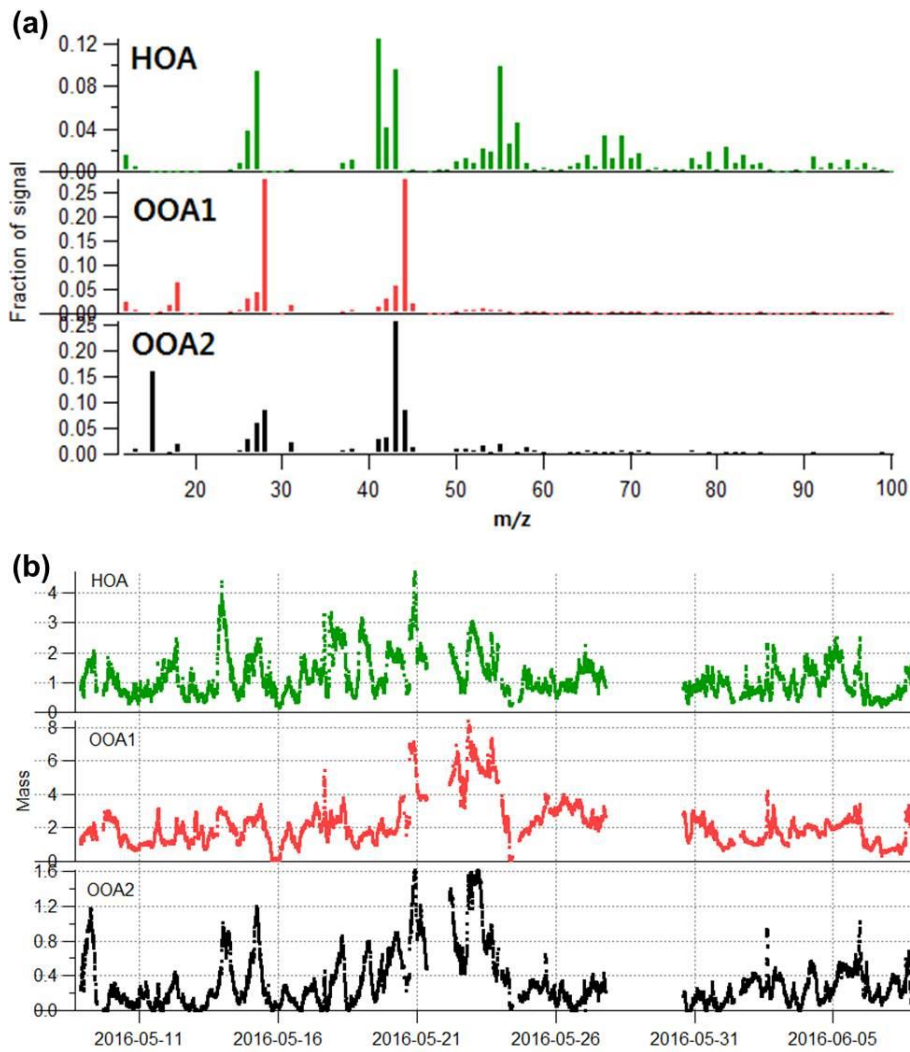


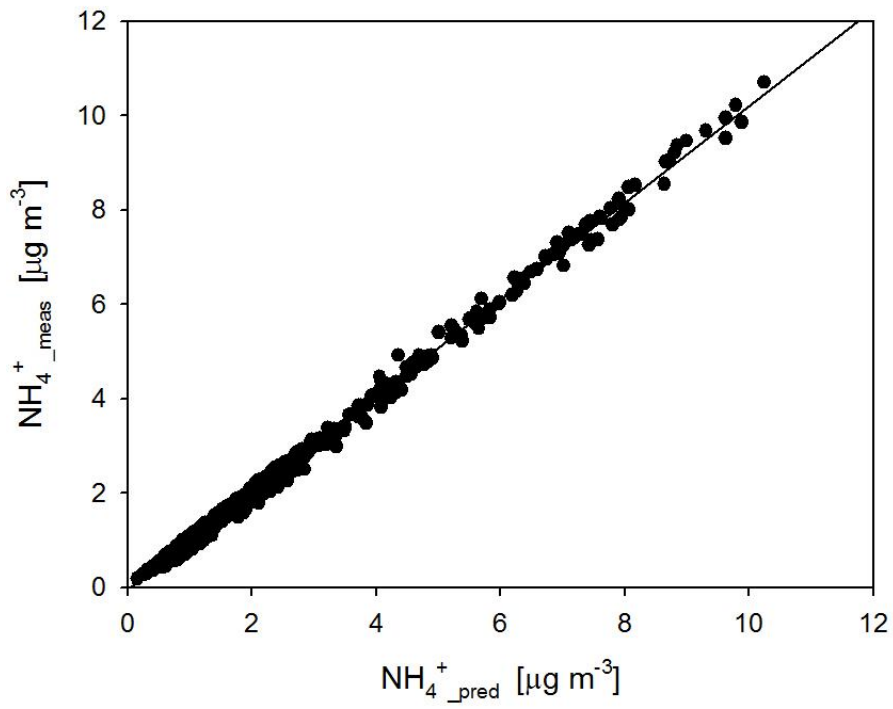
Table S1. Statistical values of slope, coefficient of determination (R^2), and average and standard deviation of ratio between κ_{chem} and κ_{HTDMA} .

	O/C ($\kappa_{org} = 0.1 \times (O/C)$)	f_{44} ($\kappa_{org} = 2.10 \times f_{44} - 0.11$)
Slope	0.83	0.88
R^2	0.55	0.57
$\kappa_{chem}/\kappa_{HTDMA}$	1.06 ± 0.19	1.00 ± 0.18



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Figure S1. Overview of the 3-factor solution, HOA, OOA1 (LV-OOA) and OOA2 (SV-OOA), from PMF analysis: (a) High resolution mass spectra and (b) time series of the three OA factors.



10 **Figure S2. Measured and Predicted ($NH_4^+_{pred} = 18 \times ((2 \times SO_4^{2-})/96 + (NO_3^-)/62 + (Cl^-)/35.5)) NH_4^+$ mass concentrations.**

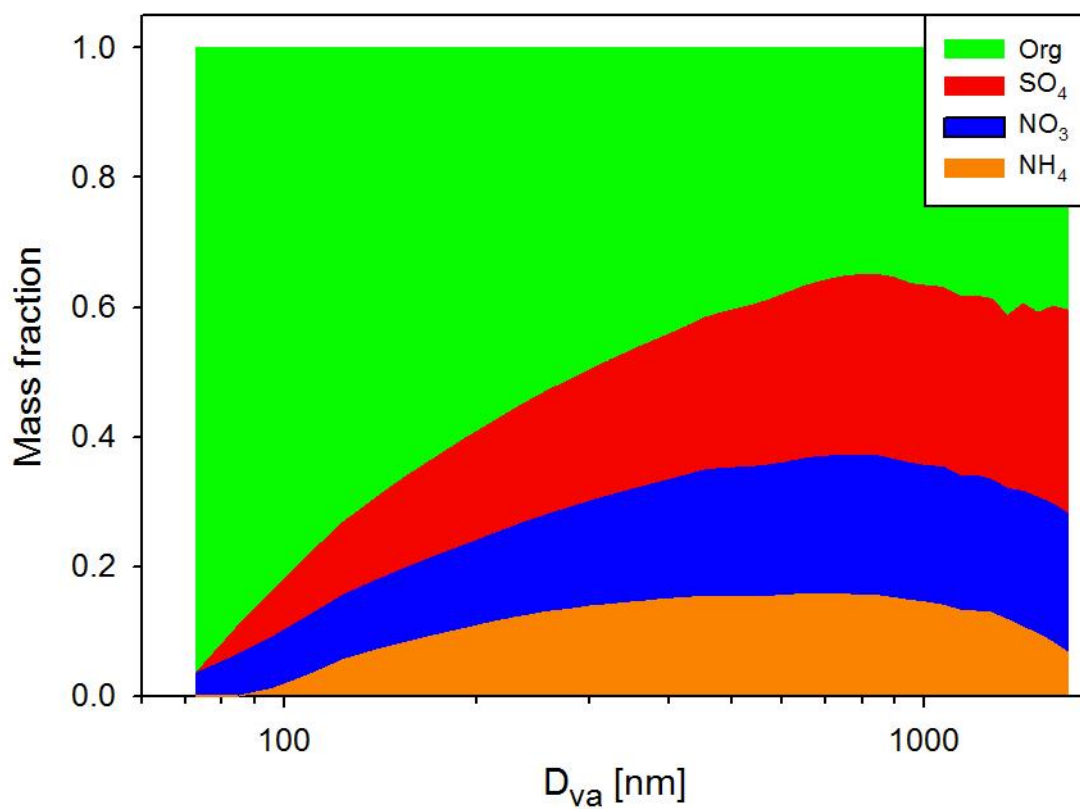


Figure S3. Campaign averaged size-resolved mass fraction of chemical composition for non-refractory aerosols.

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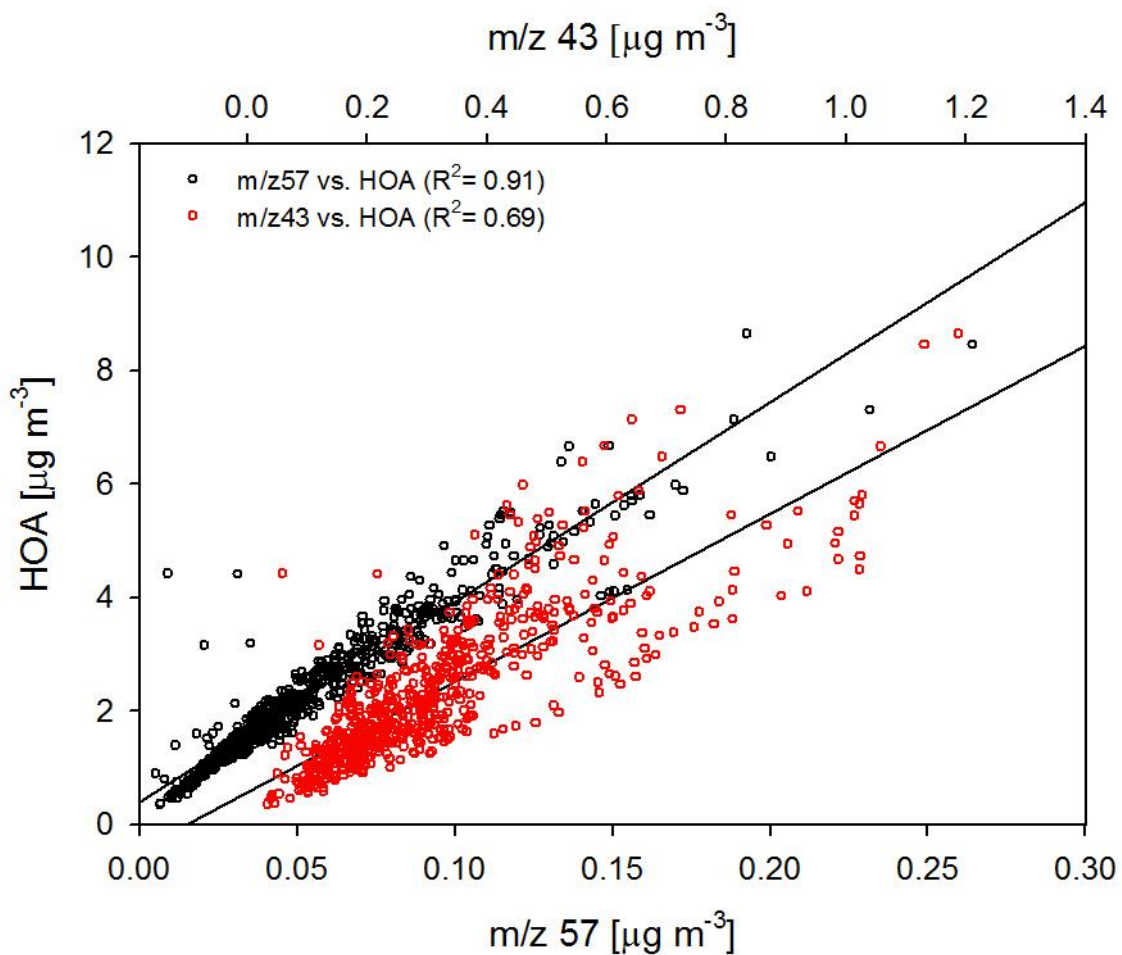


Figure S4. Scatterplots between mass concentrations of mass-to-charge ratios (m/z 57 for black dots and m/z 43 for red dots) and HOA. The solid lines indicate the linear regression lines.

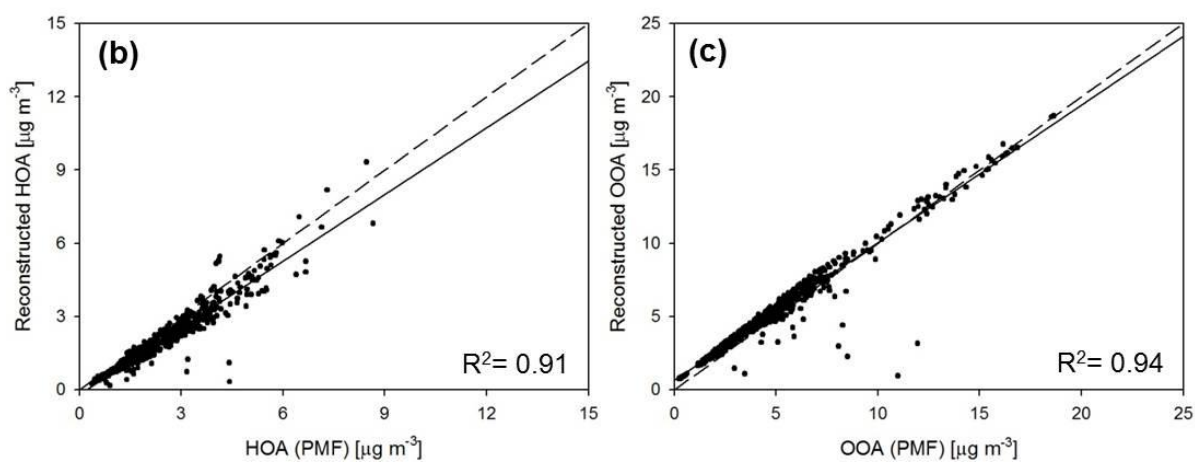
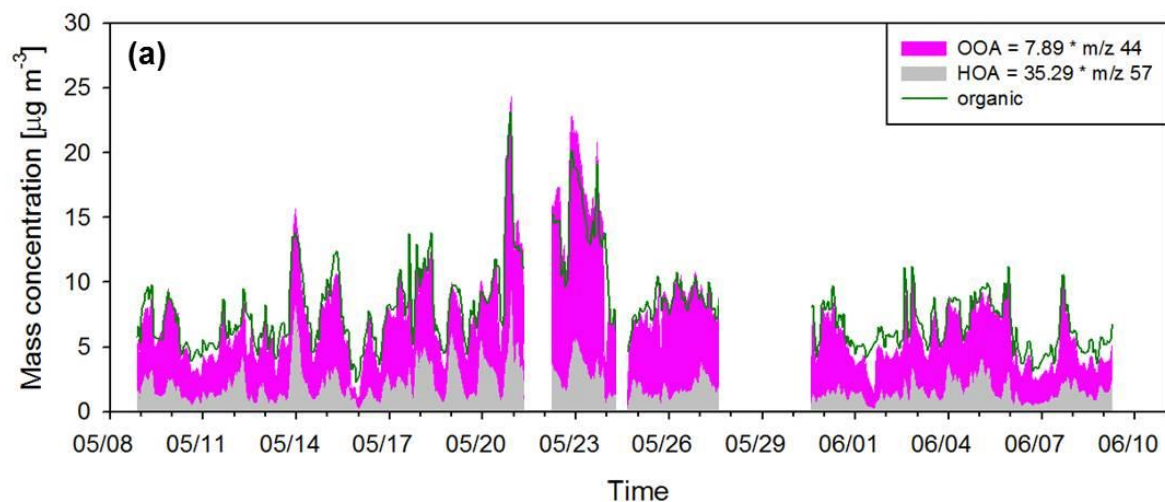


Figure S5. (a) Time series of mass concentrations for reconstructed HOA (grey) and OOA (pink), and measured organic (green) and scatterplots of measured and reconstructed **(b)** HOA and **(c)** OOA mass concentrations.