

INFRARED SPECTROSCOPY OF $\text{Li}(\text{METHYLAMINE})_n(\text{NH}_3)_m$ CLUSTERS

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Recent work in our laboratory has led to the first size-selective infrared spectra of neutral $\text{Li}(\text{NH}_3)_n$ clusters. Here we report on new work extending these studies to mixed cluster species, where ammonia derivatives such as methylamine (MA) replace some of the ammonia molecules. Spectra recorded using mass-selective IR depletion spectroscopy will be reported for $\text{Li}(\text{MA})_m(\text{NH}_3)_n$, with the emphasis on $n + m = 4$ clusters. The impact of replacing NH_3 with bulkier ligands on the solvent structure will be described. In addition the IR spectrum of the smaller cluster $\text{Li}(\text{MA})(\text{NH}_3)$ will be reported for the first time.