

GENERATION OF VIBRATIONALLY EXCITED HCP FROM A STABLE SYNTHETIC PRECURSOR

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HCP belongs to a class of reactive small molecules with much interest to spectroscopists. It bears certain similarities to HCN, including a strong \tilde{A} (bent) - \tilde{X} (linear) ultraviolet transition, associated with the HCP-HPC isomerization pathway. HCP has traditionally been generated by the *in situ* reaction of PH_3 and acetylene. In this talk, we will discuss a recently developed synthetic precursor molecule, 1,1-((triphenylphosphoranylidene)methyl)-9,10-phosphoanthracene. At temperatures above 200 degrees Celsius, this precursor is thought to release HCP in a vibrationally excited state. We will present preliminary spectra on this system obtained by LIF and chirped pulse millimeter wave spectroscopy.