

LASER INDUCED FLUORESCENCE SPECTROSCOPY OF JET-COOLED AINC AND AICN

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The rotationally resolved laser induced fluorescence spectra for the $^1A' - \tilde{X}^1\Sigma^+$ electronic transition of AINC and AICN were measured in supersonic free expansions. The radicals were prepared by reacting the CN fragments from CH_3CN in an Ar plasma with Al atoms evaporated using laser ablation of the metal surface. The electronic spectrum of AICN was observed at about 2500 cm^{-1} above that of AINC reported previously^a, and the fluorescence state is much lower than that reported by Gerasimov *et al*^b. The rotational structures of both AINC and AICN spectra measured by a excitation laser source with 0.03 cm^{-1} spectral resolution show a typical pattern of bent-linear transition.

^aM. Fukushima, Chem. Phys. Lett. **283**, 337 (1998).

^bI. Gerasimov, X. Yang, and P. L. Dagdigan, J. Chem. Phys. **110**, 220 (1999).