

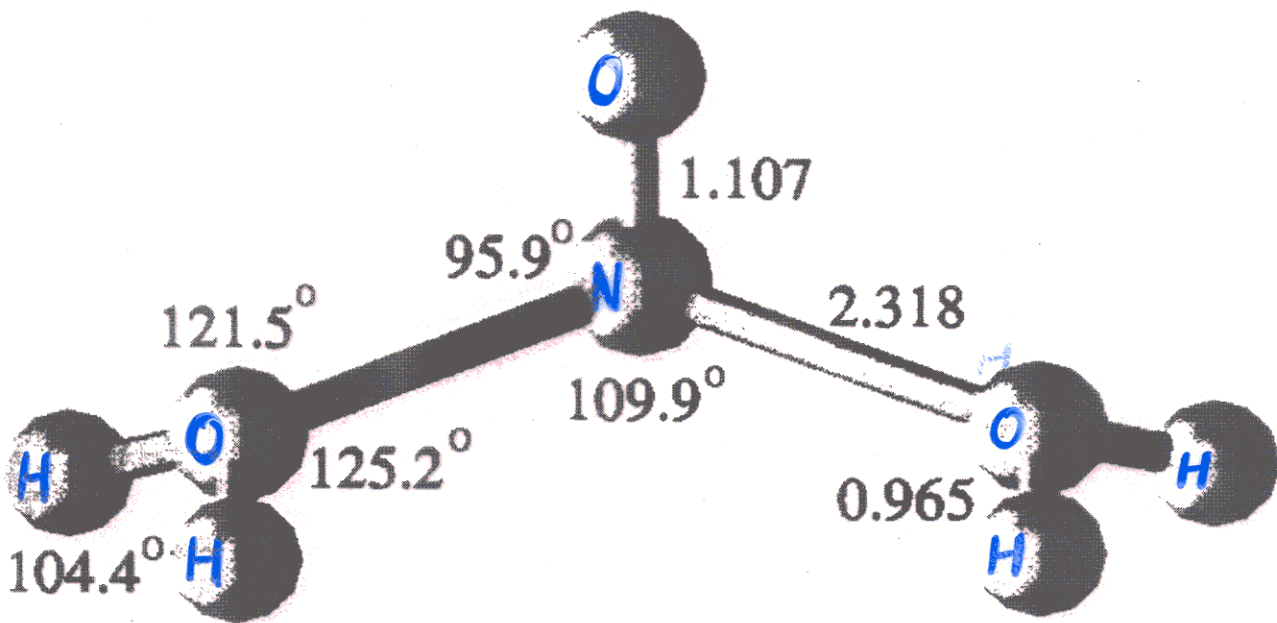
Vibrational spectroscopy of $\text{NO}^+(\text{H}_2\text{O})_n$: Evidence for the intracuster reaction $\text{NO}^+(\text{H}_2\text{O})_n \rightarrow \text{H}_3\text{O}^+(\text{H}_2\text{O})_{n-2}$ (HONO) at $n \geq 4$

Jong-Ho Choi, Keith T. Kuwata, Bernd-Michael Haas, Yibin Cao, Matthew S. Johnson, and Mitchio Okumura^{a)}

Arthur Amos Noyes Laboratory of Chemical Physics,^{b)} California Institute of Technology, Pasadena, California 91125

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Infrared spectra of mass-selected clusters $\text{NO}^+(\text{H}_2\text{O})_n$ for $n=1$ to 5 were recorded from 2700 to 3800 cm^{-1} by vibrational predissociation spectroscopy. Vibrational frequencies and intensities were also calculated for $n=1$ and 2 at the second-order Møller-Plesset (MP2) level, to aid in the



Each H_2O donates a lone pair to one of the empty $2\pi^*$ Mo's on NO^+

