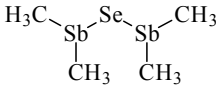
609 **$C_4H_{12}Sb_2Se$** **Bis(dimethylstibino)selane** **C_2** (near *syn-syn*)
ED, DFT calculations Selenobis[dimethylstibine] **C_s** assumed (*syn-anti*)
Bis(dimethylstibino) selenide (see also comment)

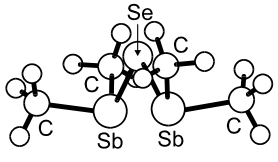
r_a	Å [a])
Sb–Se	2.551(5)
Sb–C	2.152(7)
C–H (mean)	1.103(9)
syn-syn	
Sb...Sb [c])	3.80(6)
syn-anti	
Sb...Sb [c])	3.96(6)

θ_a	deg [a])
Se–Sb–C	95.0(7)
C–Sb–C	92(7)
Sb–C–H (mean)	109 [b])
syn-syn	
Sb–Se–Sb	96.3(11)
Sb–Se–Sb–lp [d])	±26(3)
syn-anti	
Sb–Se–Sb	101.9(11)
Sb–Se–Sb–lp [d])	0, 180 [e])

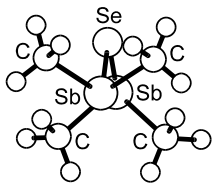


The molecule exists as a near *syn-syn* conformer. The presence of the second conformer (*syn-anti*) was uncertain. The ED analysis yielded the mole fraction of the *syn-anti* conformer $x = 0.27(18)$. Local C_{3v} symmetry was assumed for the $SbCH_3$ groups. Methyl group orientations were assumed in such a way that one C–H bond is *anti* to the Sb–Se bond. BPW91/LanL2DZ+P calculations indicated the existence of *syn-anti* conformer 3.7 kJ mol^{-1} above the more stable near *syn-syn* conformer.
The nozzle temperature was 70(5) °C.

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