Supplementary for

On the use of reference mass spectra for reducing uncertainty in source apportionment of solid fuel burning in ambient organic aerosol

Chunshui Lin1,2,3, Darius Ceburnis3, Anna Trubetskaya4, Wei Xu1, William Smith5, Stig Hellebust6, John Wenger6, Colin O’Dowd1*, and Jurgita Ovadnevaite1*

1School of Physics, Ryan Institute’s Centre for Climate and Air Pollution Studies, National University of Ireland Galway. University Road, Galway. H91 CF50, Ireland
2State Key Laboratory of Loess and Quaternary Geology and Key Laboratory of Aerosol Chemistry and Physics, Chinese Academy of Sciences, 710061, Xi’an, China
3Center for Excellence in Quaternary Science and Global Change, Institute of Earth Environment, Chinese Academy of Sciences, Xi’an 710061, China
4Department of Chemical Engineering, Aalto University, 02150 Espoo, Finland
5School of Electrical, Electronic and Mechanical Engineering, University College Dublin, D04V1W8 Dublin, Ireland
6School of Chemistry and Environmental Research Institute, University College Cork, T23XE10 Cork, Ireland

This document includes four supplementary figures:

Figure S1. Relative difference at each m/z for the mass spectral profile of wood, peat, and smoky coal burning.

Figure S2. Relative difference at each m/z for the mass spectral profile of biomass briquettes and smokeless coal burning.

Figure S3. Scatter plot between OA and temperature (left panel); and wind speed (right panel), color-coded by date.

Figure S4. Mass spectra (left axis) of the OA factors of peat, wood, coal, HOA, and OOA.
Figure S1. Relative difference at each m/z for the mass spectral profile of wood, peat, and smoky coal burning in the boiler versus the conventional stove.

Figure S2. Relative difference at each m/z for the mass spectral profile of biomass briquettes and smokeless coal burning in the conventional versus Ecodesign stove.
Figure S3. Scatter plot between OA and temperature (left panel); and wind speed (right panel), color-coded by date.

Figure S4. Mass spectra (left axis) of the OA factors of peat, wood, coal, HOA, and OOA. The dots shown for the peat, wood, coal OA factors were the upper/lower limits allowed to vary. Also shown is the reference HOA profile (great sticks in Fourth row) from Crippa et al. (2013)

Reference: