FOURIER TRANSFORM INFRARED EMISSION SPECTRA OF CaH AND SrH

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The vibration-rotation spectra of gaseous CaH and SrH have been recorded in emission using a furnace-discharge source. Ca and Sr vapor were produced at 780°C and 850°C, respectively, and reacted with a few torr of hydrogen gas under a 3 kV / 333 mA discharge to produce the metal hydrides. The fundamental and first three hot bands, v=1-0 to v=4-3, in the $^2\Sigma^+$ ground electronic state of each molecule were observed. The analysis of the data is in progress and will be presented.