

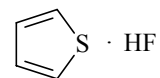
521
MW

 $\text{C}_4\text{H}_5\text{FS}$
Thiophene – hydrogen fluoride (1/1)
(weakly bound complex)

 C_s
(effective symmetry class)
(large-amplitude motion)

r_0	\AA^{a}
S...H	2.98(5)

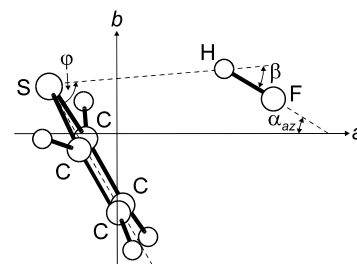
θ_0	deg^{a}
φ^{b}	65(1)
β^{b}	34(6)



Interpretation of the spectroscopic constants suggests that the complex has a geometry of C_s symmetry, with a long, weak hydrogen bond formed by HF to the π -electron density in the region of the S atom.

^a) Uncertainties include that of $\alpha_{az} = 30 \pm 5^\circ$.

^b) See figure for the definition.



Cooke, S.A., Corlett, G.K., Legon, A.C.: Chem. Phys. Lett. **291** (1998) 269.