EXCITED STATE PERTURBATIONS OF 7-AZAINDOLE MEDIATED THROUGH MICRO-SOLVATION.[a]

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7-azaindole readily forms water clusters when seeded into a molecular beam. Interestingly, the addition of water considerably perturbs the excited state of 7-azaindole: the electronic origin of 7-azaindole(H_2O) is shifted drastically to lower energy, $1290\ \mathrm{cm}^{-1}$, relative to the origin of the bare molecule; furthermore, recent evidence indicates that 7-azaindole(H_2O) is of L_a character, contrary to the bare molecule.[b] In this work, high resolution electronic spectra of 7-azaindole(H_2O) were measured in the presence of an external electric field , as a means to study water induced changes in the electronic distribution of 7-azaindole. Furthermore, the L_a/L_b character of the excited state of 7-azaindole(H_2O) was examined by recording similar spectra of isotopically labeled species.

[a] Work supported by NSF(CHE-0911117)

[b] T. B. C. Vu, I. Kalkman, L. W. Meerts, Y. Svartsov, C. Jacoby, and M. Schmitt, *J. Chem. Phys.* **128**, 214311 (2008).