Formation of secondary organic aerosol coating on black carbon particles near vehicular emissions

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Supplementary information
**PMF analysis**

Figure S1: $Q/Q_{\text{expected}}$ values as a function of number of PMF factors. A 4-factor solution, including two POA factors from traffic emissions and two SOA factors due to local photochemistry, was determined as a final solution.

Figure S2: Time series of 2-factor solution: (a) HOA and (b) OOA. Increasing the number of PMF factors to four splits HOA into HOA-rich and rBC-rich factors and OOA into OOA-1 and OOA-2 factors. The physical meaning of individual factors are described in the main text.
Figure S3: Correlations between 4-factor and 2-factor solutions: (HOA-rich + rBC-rich) vs. HOA and (OOA-1 + OOA-2) vs. OOA.

Figure S4: Mass spectra (a-b) and diurnal cycles (c-d) of 2-factor solution from SP-AMS data within the hot period. (Box plots: 5\textsuperscript{th}, 25\textsuperscript{th}, 50\textsuperscript{th}, 75\textsuperscript{th} and 95\textsuperscript{th} percentile, Filled circles: mean values for organic + C\textsubscript{x}\textsuperscript{+} fragments, Red dashed lines: mean values for organic alone)
Figure S5: Time series of the 4-factor solution: (a) HOA-rich, (b) rBC-rich, (C) OOA-1, and (d) OOA-2.
Figure S6: Mass spectra (a-d) and diurnal cycles (e-h) of 4-factor solution from HR-ToF-AMS data within the hot period. (Box plots: 5th, 25th, 50th, 75th and 95th percentile, Filled circles: mean values) (Chen et al., 2017)

References: