HIGH-RESOLUTION INFRARED SPECTROSCOPY OF HCN-Zn_n CLUSTERS

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Rotationally resolved infrared spectra have been obtained for the first time for tr ansition metal complex-adsorbate systems. The zinc clusters are formed in helium d roplets, to which are added a single HCN molecule. The C-H stretches of the comple xes have been measured for HCN-Zn_n, where n=1-4. The rotaional constants and di pole moments are reported and compared to ab initio calculations.