

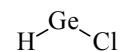
125  
LIF

ClGeH

Chlorogermylene

 $C_s$ 

State	$\tilde{X}^1A'$ <sup>a)</sup>	$\tilde{A}^1A''$ <sup>a)</sup>
Energy [eV]	0.00	2.668
$r_0(\text{H-Ge})$ [Å]	1.592(1)	1.613(2)
$r_0(\text{Ge-Cl})$ [Å]	2.171(2)	2.146(15) <sup>b)</sup>
$\theta_0(\text{H-Ge-Cl})$ [deg]	94.3 <sup>c)</sup>	114.5 <sup>c)</sup>



HGeCl and DGeCl were produced in a pulsed-jet discharge through helium seeded with  $\text{H}_3\text{GeCl}$  and  $\text{D}_3\text{GeCl}$ . The  $\tilde{A}^1A'' - \tilde{X}^1A'$  spectra were studied by laser-induced fluorescence. Rotational analyses of the 0-0 bands yielded rotational constants from which the structural parameters for the zeroth levels were obtained.

<sup>a)</sup> This work [1].

<sup>b)</sup> From [2].

<sup>c)</sup> Assumed at the value from MRSDCI calculations [3].

[1] Harper, W.W., Clouthier, D.J.: J. Chem. Phys. **108** (1998) 416.

[2] Ito, H., Hirota, E., Kuchitsu, K.: Chem. Phys. Lett. **175** (1990) 384.

[3] Benavides-Garcia, M., Balasubramanian, K.: J. Chem. Phys. **97** (1992) 7537.

Replaces [II/25A\(2, 273\)](#)