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*Supplement of*

# A possible unaccounted source of nitrogen-containing compound formation in aerosols: amines reacting with secondary ozonides

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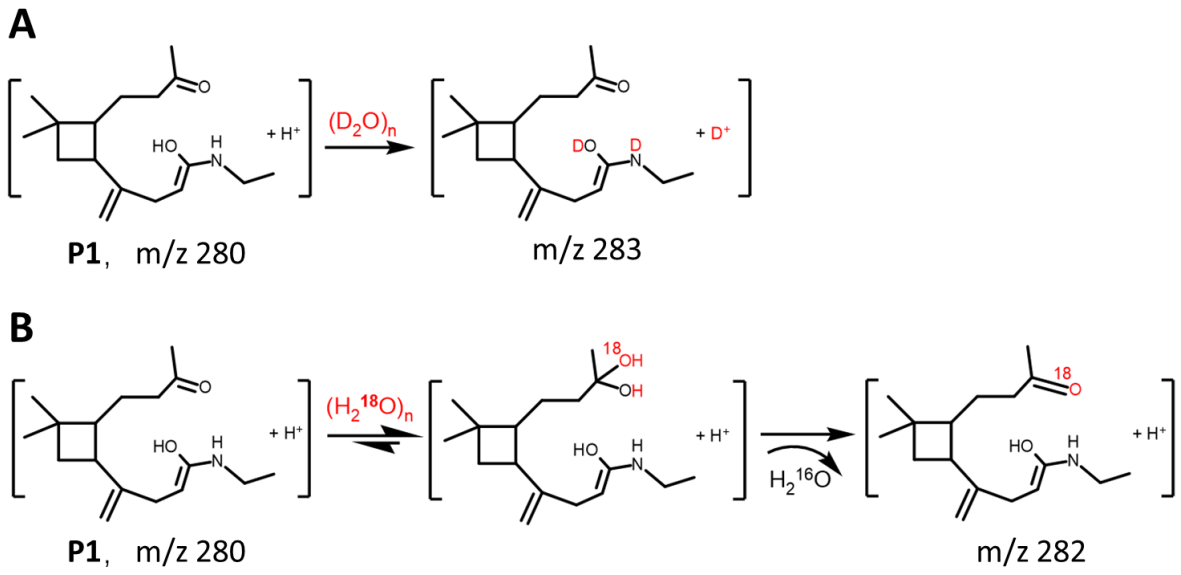
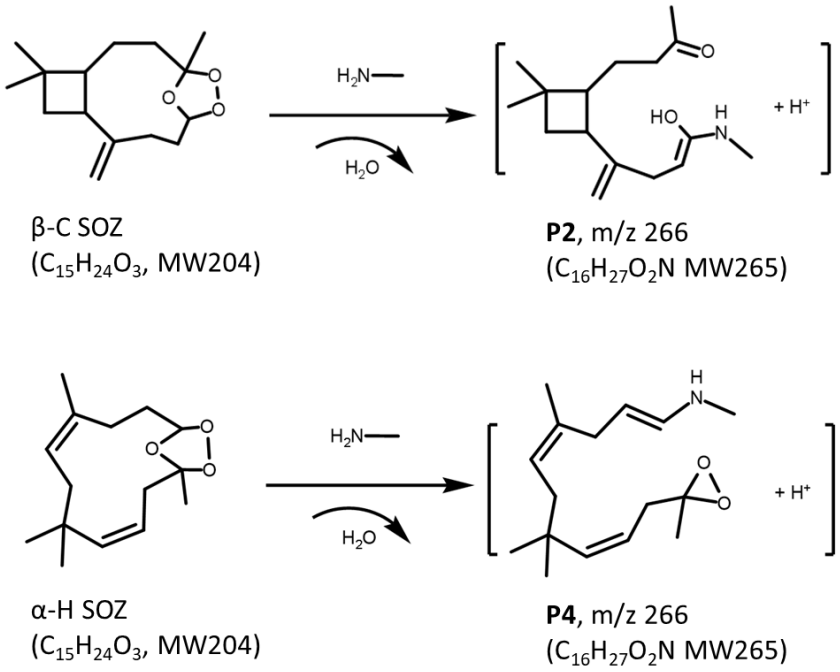
*Supplement*

## Schemes




**Scheme S1** (A) H-atom and D-atom exchange between P1 and $D_2O$ in AN/$D_2O$ solution. (B) O-atom exchange between P1 and $H_2{}^{18}O$ in AN/$H_2{}^{18}O$ solution.




**Scheme S2** Possible structures of P2 and P4 generated from the reactions of β-C SOZ and α-H SOZ with MA

## Figures

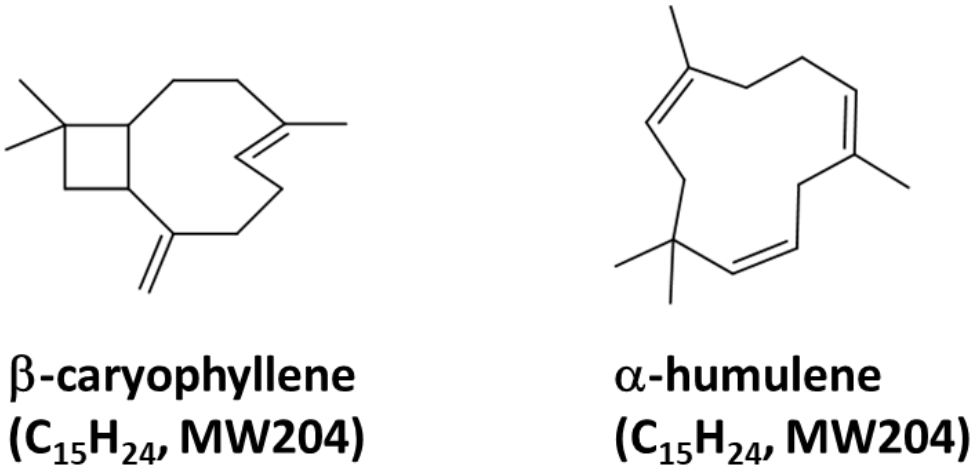



**Figure S1** Chemical structures of β-caryophyllene and α-humulene

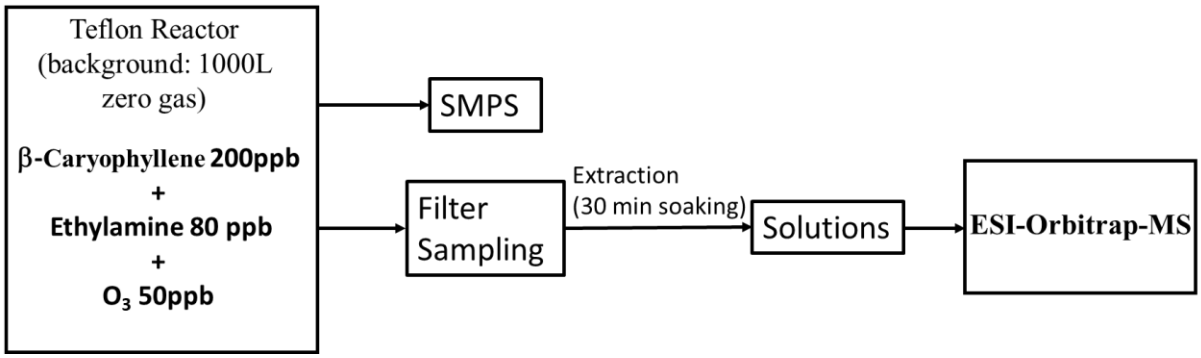



**Figure S2** Schematic setup and procedure used in this work

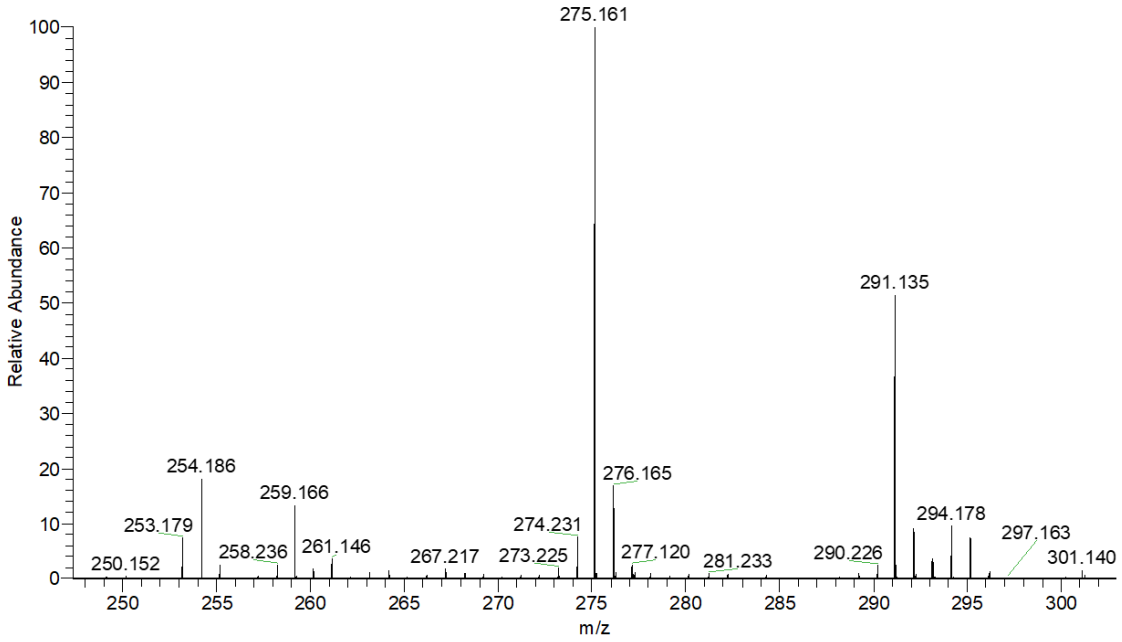



**Figure S3** High-resolution positive-ion ESI mass spectra of the degradation products extracted in AN/$D_2O$ (vol/vol = 4/1) from β-C reacting with $O_3$.

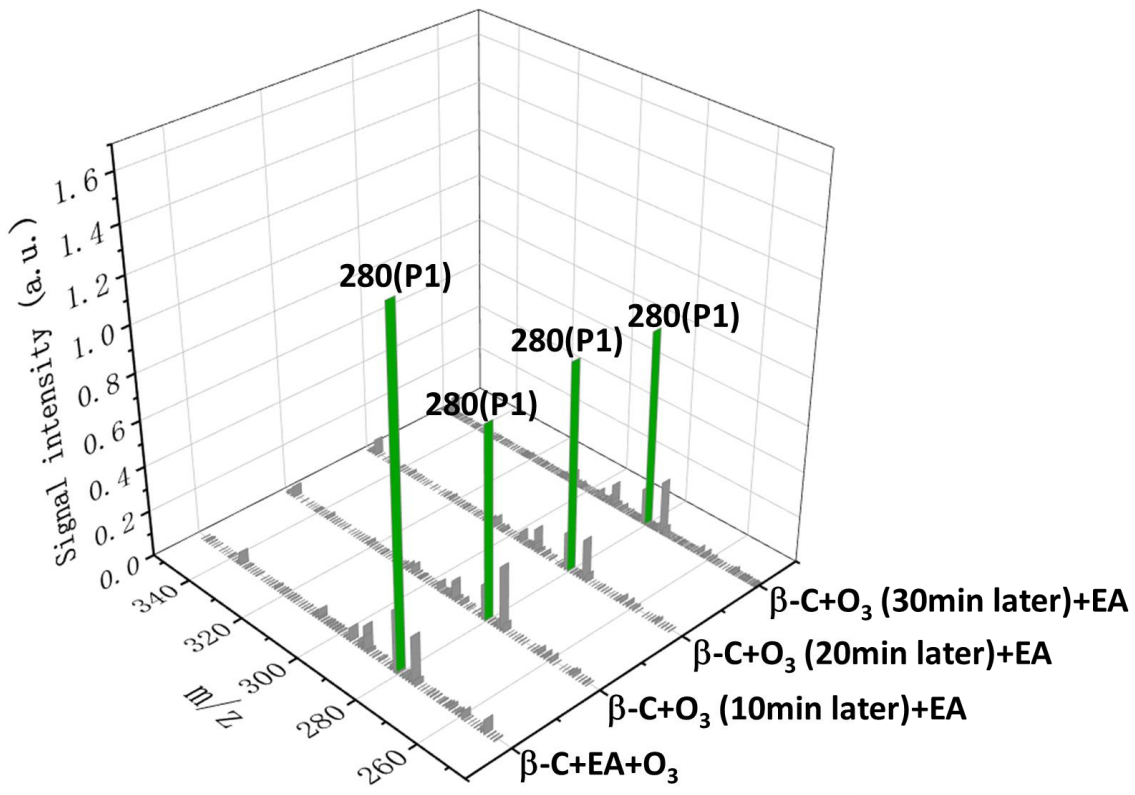



**Figure S4** Positive-ion ESI mass spectra of the products extracted in AN/W (vol/vol = 4/1) from ozonolysis of β-C in addition of EA at different timings

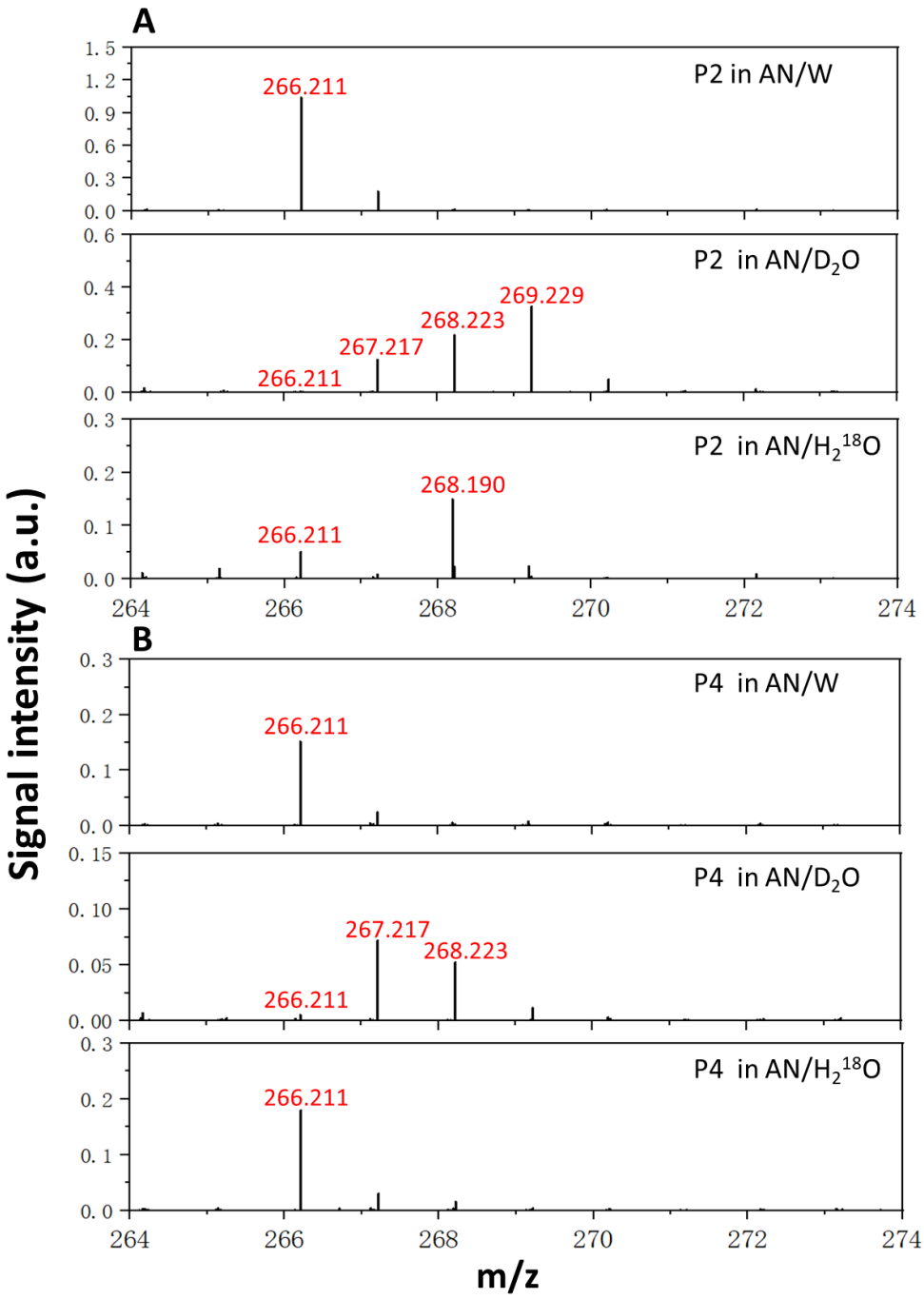



**Figure S5** High-resolution positive-ion ESI mass spectra of (A) P2 and (B) P4 extracted in AN/W (vol/vol = 4/1), AN/$D_2O$ (vol/vol = 4/1) and AN/$H_2{}^{18}O$ (vol/vol = 4/1) solutions