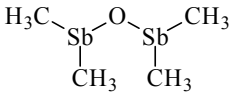
605 **$C_4H_{12}OSb_2$** **Bis(dimethylstibino) oxide** **C_2** (near *syn-syn*)
ED, DFT calculations Oxybis[dimethylstibine] **C_s** assumed (*syn-anti*)

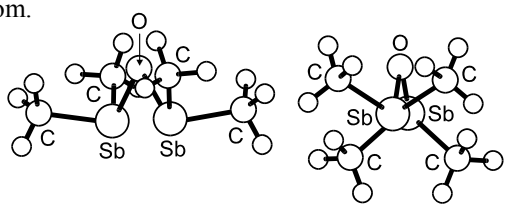


r_a	Å [a])
Sb–O	1.976(14)
Sb–C	2.144(9)
C–H (mean)	1.108(7)
syn-syn	
Sb...Sb [b])	3.462(16)
syn-anti	
Sb...Sb [b])	3.597(16)

θ_a	deg [a])
O–Sb–C	92.3(6)
C–Sb–C	97.8(18)
Sb–C–H (mean)	108.7(13)
syn-syn	
Sb–O–Sb	122.3(16)
Sb–O–Sb–lp [c])	±28(4)
syn-anti	
Sb–O–Sb	131.1(18)
Sb–O–Sb–lp [c])	0, 180 [d])

The molecule exists as a mixture of the near *syn-syn* (49(7)%) and *syn-anti* (51(7)%) conformers. Local C_{3v} symmetry was assumed for the $SbCH_3$ groups. Methyl group orientations were assumed in such a way that one C–H bond is *anti* to the Sb–O bond. BPW91/LanL2DZ+P calculations indicated the existence of *syn-anti* conformer 4.6 kJ mol^{-1} above the more stable near *syn-syn* conformer.
The nozzle temperature was 22(2) °C.

[a]) Twice the estimated standard errors including a systematic error.
[b]) Difference between Sb...Sb distances in the two conformers was assumed at the value from BPW91/LanL2DZ+P.
[c]) lp is the lone pair on the Sb atom.
[d]) Assumed.



syn-syn *syn-anti*

Haaland, A., Sokolov, V.I., Volden, H.V., Breunig, H.J., Denker, M., Rösler, R.: Z. Naturforsch. **52b** (1997) 296.
See also: Haaland, A., Shorokhov, D.J., Sokolov, V.I., Volden, H.V., Breunig, H.J., Denker, M., Rösler, R.: Phosphorus Sulfur Silicon **136-138** (1998) 463.