BASE PAIR ANALOGS IN THE GAS PHASE [a]

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A rotationally resolved electronic spectrum of the 2-aminopyridine/2-pyridone (2AP/2PY) dimer in the gas phase has been obtained and interpreted. Using structures based on x-ray crystallography [ab], a dimer structure is proposed, and used to determine that the hydrogen bond lengths are similar to those found elsewhere, with little change upon electronic excitation. Further analyses of the transition moment reveals that, while 2PY is the primary chromophore, 2AP is also excited, indicating a single-photon, double-chromophore excitation. Possible theoretical interpretations of the excitation are discussed.

[a] Work supported by NSF.

[a] Ming Chao, Ellory Schempp, and Robert D. Rosenstein, Acta Cryst. B31, 2922 (1975)

[b] H. W. Yang and B. M. Craven, Acta Cryst. 54, 912 (1998)