

936
LIF

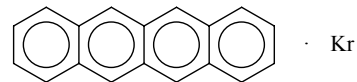
C₁₈H₁₂Kr

Naphthalene – krypton (1/1)

Tetracene – krypton (1/1)
(weakly bound complex)

C_{2v}

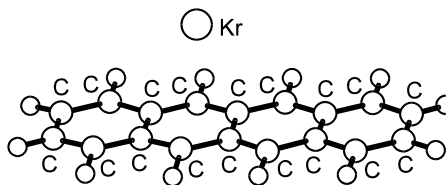
(effective symmetry class)
(large-amplitude motion)



State	\tilde{X}^1A_1
Energy [eV]	0.00
$r_0(\text{C}_{18}\text{H}_{12}\dots\text{Kr})$ [Å]	3.65(20)

Krypton was passed over tetracene heated to *ca.* 210 °C and expanded into a vacuum chamber. The Doppler line width was reduced to about 15

MHz by doubly skimming the molecular beam. Fluorescence was excited by a tunable dye laser with a line width of *ca.* 3 MHz. Rotational constants were obtained from the analysis of the resulting spectrum and are consistent with a structure with the Kr atom lying over the center of one of the inner rings in tetracene.



Szydłowska, I., Myszkiewicz, G., Meerts, W.L.: Chem. Phys. **283** (2002) 371.