232: Please correct: »to over predict the O3 concentration in the after 5.5 h«. (after 0.5 or 5.5h?)

Line 233: Correct the sentence: "This phenomenon is similar to a study about 1,3,5-TMB, the experiment of which was performed with an outdoor chamber"

Line 313: Correct to "Organic chemical composition"

Line 347: ….larger concentration of organo-nitrates…

Line 358: Instead of organo-surfates should be organo-sulfates"

Please, revise/edit:

4. Conclusions and <u>atmospheric implications</u>:

Please revise/edit the last section with atmospheric implications. According to the suggestion of Reviewer 1, you constructed a mechanism explaining the experimental observations; but try (if possible) to use this mechanism in discussion and explanation of the atmospheric implications of your findings.