

91
LIF

CHSi

Silicon methylidyne
Methylidynesilyl

C_{∞v}
H-C≡Si·

State	$\tilde{X}^2\Pi_i$	$\tilde{A}^2\Sigma^+$
Energy [eV]	0.00	1.459
$r_0(\text{Si}\equiv\text{C})$ [Å]	1.69252(8)	1.6118(1)
$r_0(\text{C-H})$ [Å]	1.0677(4)	1.0625(5)

SiCH and SiCD were produced in a pulsed-jet discharge using tetramethylsilane and tetramethylsilane- d_{12} as precursors. The $\tilde{A}^2\Sigma^+ - \tilde{X}^2\Pi_i$ band systems were studied by laser-induced fluorescence. Zero-point structures for the two electronic states were deduced from the rotational constants.

Smith, T.C., Li, H., Clouthier, D.J., Kingston, C.T., Merer, A.J.: J. Chem. Phys. **112** (2000) 3662.