

ROTATIONAL SPECTRUM OF CYANO- AND ISOCYANOSILYLENE, HSiCN AND HSiNC

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Cyanosilylene, HSiCN, and its isomer HSiNC have been unambiguously detected and characterized by molecular beam Fourier transform microwave spectroscopy. Both closed-shell asymmetric tops are generated in electric discharges of SiH₄ and (CN)₂ or HC₃N highly diluted in neon. Microwave spectra of all isotopic species have also been detected and analyzed, which allowed us to estimate the structure of the molecules.