

*Supplement of*

## **A Possible Unaccounted Source of Nitrogen-Containing Compounds Formation in Aerosols: Amines Reacting with Secondary Ozonides**

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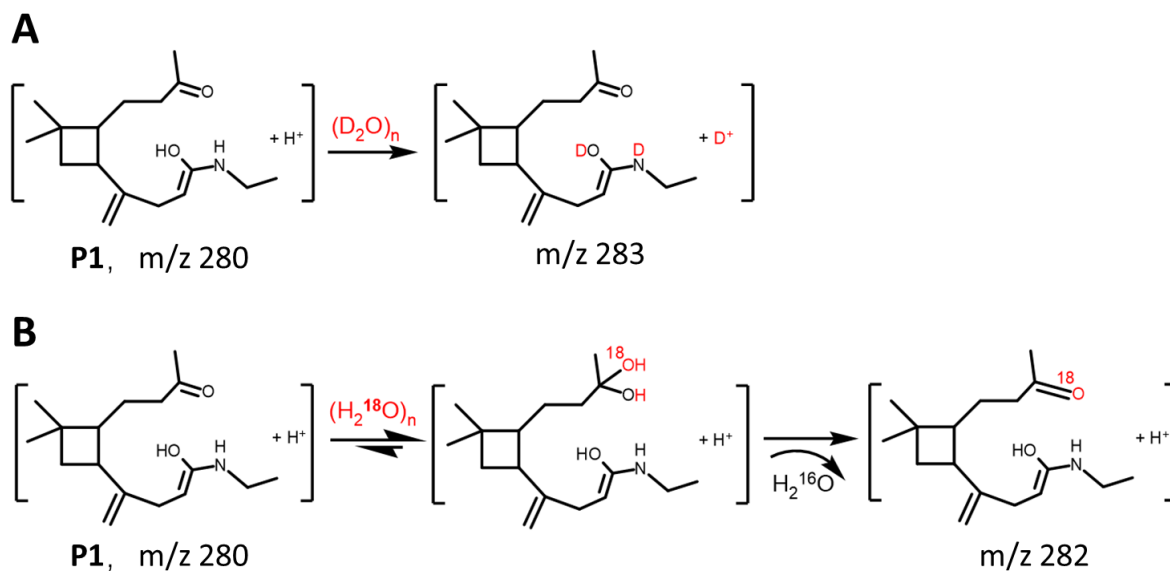
Number of Schemes: 2

Number of Figures: 5

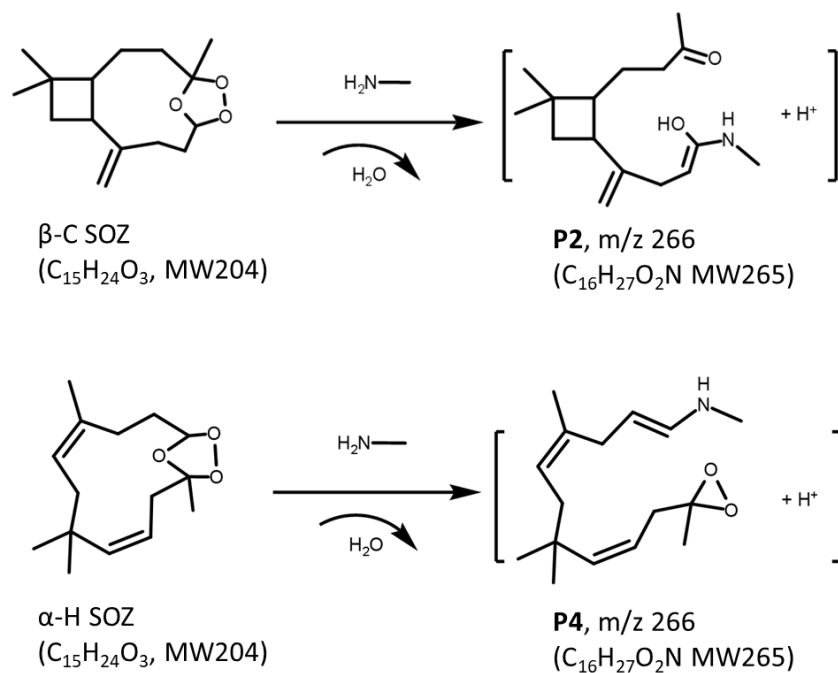
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## Schemes

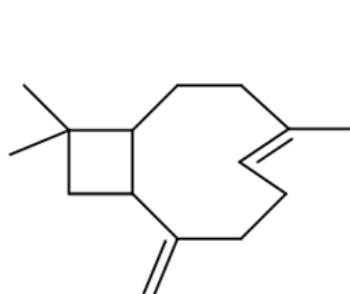


**Scheme S1** (A) H-atom and D-atom exchange between P1 and D<sub>2</sub>O in AN/D<sub>2</sub>O solution. (B) O-atom exchange between P1 and H<sub>2</sub><sup>18</sup>O in AN/H<sub>2</sub><sup>18</sup>O solution.

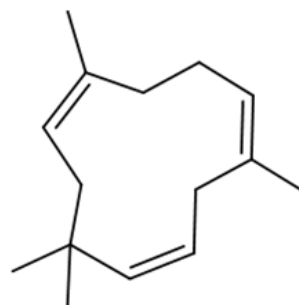


**Scheme S2** Possible structures of P2 and P4 generated from the reactions of  $\beta\text{-C SOZ}$  and  $\alpha\text{-H SOZ}$  with MA

## Figures

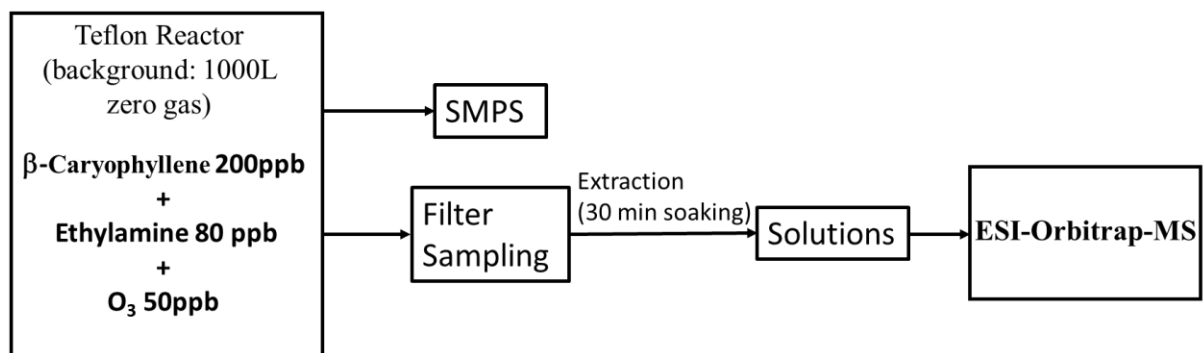


**$\beta$ -caryophyllene**  
**(C<sub>15</sub>H<sub>24</sub>, MW204)**

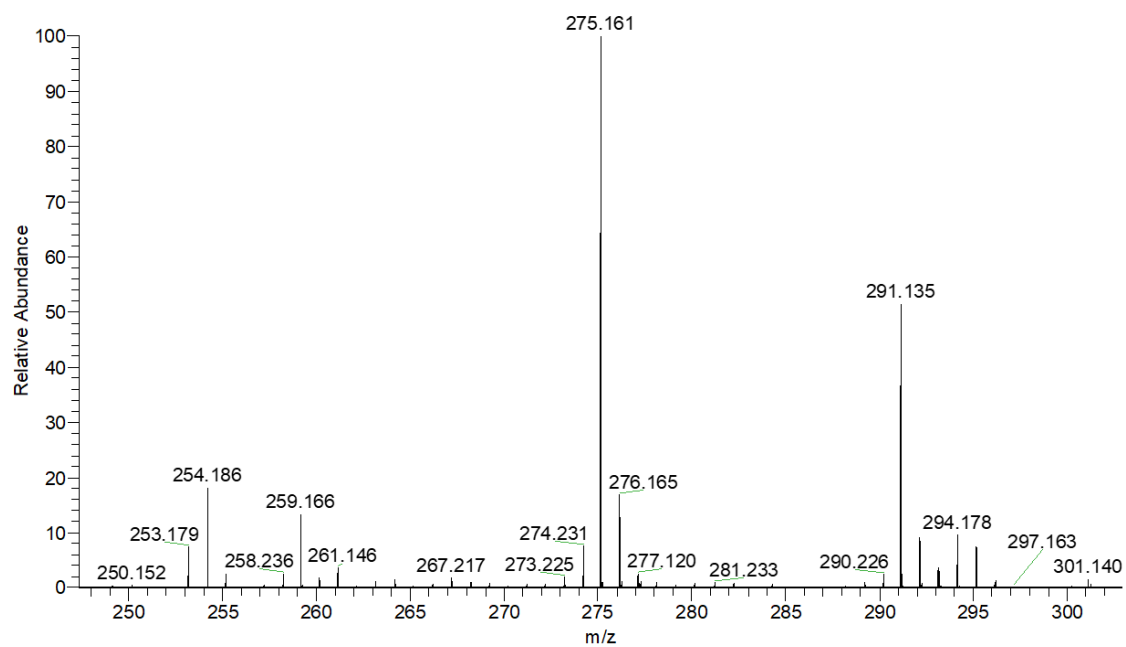


**$\alpha$ -humulene**  
**(C<sub>15</sub>H<sub>24</sub>, MW204)**

**Figure S1** Chemical structures of  $\beta$ -caryophyllene and  $\alpha$ -humulene

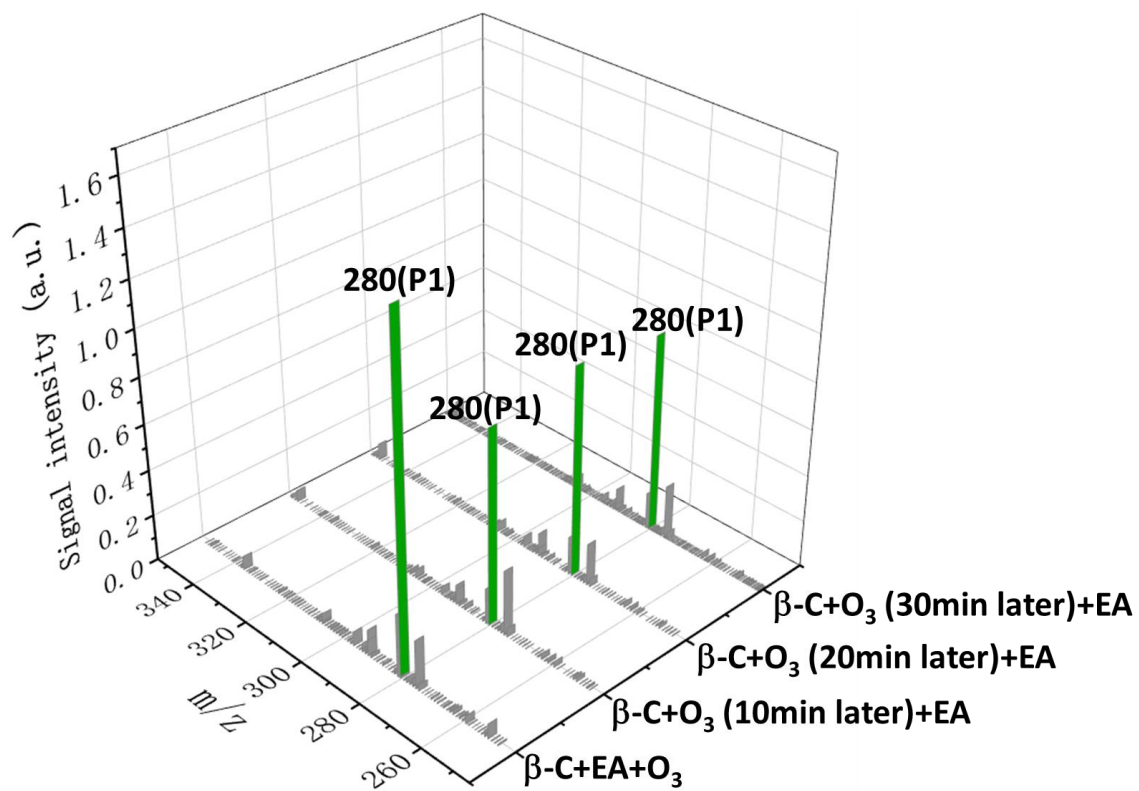


**Figure S2** Schematic setup and procedure used in this work

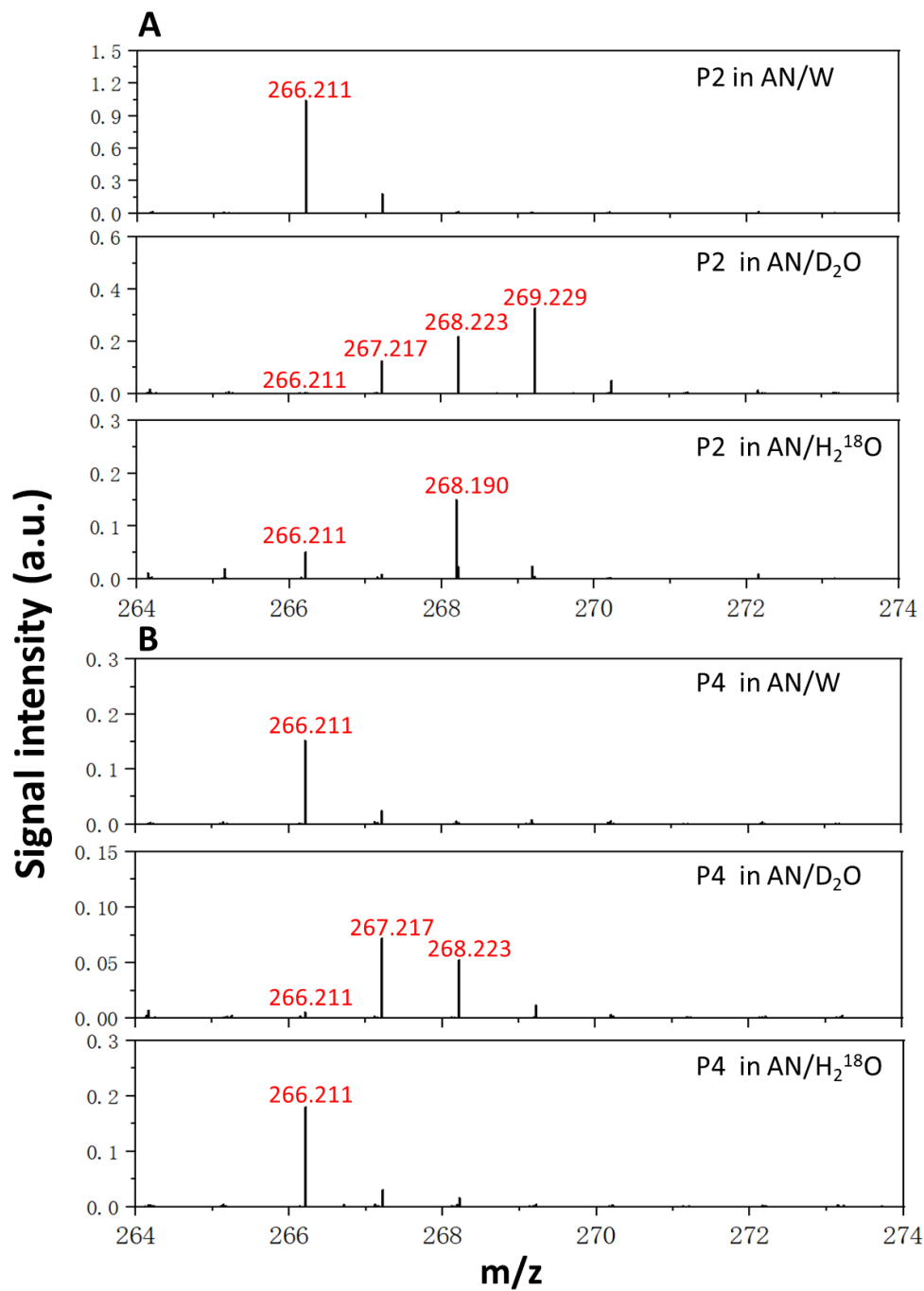


**Figure S3** High-resolution positive-ion ESI mass spectra of the degradation products extracted in AN/D<sub>2</sub>O (vol/vol = 4/1) from  $\beta$ -C reacting with O<sub>3</sub>.





**Figure S4** Positive-ion ESI mass spectra of the products extracted in AN/W (vol/vol = 4/1) from ozonolysis of  $\beta$ -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<sub>2</sub>O (vol/vol = 4/1) and AN/H<sub>2</sub><sup>18</sup>O (vol/vol = 4/1) solutions