FOURIER TRANSFORM INFRARED EMISSION SPECTROSCOPY OF GAS-PHASE MnH, MnD AND YbH

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Molecules in the gas phase were generated in an emission source that combines a high temperature tube furnace with an electrical discharge. Infrared emission spectra of MnH/D in its $^7\Sigma^+$ ground state were recorded using a Fourier transform spectrometer at a resolution of 0.008 cm^{-1}. The vibrational bands v=1→0 to v=3→2 for MnH and v=1→0 to v=4→3 for MnD were observed. The vibration-rotation emission spectrum of YbH in its $^2\Sigma^+$ ground state was recorded at a resolution of $0.01\mathrm{cm}^{-1}$. Lines corresponding to five isotopomers of Yb were recorded for the v=1→0 band. In addition some weak electronic transitions of YbH/D in the near-infrared were observed and their analyses may be presented at the conference.