INFRARED SPECTROSCOPIC STUDIES OF IMIDAZOLE COMPLEXES IN SUPERFLUID HELIUM NANODROPLETS

MYONG YONG CHOI, and ROGER E. MILLER, *Department of Chemistry, University of North Carolina at Chapel Hill, Chapel Hill, NC 27599, USA*.

Infrared laser spectroscopy has been used to characterize imidazole (IM), imidazole dimer (IMD) and imidazole-water (IMW) binary system formed in helium nanodroplets. The experimental results are compared with ab initio calculations reported here. Vibrational transition moment angles (VTMAs) provide conclusive assignments for the various complexes studied here. In the present study we confirm the existence and the assignment of the infrared spectra of IM, one isomer of IMD and two isomers of the IMW binary complexes.