

ELECTRONIC STATES AND SPECTRA OF BiOH, BiSH AND RELATED RADICALS

EWALD H. FINK, RALF GIELEN, and OLEG SHESTAKOV, *Fachbereich Chemie, Bergische Universität-GH Wuppertal, Gaußstraße 20, D-42097 Wuppertal, Germany.*

Visible and NIR spectra of BiOH, BiSH, BiSeH, BiTeH, and the corresponding deuterides have been studied by FTS and LIF. The molecules are isoelectronic with the diatomic bismuth halides and have a number of stable A' and A'' states arising from the fine structure and Λ -doubling components of the $^3\Sigma^-$, $^1\Delta$, and $^1\Sigma^+$ states in the linear configuration. For BiOH and BiOD, five electronic transitions have been observed including fine structure transitions between the three A' and A'' components of the $^3A''$ ground states.