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CRDS Detection of HS Radical in HFCVD Diamond Thin Film MADALINA BUZAINAU, VLADIMIR MAKAROV, GERARDO MORELL, BRAD WEINER, UPR — In the present study, the HS radical was detected using the Cavity Ring Down Spectroscopic (CRDS) method in hot filament diamond CVD for the CH₄(0.4%)/H₂ mixture doped by H₂S (400 ppm). The HS radical was detected both by the 0 - 0(A — X) and 1 - 0(A — X) transitions. The absolute absorption density spectrum of the HS radical was obtained as well as the absolute HS concentration estimation. This study proves that the HS radical is an intermediate produced during the diamond CVD synthesis.

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