THE LOW-LYING BENDING VIBRONIC BANDS OF THE MgNC $\tilde{A}\ ^2\Pi$ – $\tilde{X}\ ^2\Sigma^+$ TRANSITION: ANALYSIS OF THE RENNER-TELLER VIBRONIC STRUCTURE

MASARU FUKUSHIMA and TAKASHI ISHIWATA, *Faculty of Information Sciences, Hiroshima City University, Asa-Minami, Hiroshima 731-3194, Japan*.

We have generated MgNC in supersonic free jet expansions, and measured the laser induced fluorescence excitation spectra of the Mg-N-C bending vibronic bands of the $\tilde{A}\ ^2\Pi$ – $\tilde{X}\ ^2\Sigma^+$ transition. We analyzed 2^1_0, $\kappa\ ^2\Sigma^{(+)}$ – and 2^2_0, $\kappa\ ^2\Pi$ – $^2\Sigma^+$ bands and 2^2_0, $\mu\ ^2\Pi_{\frac{1}{2}}$ – $^2\Sigma^+$ sub-band. Through the molecular constants of the $\tilde{A}$ (010) $\kappa\ ^2\Sigma^{(+)}$, (020) $\kappa\ ^2\Pi$ and $\mu\ ^2\Pi_{\frac{1}{2}}$ levels, the Renner-Teller vibronic structure on the ν_2 bending mode in the $\tilde{A}\ ^2\Pi$ state has been characterized. To analyze the vibronic structure, we need to consider the anharmonic term.