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**Scheme 1.** Molecules carrying silicon-carbon bonds detected in the circumstellar envelope of IRC+10216. Silicon, carbon, nitrogen, and hydrogen are indicated in purple, gray, blue, and white.



**Figure 1.** Time-of-flight spectra recorded at the center-of-mass angle for *m/z* = 43 (CSiH3+) and *m/z* = 42 (CSiH2+). The left and right panels depict raw and normalized TOF spectra, respectively.

**Chart

Description automatically generated with medium confidence**

**Figure 4**. CM translational energy flux distribution (A), CM angular flux distribution (B), and the top view of the flux contour map (C) leading to the formation of silylenemethyl radical. Shaded areas indicate the acceptable upper and lower error limits, while the blue solid lines define the best fits. The flux contour map represents the flux intensity of the reactively scattered heavy products as a function of the CM scattering angle (y) and product velocity (u). The color bar manifests the flux gradient from high (H) intensity to low (L) intensity. Colors of the atoms: silicon, purple; carbon, gray; hydrogen, white.



**Figure 7.** Molecular geometries for the isoelectronic silylenemethyl (HCSiH2) and vinyl (HCCH2) radicals in their respective 2B2 and 2A' electronic ground states.