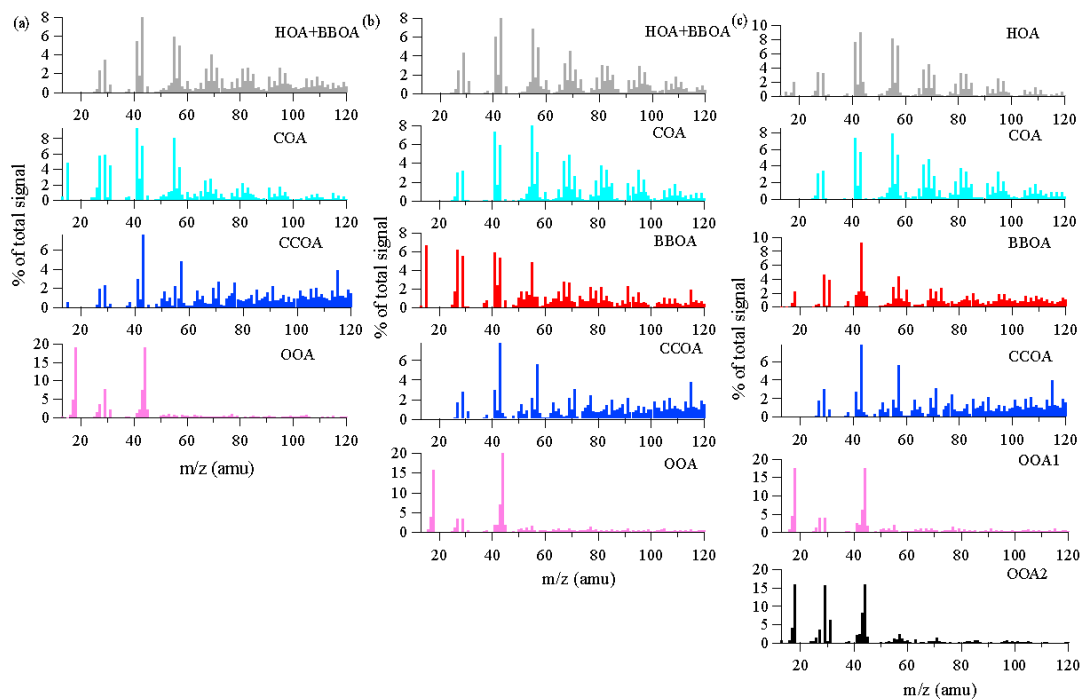Atmospheric
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Supplement of

Primary emissions versus secondary formation of fine particulate matter in the most polluted city (Shijiazhuang) in North China

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Fig. S1. PMF profiles of OA sources for 4-, 5-, and 6-factor solutions.
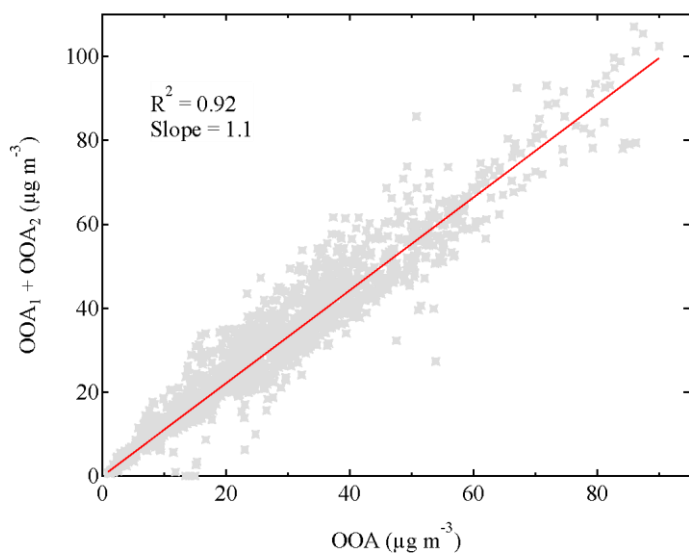
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Fig. S2. Scattering plot of OOA_1+OOA_2 in the 6-factor solution vs OOA in the 5-factor solution.

Note: The resolved two secondary factors in the 6-factor solution, referred to as "OOA_1" and "OOA_2", have the similar contributions from oxygenated fragment-related m/z (m/z 44) and the strong correlation with each other ($R^2 = 0.72$). The sum of the contributions of OOA_1 and OOA_2 matches the OOA contribution from 5-factor solution ($R^2 = 0.92$ and slope = 1.1).
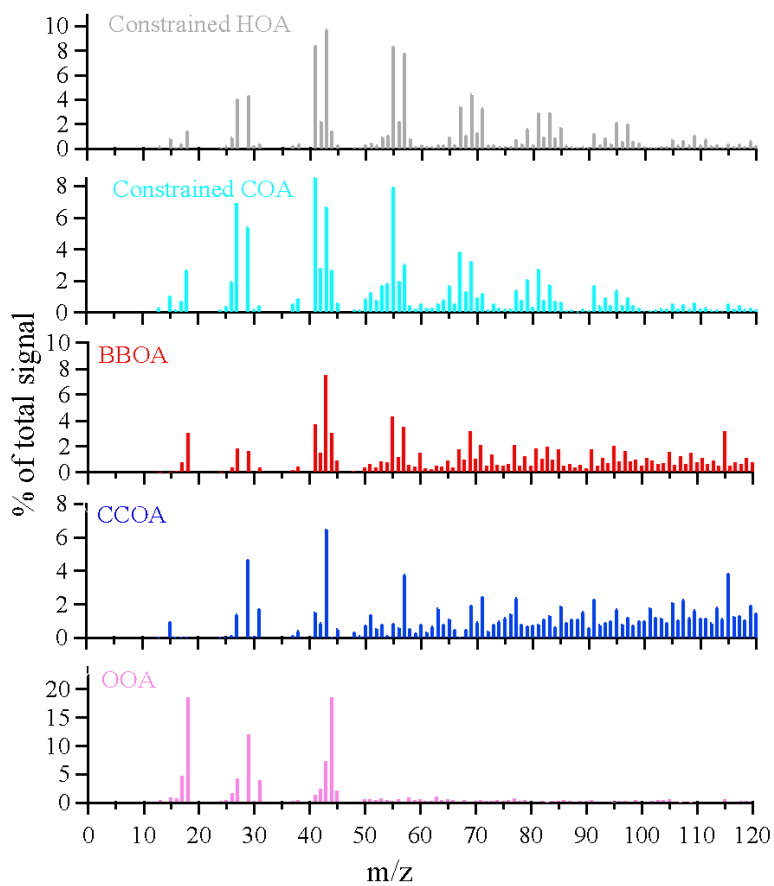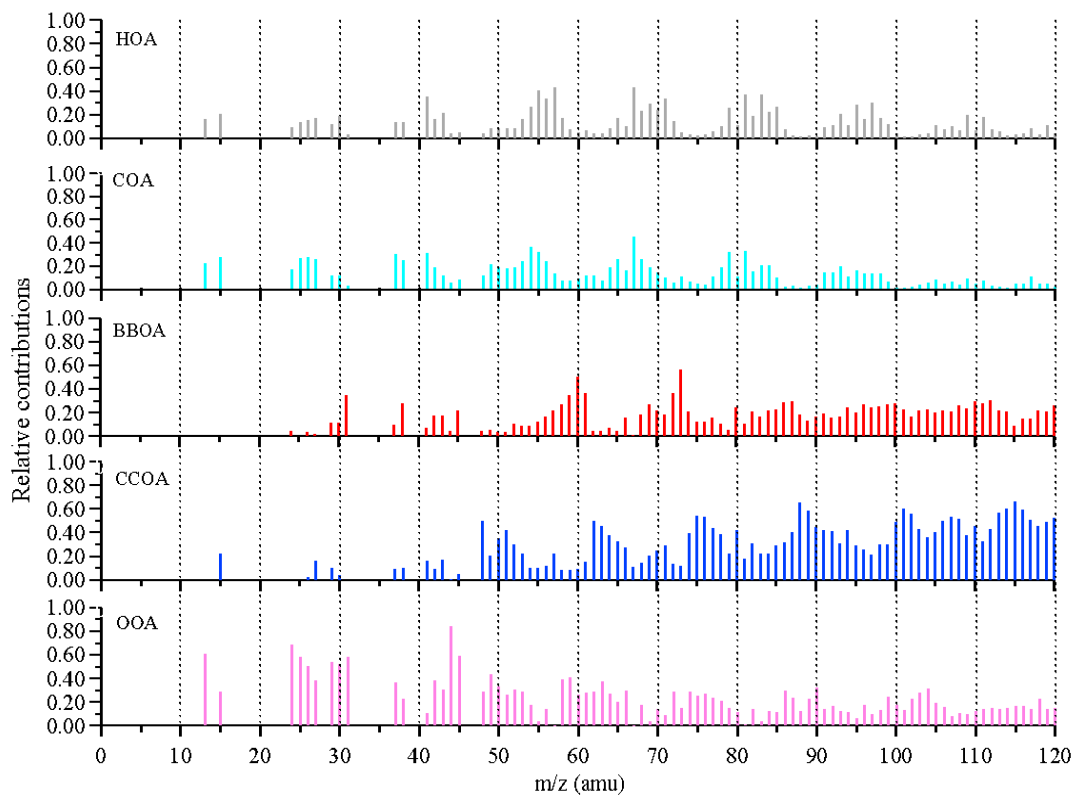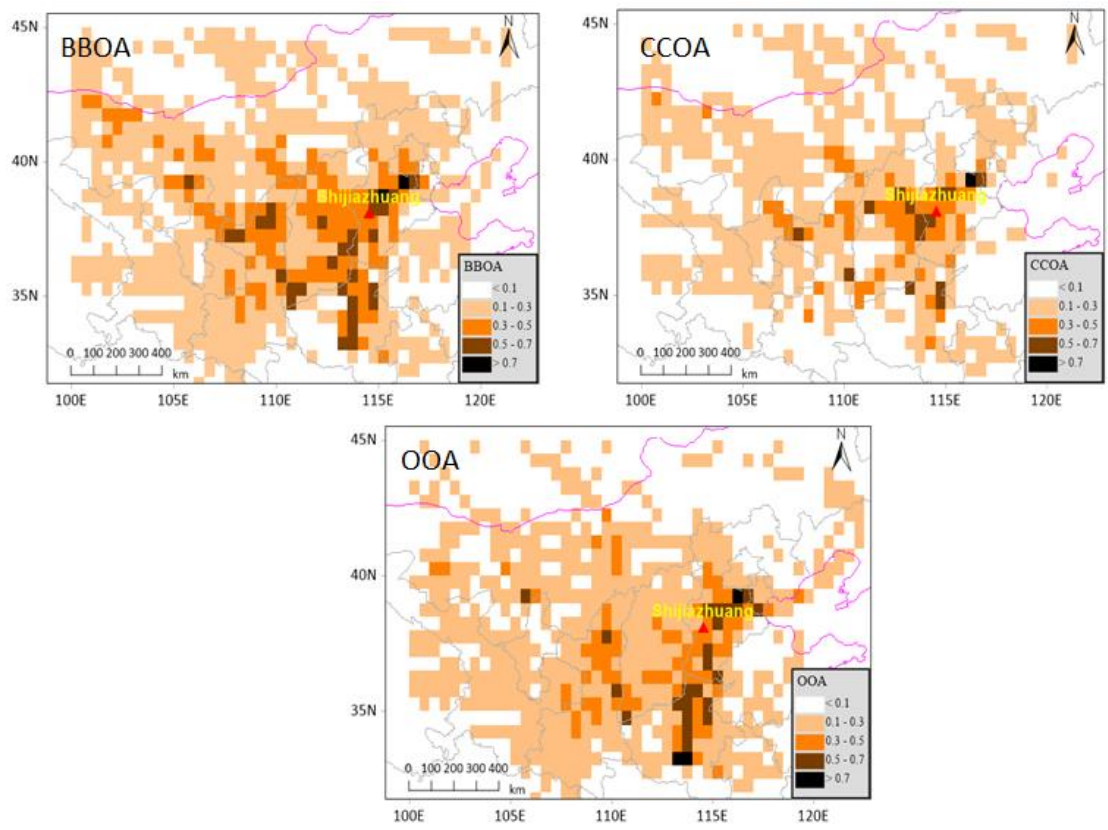
Fig. S3. ME-2 profiles of OA sources. The COA profile is from that of Crippa et al. (2013), and the HOA profile is from that of Ng et al. (2011b). The others are unconstrained factors.

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2 Fig. S4. The relative contributions of OA factors to the *m/z*'s.

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2 Fig. S5. The maps of potential source contribution function (PSCF) analysis for BBOA, CCOA, and
3 OOA.