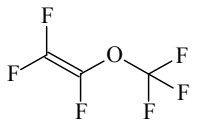
335 **C_3F_6O** **Trifluoro(trifluoromethoxy)ethene** **C_1**

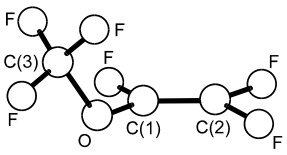
ED, *ab initio* calculations

Trifluoromethyl trifluorovinyl ether



r_a	Å [a])	θ_a	deg [a])
C(1)=C(2)	1.310 [b])	C(2)=C(1)–O	117.5(18)
C–F (mean)	1.322(3)	C=C–F (mean)	123.9(12)
C(3)–F [c])	1.326(4)	C(2)=C(1)–F [d])	123.1(13)
C(1)–F [c])	1.331(7)	C(1)=C(2)–F [d])	124.3(13)
C(2)–F [c])	1.316(7)	C–O–C	118.9(19)
O–C (mean)	1.373(14)	F–C(3)–F	108.9(3)
		tilt(CF_3) [e])	4.2(28)
		τ [f])	103.7(19)

Local C_{3v} symmetry and the staggered conformation with respect to the O–C(1) bond were assumed for the CF_3 group.
The nozzle was at room temperature.



[a]) Three times the estimated standard errors including a systematic error.
[b]) Assumed at the experimental value for the $F_2C=CF_2$ molecule.
[c]) Differences between the C–F bond lengths were assumed at the mean values from HF/3-21G and MP2/6-31G* calculations. Two inequivalent C(2)–F bond lengths were essentially equal.
[d]) Difference between the C=C–F bond angles was assumed at the mean value from HF/3-21G and MP2/6-31G* calculations. Two inequivalent C(1)=C(2)–F bond angles were essentially equal.
[e]) Tilt angle between the C_3 axis of the CF_3 group and the O–C bond direction away from the O–C(1) bond.
[f]) C=C–O–C torsional angle from the *syn* position.

Leibold, C., Reinemann, S., Minkwitz, R., Resnik, P.R., Oberhammer, H.: J. Org. Chem. **62** (1997) 6160.