Supplement of

Organic aerosol volatility and viscosity in North China Plain: Contrast between summer and winter

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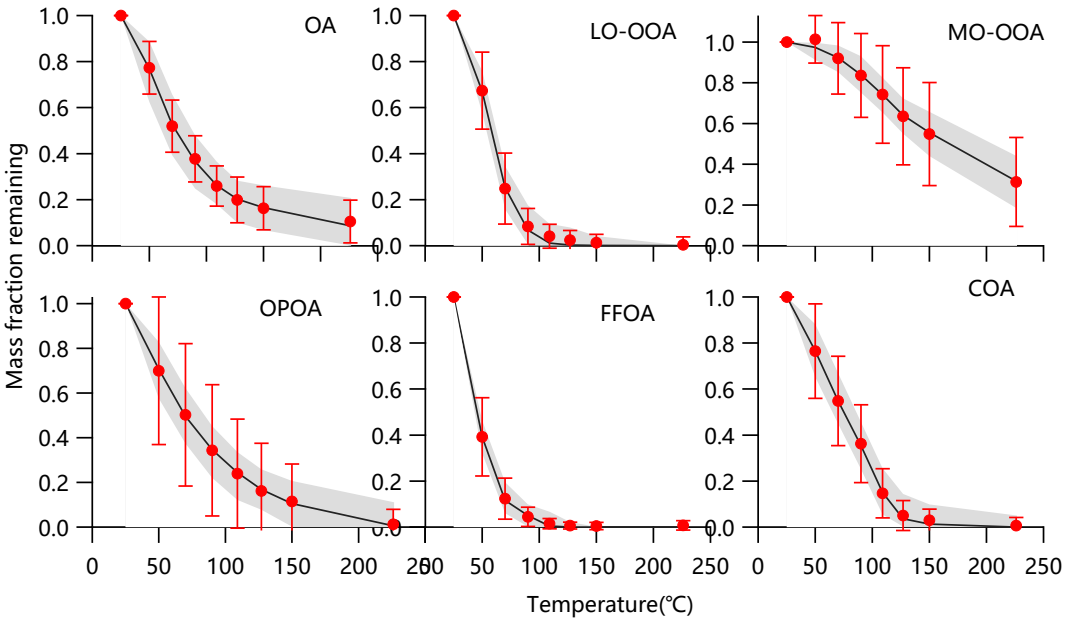

Figure S1. Thermograms of OA and OA factors measured by TD-AMS in winter of 2018 in Beijing. The solid circles represent the measurements and the error bars are one standard deviation. The black lines refer to the best-predicted MFR using the algorithm of Karnezi et al. (2014).

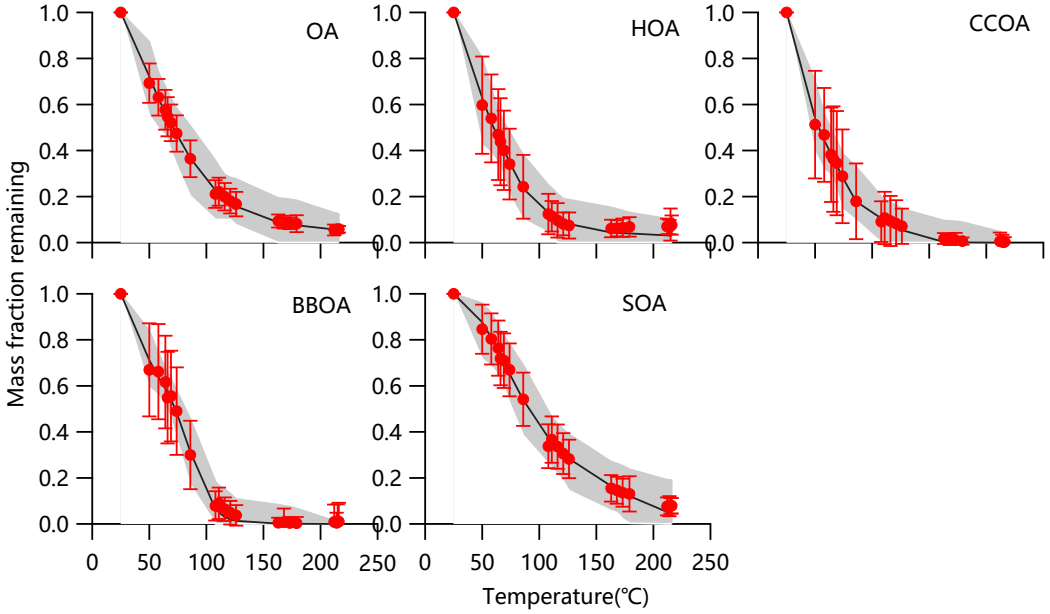

Figure S2. Thermograms of OA and OA factors measured by TD-AMS in winter of 2019 in Gucheng. The solid circles represent the measurements and the error bars are one standard deviation. The black lines refer to the best-predicted MFR using the algorithm of Karnezi et al. (2014).

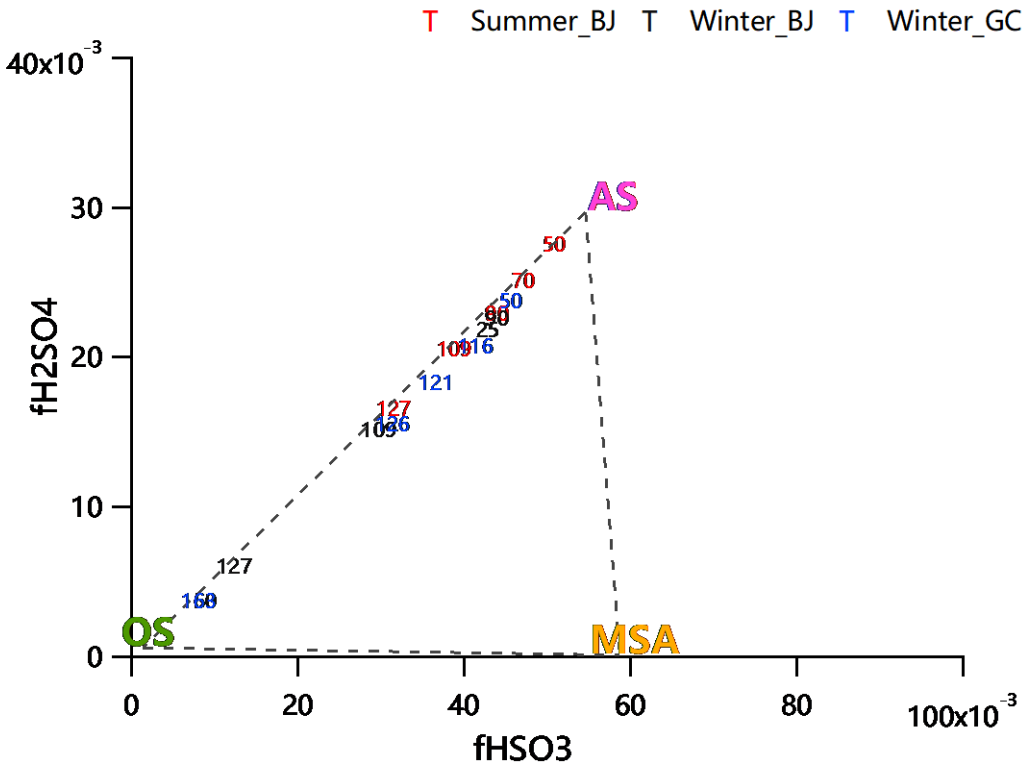

Figure S3. f_{H2SO4+} **vs.** f_{HSO3+} **for ambient and TD data. The marker indicates TD temperature. The triangle region defined by the OS/SS-AS-MSA triangle (Chen et al., 2019)**

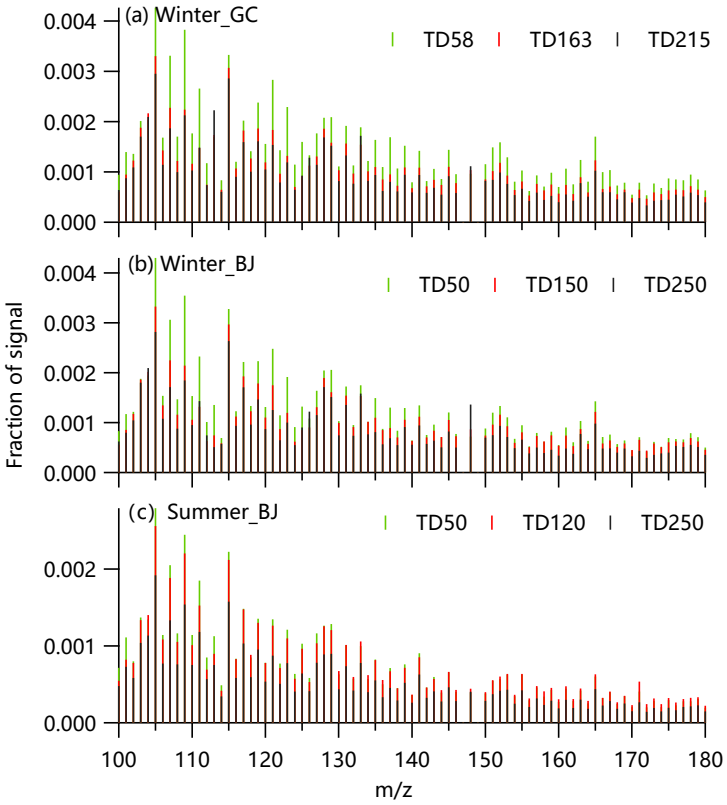

Figure S4. The intensity of high ***m/z*** **(i.e., from 100 to 180 amu) for different TD temperatures.**

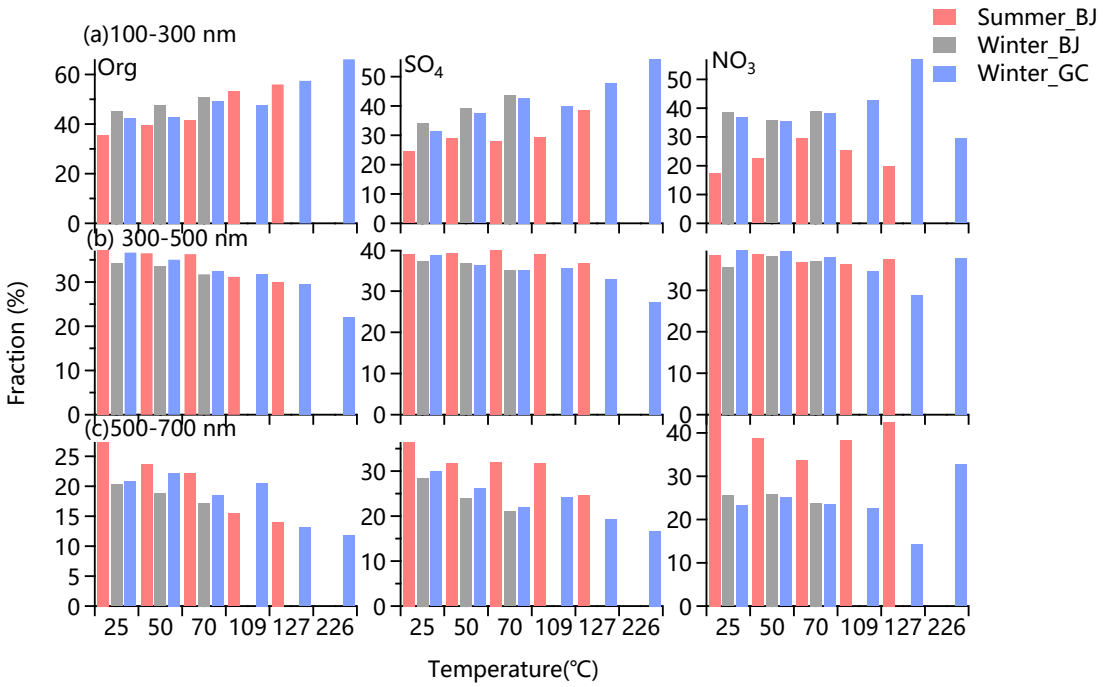

Figure S5. Mass fraction of different size ranges versus TD temperature.

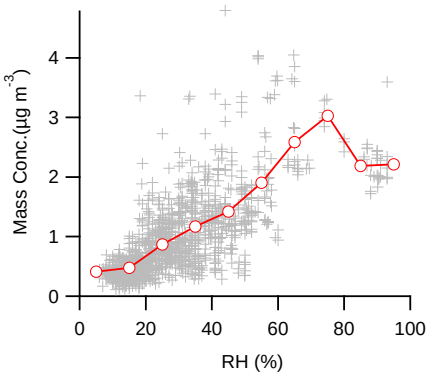

Figure S6. Variations of OA mass concentrations as a function of RH in winter of 2018 in Beijing

References

Chen, Y., Xu, L., Humphry, T., Hettiyadura, A. P. S., Ovadnevaite, J., Huang, S., Poulain, L., Schroder, J. C., Campuzano-Jost, P., Jimenez, J. L., Herrmann, H., O'Dowd, C., Stone, E. A., and Ng, N. L.: Response of the Aerodyne Aerosol Mass Spectrometer to Inorganic Sulfates and Organosulfur Compounds: Applications in Field and Laboratory Measurements, Environ. Sci. Technol., 10.1021/acs.est.9b00884, 2019.

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