

1839
ED

$C_4H_{12}As_2$

Tetramethyldiarsine

C_2 (*gauche*)
essentially C_{2h} (skeleton) (*trans*)
 $(H_3C)_2As-As(CH_3)_2$

r_a	\AA^a	θ_a	deg^a
As–As	2.433(2)	As–As–C	95.4(5)
As–C	1.973(2)	C–As–C	95.3(11)
C–H	1.110 ^b	As–C–H	109.3(9)
		ϕ^c	49.5(46)
		τ (<i>trans</i>) ^d	186(8)
		τ (<i>gauche</i>) ^d	90.5(35)

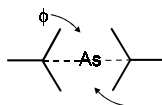
The molecule exists as a mixture of the *gauche* (60(15)%) and *trans* (40(15)%) conformers.

The nozzle temperature was 293 K.

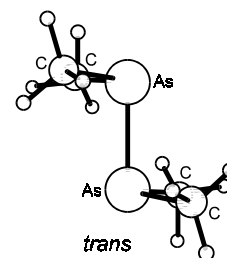
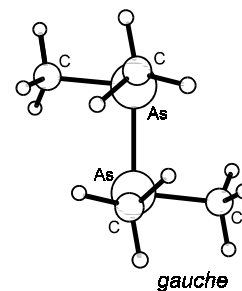
^a) Estimated standard errors including a systematic error.

^b) Assumed.

^c) Angle of concerted rotation of the two CH_3 groups in each $As(CH_3)_2$ fragment away from the null position represented by the figure:



^d) Dihedral angle of the $As(CH_3)_2$ groups made by the planes bisecting each of the AsC_2 units, $\tau = 0^\circ$ for the *syn* position.



Downs, A.J., Hunt, N.I., McGrady, G.S., Rankin, D.W.H., Robertson, H.E.: J. Mol. Struct. **248** (1991) 393.