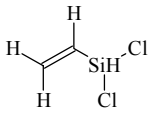
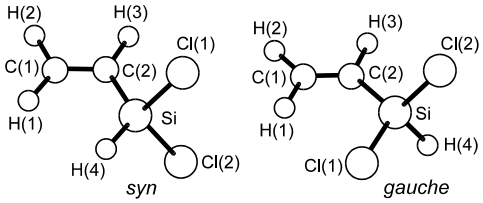
265 **$C_2H_4Cl_2Si$** **Dichloro(ethenyl)silane** **C_s** (*syn*)
ED, *ab initio* and DFT calculations Dichloro(vinyl)silane **C_1** (*gauche*)



r_g	Å [a])	θ_α	deg [a])
C=C	1.357(7)	C–C–Si	121.8 [b])
C–Si	1.847(5)	C–C–H (average)	121.1 [b])
Si–Cl	2.042(2)	Cl–Si–Cl	108.2(6)
Si–H	1.499 [c])	C–Si–Cl	110.3(6)
C–H (average)	1.099 [c])	C–C–H(1)	122.5 [b])
		C–C–H(2)	121.9 [b])
		C–C–H(3)	118.9 [b])
		C–Si–H(4)	111.7 [b])
		Si–C–H(3)	119.3 [b])
		Cl–Si–H	108.1(7)
		H–C(1)–H	115.6 [b])
		τ [d])	0.0 [c])

The molecule was found to exist as a mixture of *syn* (32%) and *gauche* (68%) conformers, no uncertainties being reported. A dynamic model of pseudoconformers was used to describe the internal rotation around the C–Si bond. Structural differences between all pseudoconformers were assumed at the values from HF/6-31G(d) and HF/6-311G(d) calculations. The structural parameters are listed for the *syn* conformer.
The nozzle was at 296…298 K.



[a]) Twice the estimated standard errors including a systematic error.
[b]) Assumed at the value from HF/6-311G(d) calculations.
[c]) Assumed.
[d]) Torsional angle C=C–Si–H. This angle was assumed to be 120° for the *gauche* conformer.

Johansen, T.H., Hagen, K., Hassler, K., Richardson, A.D., Pätzold, U., Stølevik, R.: J. Mol. Struct. **550-551** (2000) 257.