

Response to Anonymous Referee #1

Interactive comment on “Characterization of Organosulfates in Secondary Organic Aerosol Derived from the Photooxidation of Long-Chain Alkanes” by M. Riva et al.

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This is an interesting study about the formation of organosulfates from the oxidation of aliphatic alkanes. As the authors point out in the manuscript, earlier studies mostly presented the formation of organosulfates from the oxidation of biogenic VOCs (isoprene, monoterpenes, and sesquiterpenes) or anthropogenic aromatic hydrocarbons, and this is one of the first studies to report the aliphatic alkane organosulfates. The authors conducted a series of well-designed chamber experiments, and filter sample analysis to elucidate the formation mechanisms and the structures of these organosulfates. While tandem MS experiments may not provide conclusive evidence for the structures, proposed formation mechanisms and resulting organosulfate structures are consistent with our current knowledge about atmospheric organosulfate formation pathways. In addition, the authors support the importance of the aliphatic alkane organosulfates by providing evidence for their presence in ambient PM filter samples. The manuscript is concise and very well written. I suggest the manuscript be published as is.

We thank Referee # 1 for careful consideration of our article.