

INFRARED SPECTROSCOPY OF ISOTOPICALLY SUBSTITUTED NO₃ TRAPPED IN SOLID NEON

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A sufficient concentration of NO₃ trapped in solid neon has been produced for detection of all of its previously reported infrared bands between 700 and 2600 cm⁻¹, most of which lie within 2.5 cm⁻¹ of the gas-phase band origins. Analysis of the infrared spectra obtained for isotopologues of NO₃ which contain nitrogen-15 and/or oxygen-18 is consistent with a planar, threefold symmetric structure for the ground-state molecule and provides information supporting the occurrence of extensive mixing of ground-state vibrational levels of *E'* symmetry and vibronic interaction with the \tilde{B}^2E' excited electronic state.