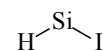


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LIF

HSiI

Silicon iodide hydride
Monoiodosilylene C_s 

State	\tilde{X}^1A'	\tilde{A}^1A''
Energy [eV]	0.00	2.264
$r_0(\text{Si-H})$ [Å]	1.534(1)	1.515(5)
$r_0(\text{Si-I})$ [Å]	2.463(1)	2.436(1)
$\theta_0(\text{H-Si-I})$ [deg]	92.4(1)	114.9(2)

HSiI and DSiI were produced in a pulsed-jet discharge using H_3SiI and D_3SiI 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 [1]. Single vibronic level emission spectra have yielded five of the six fundamentals for both isotopomers and enabled force fields to be evaluated. These results have permitted approximate equilibrium structures to be determined [2].

[1] Clouthier, D.J., Harper, W.W., Klusek, C.M., Smith, T.C.: J. Chem. Phys. **109** (1998) 7827.

[2] Tackett, B.S., Clouthier, D.J.: J. Chem. Phys. **118** (2003) 2612.

Replaces [II/25A\(2, 677\)](#)