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A detailed study of the ion chemistry of alkenes focusing on heptenes aimed at their SIFT-MS quantification

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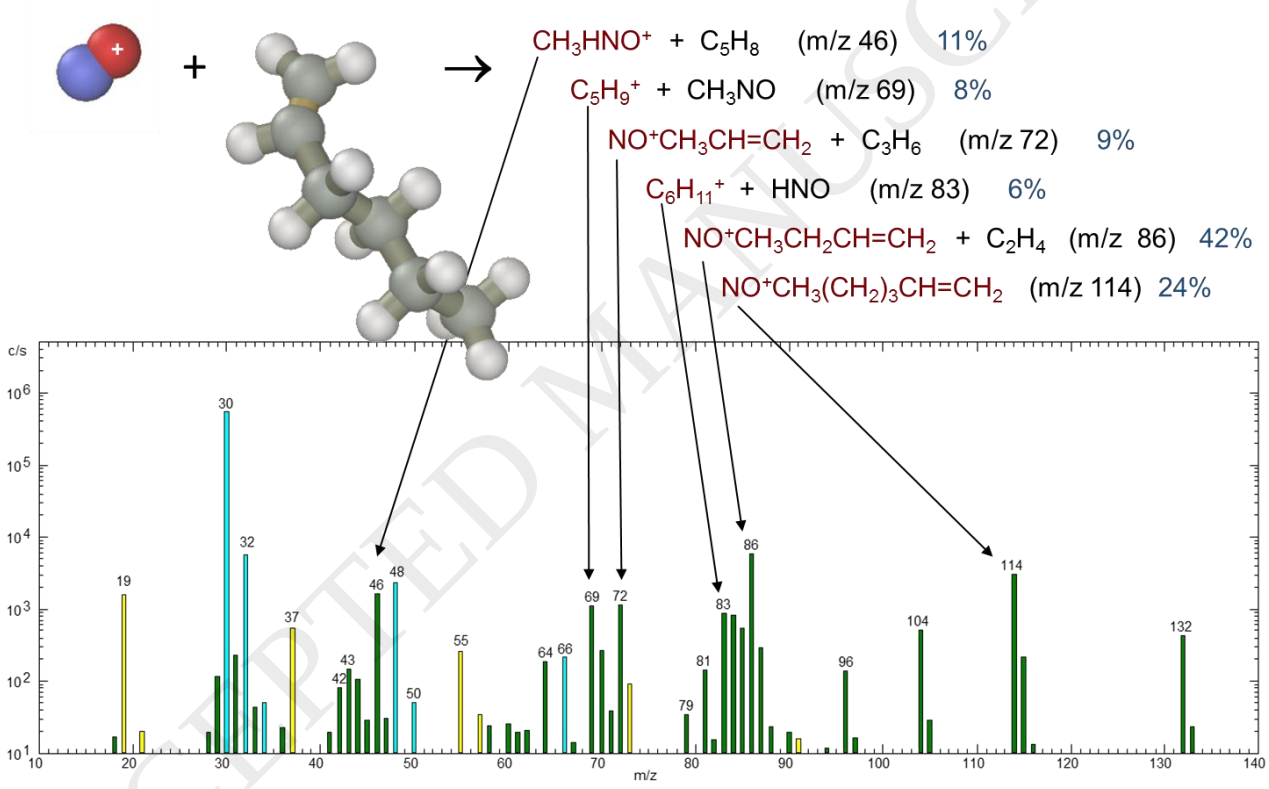
Graphical abstract



Highlights

- Rate coefficients and product ion branching ratios were determined for the reactions of H_3O^+, NO^+ and O_2^+ with several alkenes
- The compounds included 1-hexene, 1-heptene, *trans*-2-heptene, 3-heptene (*cis* and *trans*), 1-octene, 1-nonene, 1-decene
- Characteristic product ions were chosen and the concentration calculation equation coefficients were determined.