Dear Professor Barbara Ervens,

Thank you for your valuable comments and suggestion. We would like to publish this paper as a Measurement Report. Please find below the response to the minor/technical comments. Finally, we sincerely thank you for handling this manuscript, and we have also learned a lot from your expertise.

Best regards,

Shengzhen Zhou, PhD/Associate Professor
Xuemei Wang, PhD/Professor

Response to minor/technical comments

1. p. 1, l. 25: replace 'were' by 'was'
[A]: Changed.

2. p. 3, l. 20: replace 'reaction mechanisms' by 'reactions'
[A]: Changed.

3. p. 5, l. 1: This sentence seems to partially repeat the text from the previous one: "quantification of the aerosol formation through heterogeneous reactions under real atmospheric conditions" and "more studies of aerosol formation resulting from heterogeneous reactions are needed from field measurements". Please reword or shorten.
[A]: We have rephased these sentences.
"To improve the understanding of haze formation, models will require updated kinetic and mechanistic data of multiphase chemistry, and quantification of the aerosol formation through heterogeneous reactions are needed from field measurements, laboratory experiments and model simulations under real atmospheric conditions."

4. p. 9, l. 22: replace 'likably' by 'likely'

[A]: Changed.

5. p. 12, l. 17: add 'by' (formed by the heterogeneous reactions…)
[A]: Changed.

6. p. 14, l. 18: replace 'much' by 'very'
[A]: Changed.

7. p. 14, l. 20: 'Jaffrezo' misspelled
[A]: Changed.

8. p. 16, l. 21: Did you use WRF or WRF-Chem for these simulations?
[A]: We applied WRF to simulate the distribution of vertical wind and cloud fraction. Vertical concentration distributions of sulfate, nitrate and ammonium were further simulated by WRF-Chem as suggested by the referee.

9. p. 16, l. 22: add 'on' (than on event days)
[A]: Changed.

10. p. 17, l. 20: 'Figure 10 …'
[A]: Changed to "Figure 10"

11. p. 17, l. 22 : add 'it' (while it was in ….)
[A]: Changed.