

Interactive comment on “Effect of thermodenuding on the structure of nascent flame soot aggregates” by Janarjan Bhandari et al.

Anonymous Referee #1

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In the manuscript "Effect of thermodenuding on the structure of nascent flame soot aggregates" authors present a study on nascent flame soot aggregates using thermodenuder (TD). The manuscript starts with introduction, where authors state the importance of atmospheric processing of soot particles for light scattering and absorption. Soot particle morphology is addressed to be one of the parameters that change optical particle properties. For this reason authors proposed a pathway for soot restructuring solely by thermodenuding due to weakening of the bonds between the aggregate monomers when no or minimal coating is present. However, the motivation of such study remained unclear. Authors did not provide any information on how abundant in atmosphere is nascent soot particles. Moreover, previous studies have already addressed soot restructuring due to surface tension effects. In those studies restructuring occurred solely when soot particles were coated with volatile materials,

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which then were removed by thermodenuding. As it is very unlikely that soot particles in the atmosphere would remain unaltered by any aging processes, soot particles, if restructured, would change their morphology due to surface tension effects and not due to weakening of the bonds between the aggregate monomers. It suggests that this study is irrelevant for the atmospheric studies. Because of previous reasons, I cannot recommend this study for publishing in Atmospheric Measurement Techniques.

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