MICROWAVE SPECTROSCOPY OF METAL MONOCYANIDE, MCN (M=Ag,Au)

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The rotational spectrum of MCN (M=Ag, Au) was observed by employing a source-modulation mi crowave spectrometer. The MCN species was generated in a dc glow discharge through the mixture of CH_3CN and Ar by a sputtering reaction with an metal target. The spectrum of MCN was observed in the ground and ν_2 vibrational excited states. The molecular constants derived from the observed transition frequencies were compared with values of theoretical calculations reported in literature.