

Supplement for “Formation of secondary organic aerosols from gas–phase emissions of heated cooking oils”

Tengyu Liu¹, Zijun Li², ManNin Chan^{2,3}, 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. The Institute of Environment, Energy and Sustainability, The Chinese University of Hong Kong, Hong Kong, China

*Corresponding author:

Dr. Chak K. Chan

School of Energy and Environment, City University of Hong Kong

Tel: +852-34425593

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

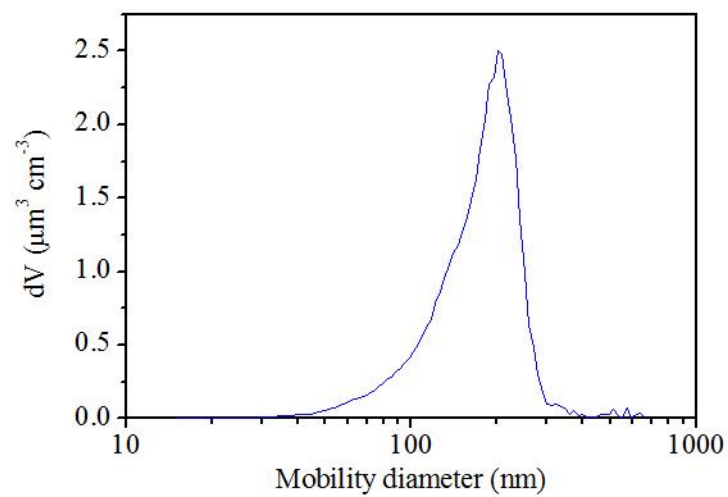


Fig. S1. Size distribution of particle volume of SOA for sunflower oil at an OH exposure of 2.7×10^{10} molecules cm^{-3} s.

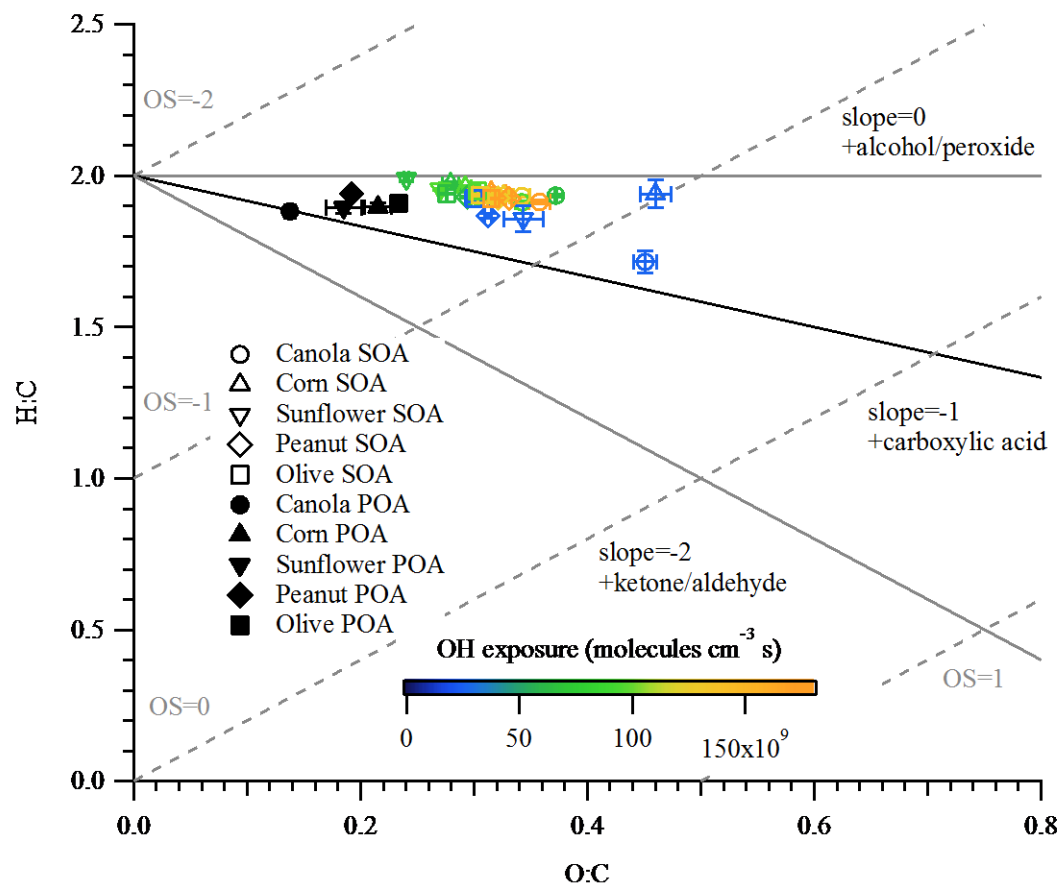


Fig. S2. Van Krevelen diagram of POA and SOA from different heated cooking oils. Error bars represent the standard deviation (1σ). SOA Data are colored according to OH exposure. Average carbon oxidation states from [Kroll et al. \(2011\)](#) and functionalization slopes from [Heald et al. \(2010\)](#) are shown for reference.

References:

- Heald CL, Kroll JH, Jimenez JL, Docherty KS, DeCarlo PF, Aiken AC, et al. A simplified description of the evolution of organic aerosol composition in the atmosphere. *Geophys. Res. Lett.* 2010; 37: L08803.
- Kroll JH, Donahue NM, Jimenez JL, Kessler SH, Canagaratna MR, Wilson KR, et al. Carbon oxidation state as a metric for describing the chemistry of atmospheric organic aerosol. *Nat. Chem.* 2011; 3: 133-139.