

Supplement for “Comparison of secondary organic aerosol formation from toluene on initially wet and dry ammonium sulfate particles”

Tengyu Liu¹, Dan Dan Huang¹, Zijun Li², Qianyun Liu³, ManNin Chan^{2,4}, and Chak K. Chan^{1,*}

1. School of Energy and Environment, City University of Hong Kong, Hong Kong, China
2. Earth System Science Programme, The Chinese University of Hong Kong, Hong Kong, China
3. Division of Environment and Sustainability, Hong Kong University of Science and Technology, Hong Kong, China
4. The Institute of Environment, Energy and Sustainability, The Chinese University of Hong Kong, Hong Kong, China

*Corresponding author:

Chak K. Chan

School of Energy and Environment, City University of Hong Kong

Tel: +852-34425593

Email: Chak.K.Chan@cityu.edu.hk

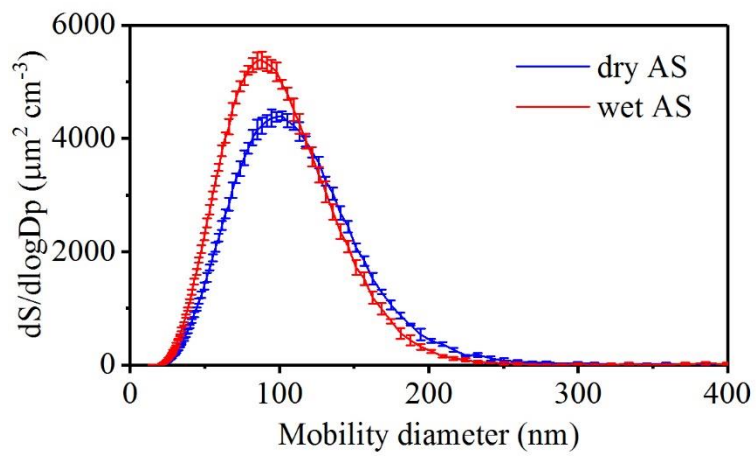


Fig. S1. Size distribution of particle surface of initially wet and dry AS seeds.

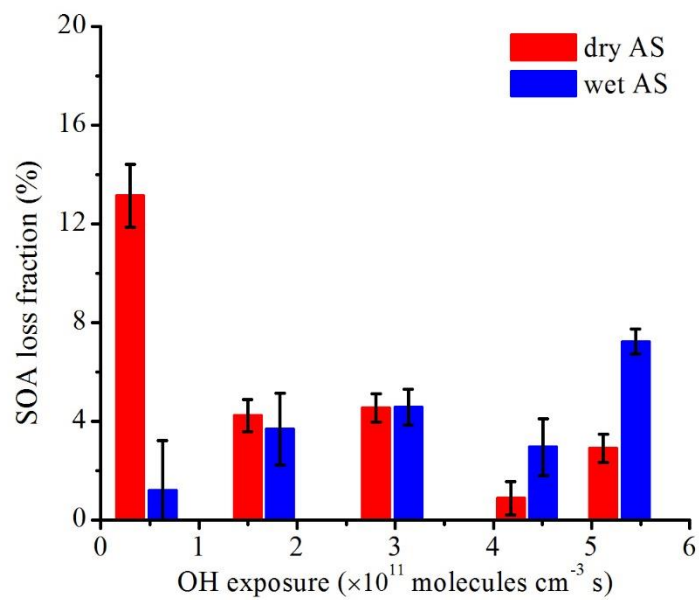


Fig. S2. Losses of SOA due to drying process for initially wet and dry AS seeds.

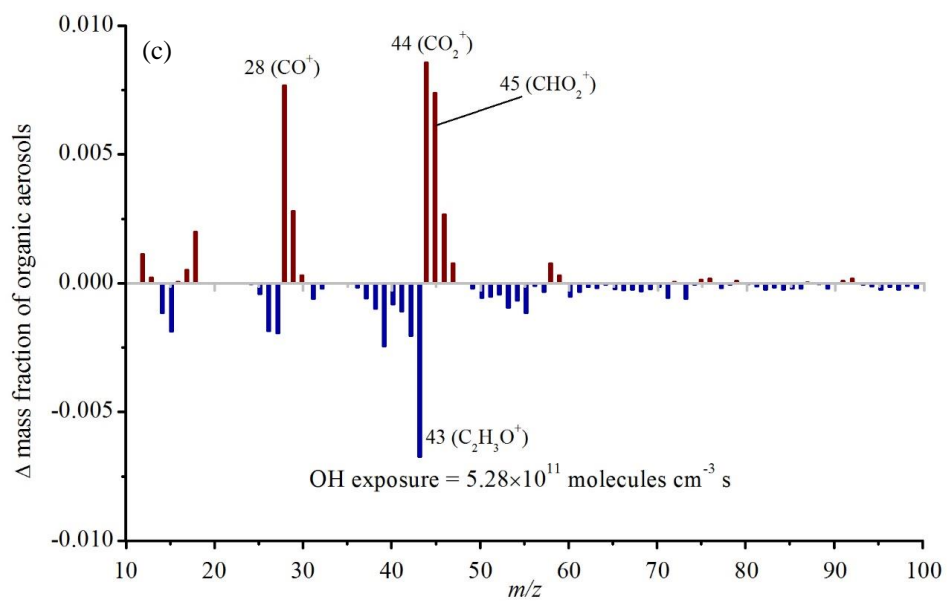
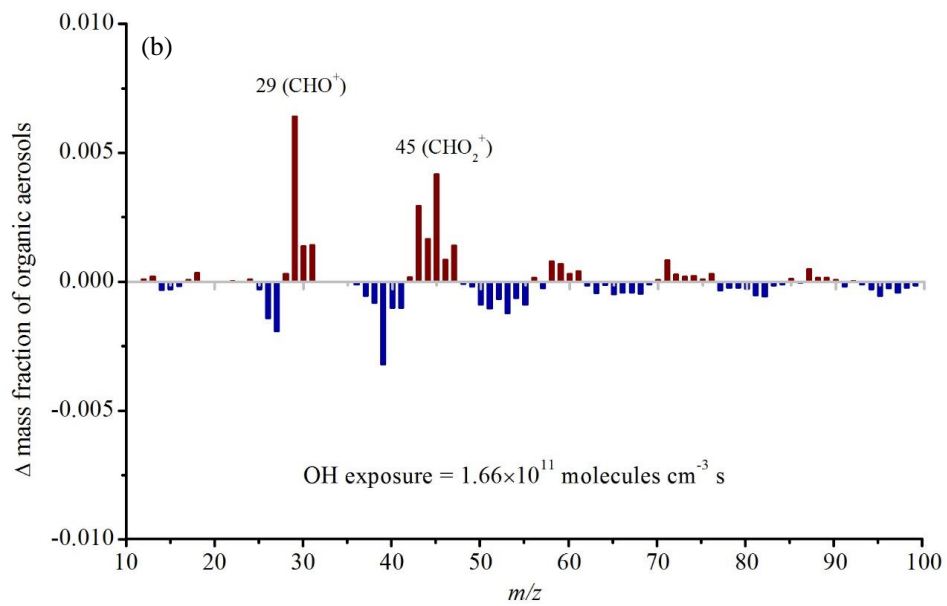
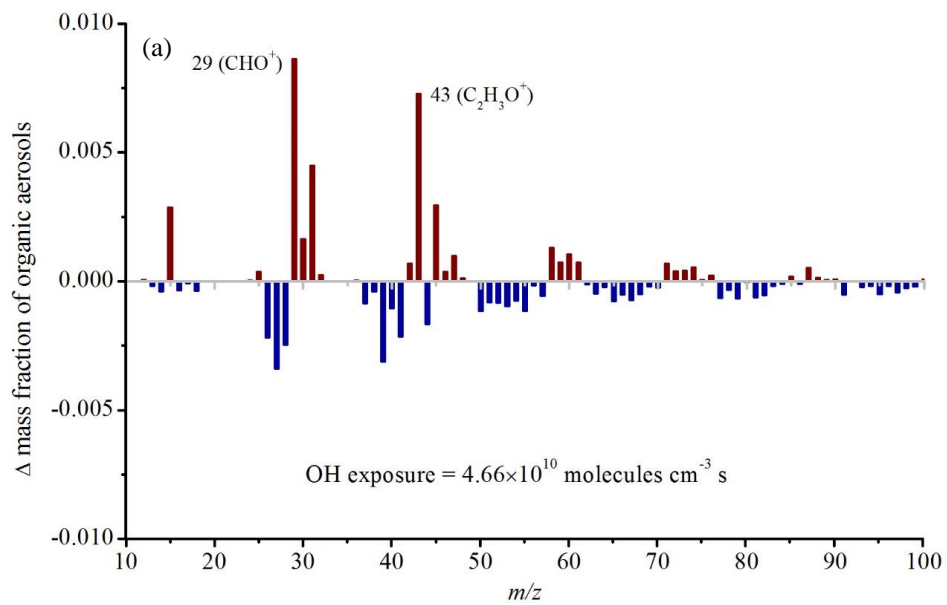


Fig. S3. Difference of organic mass fraction of toluene-derived SOA on dry and wet AS at an OH exposure of (a) 4.66×10^{10} molecules cm^{-3} s, (b) 1.66×10^{11} molecules cm^{-3} s and (c) 5.28×10^{11} molecules cm^{-3} s. Positive red peaks display a larger fraction of organic aerosols on wet AS, and negative blue peaks show a larger fraction of organic aerosols on dry AS.

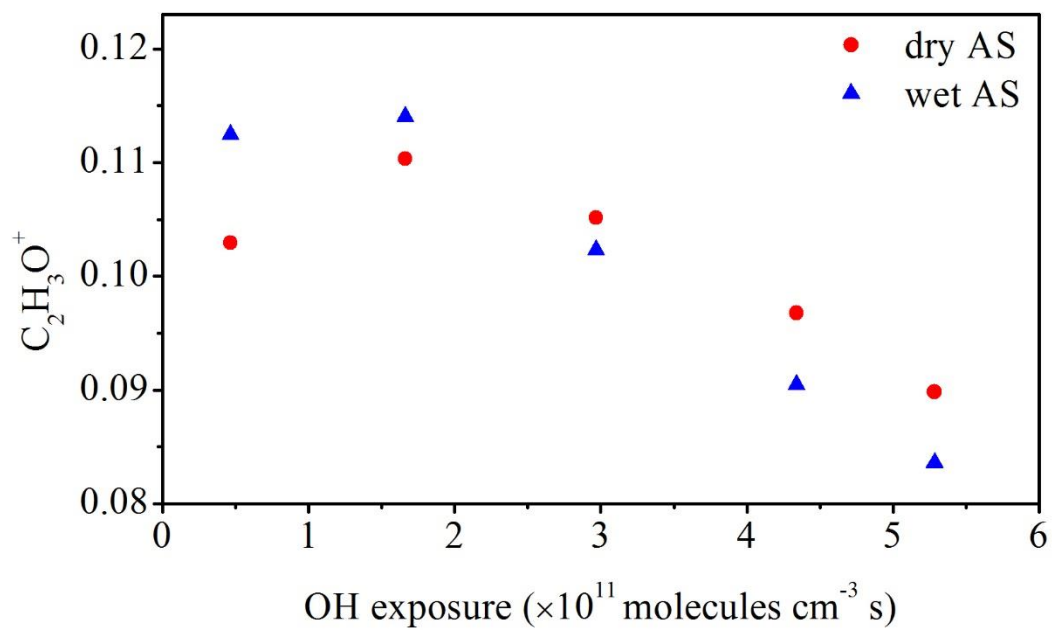


Fig. S4. Fractions of $C_2H_3O^+$ in toluene-derived SOA as a function of OH exposure.