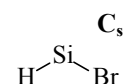


92  
LIF

BrHSi

Silicon bromide hydride  
Monobromosilylene

State	$\tilde{X}^1A'$	$\tilde{A}^1A''$
Energy [eV]	0.00	2.468
$r_0(\text{Si-H}) [\text{\AA}]$	1.518(1)	1.497(10)
$r_0(\text{Si-Br}) [\text{\AA}]$	2.237(1)	2.208(2)
$\theta_0(\text{H-Si-Br}) [\text{deg}]$	93.4(3)	116.4(7)

HSiBr and DSiBr were produced in a pulsed-jet discharge using HSiBr<sub>3</sub> and DSiBr<sub>3</sub> diluted in argon as precursors. The  $\tilde{A}^1A'' - \tilde{X}^1A'$  spectra were studied by laser-induced fluorescence. Rotational analyses of the 0-0 bands yielded the structural parameters for the zero levels.

Harjanto, H., Harper, W.W., Clouthier, D.J.: J. Chem. Phys. **105** (1996) 10189.

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