



Supplement of

Continental pollutants modulate organic nitrogen and light absorption of marine organic aerosols over East Asian marginal seas

Chao Yu et al.

Correspondence to: Yujue Wang (wangyujue@ouc.edu.cn)

The copyright of individual parts of the supplement might differ from the article licence.

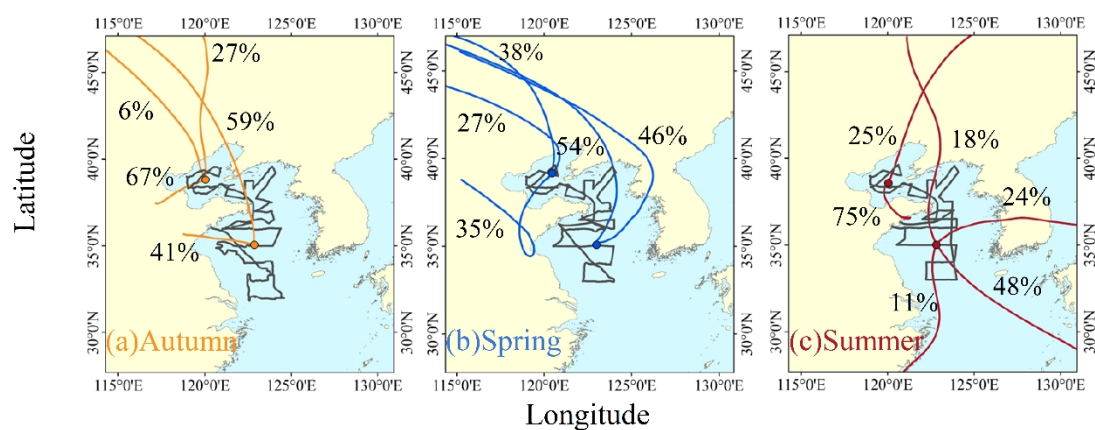


Figure S1 Cruise observation area and the 72-hrs backward trajectories of air masses from an altitude of 500 m during each cruise.

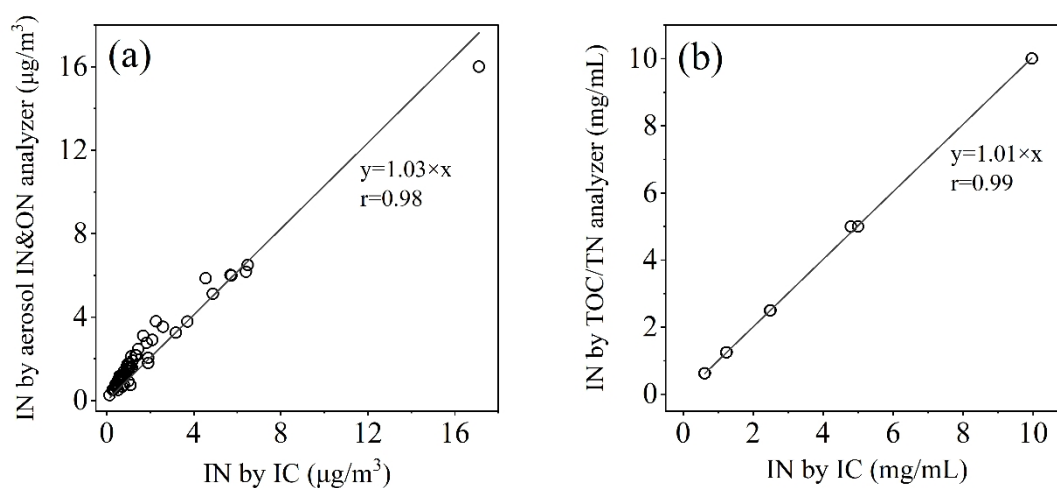


Figure S2 (a) Comparison of inorganic nitrogen ($\text{IN}=[\text{NH}_4^+-\text{N}] + [\text{NO}_3^--\text{N}]$) measured by aerosol IN&ON analyzer and by ion chromatograph (IC). (b) Comparison of IN concentrations in a mixed solution of NH_4Cl and KNO_3 measured by TOC/TN analyzer and IC.

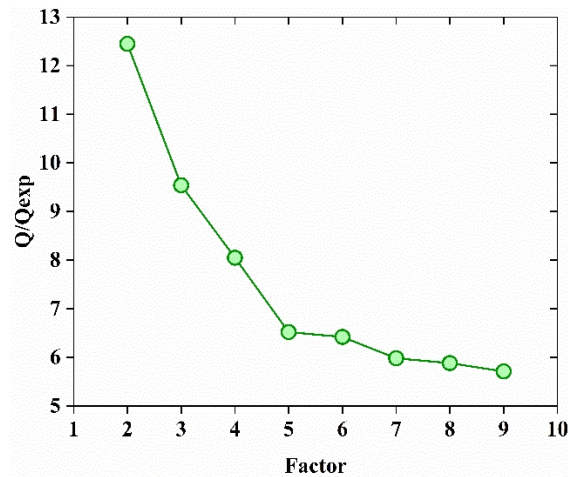


Figure S3 Variation of Q/Q_{exp} with different solution numbers resolved by PMF source apportionment. Q_{exp} was calculated by $(n \times m - p \times (n + m))$, where n , m , and p are number of samples, number of strong species, and number of resolved factors.

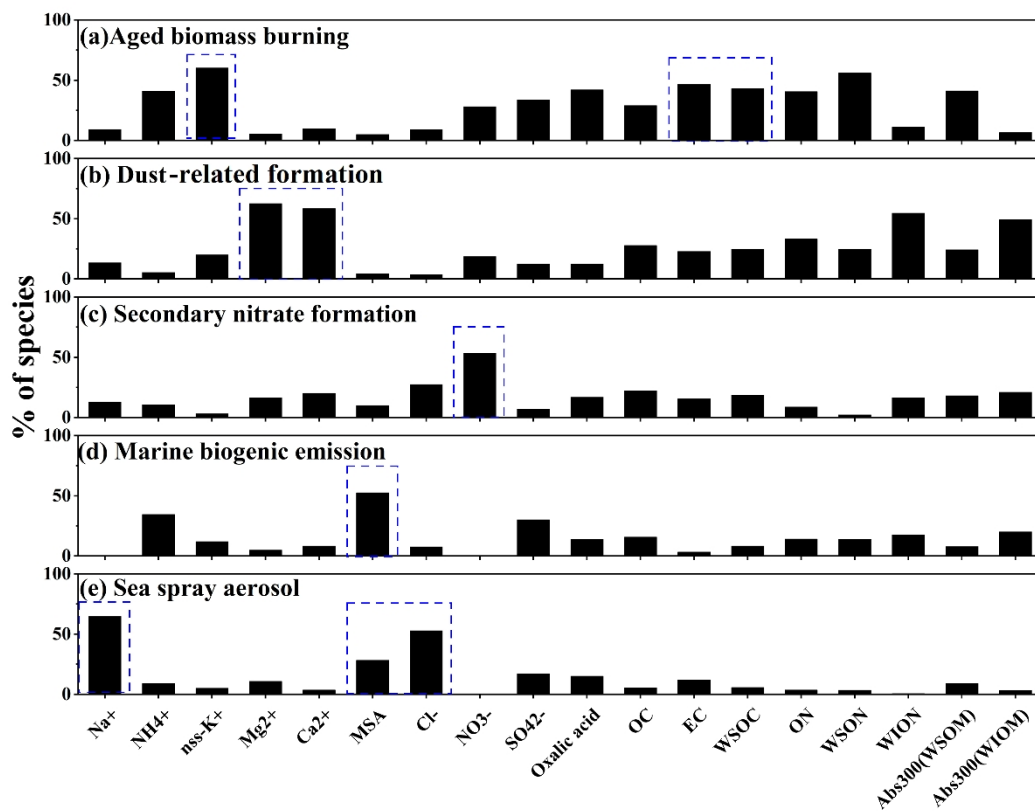


Figure S4 Explained source profiles resolved by PMF.

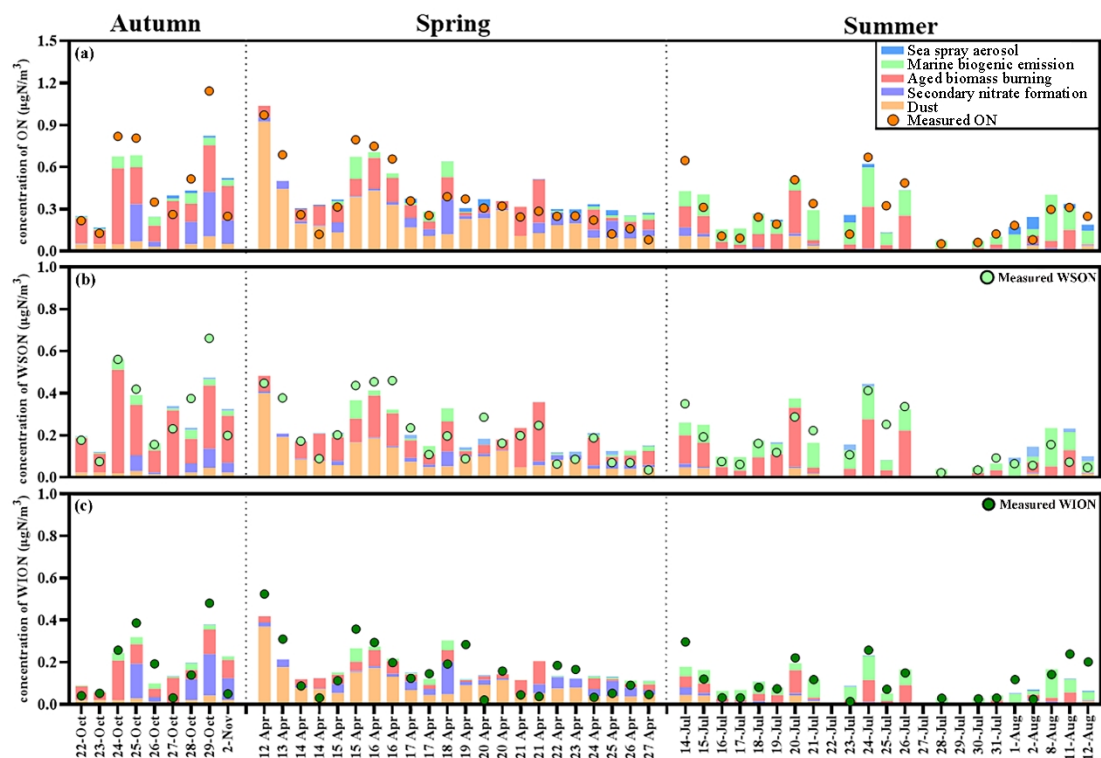


Figure S5 Source contributions of ON, WSON, and WION in marine aerosols over the YBS.

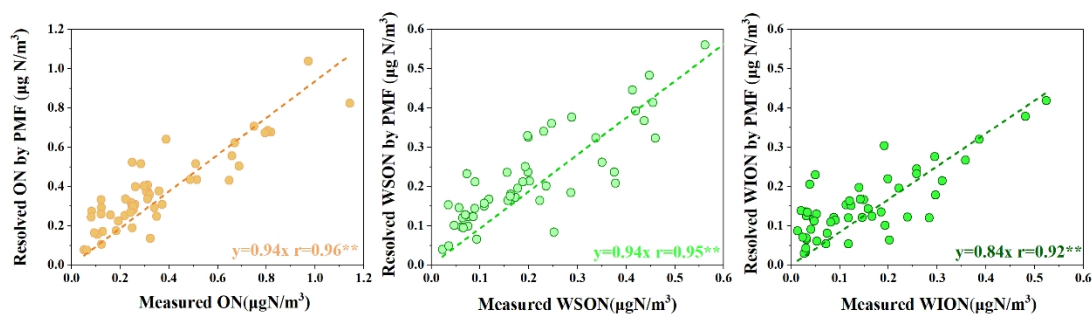


Figure S6 Comparison of ON, WSON, and WION resolved by PMF and measured concentrations. ** indicates the correlation is significant at the 0.01 level.

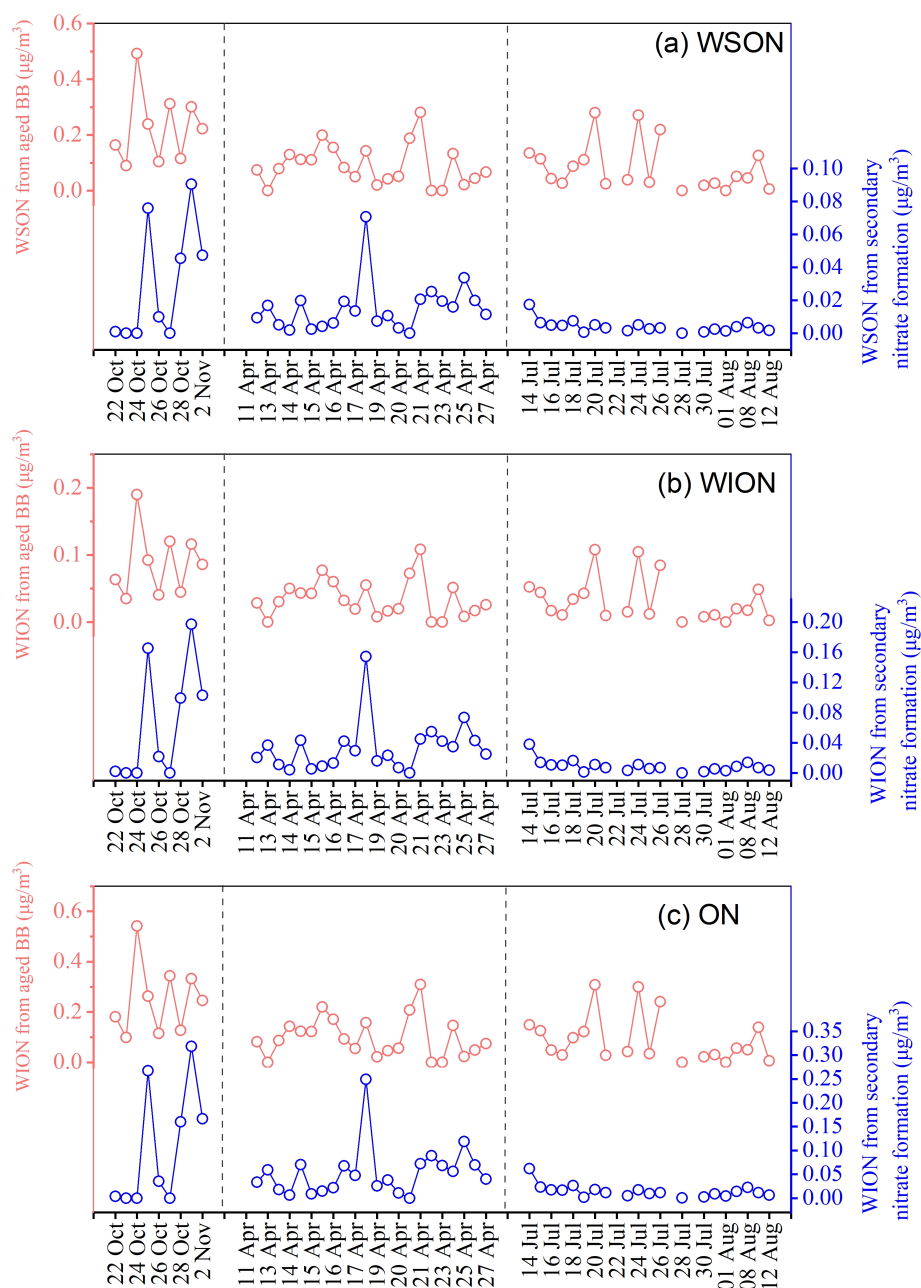


Figure S7 Time series of (a) WSON, (b) WION, and (c) ON contributed by aged biomass burning and secondary nitrate formation.

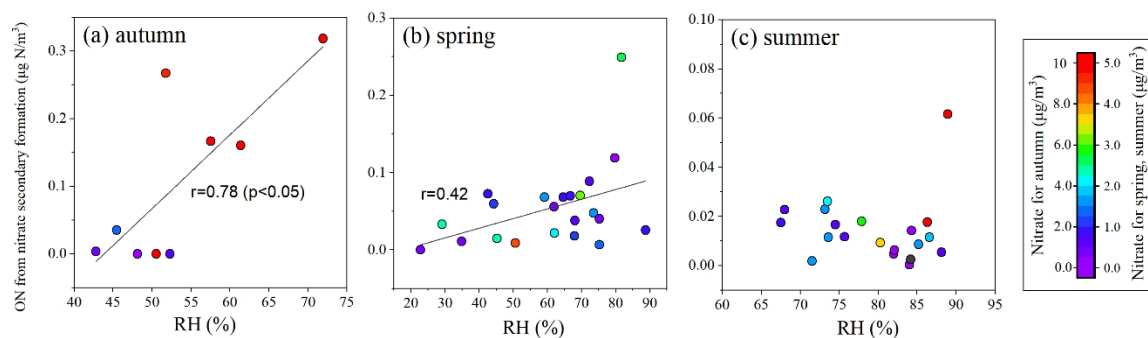


Figure S8 Variation of ON from nitrate secondary formation as a function of RH in each season. The markers are colored by nitrate concentrations. The spring and summer samples used the same color bar, and the autumn samples used a different one.

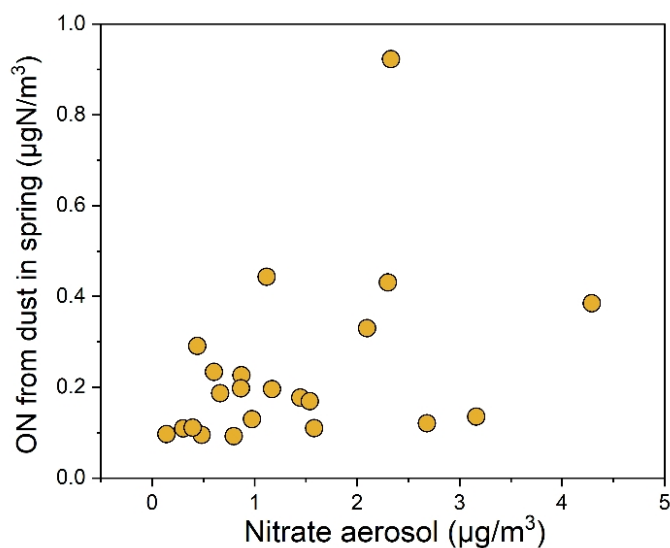


Figure S9 Variation of ON from dust as a function of nitrate aerosols during the spring cruise.

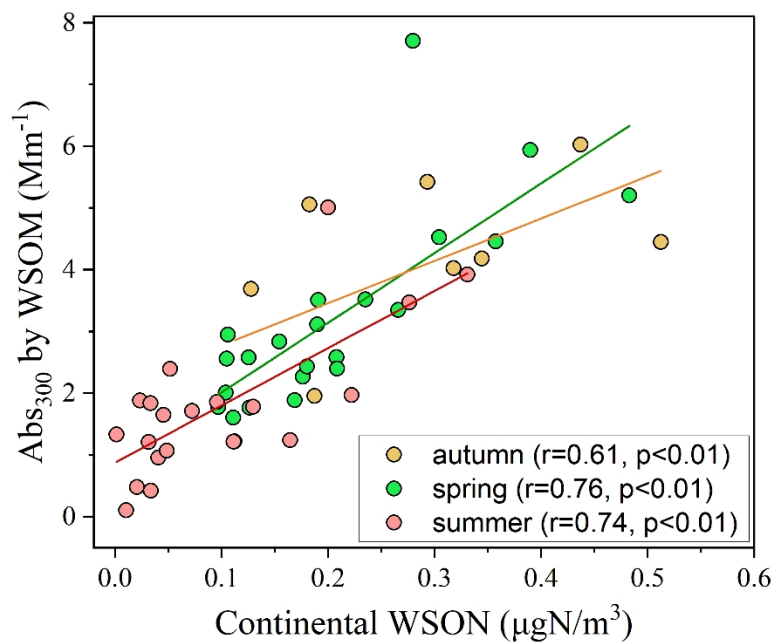


Figure S10 Variation of Abs_{300} by WSOM as a function of continental WSON within individual season.

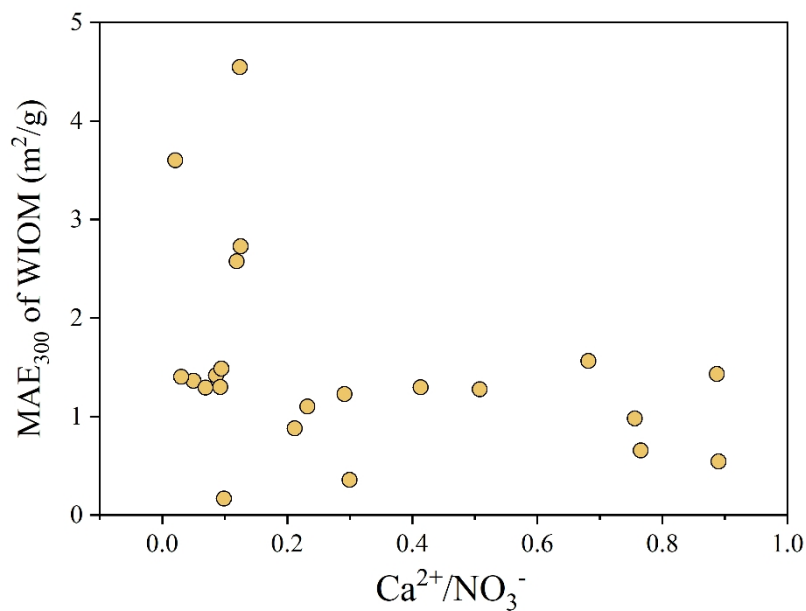


Figure S11 Variation of MAE_{300} of WIOM as a function of $\text{Ca}^{2+}/\text{NO}_3^-$ mass ratio in spring.