

INFRARED PHOTODISSOCIATION SPECTROSCOPY OF $M^{2+}(H_2O)Ar_n$ (M = Sc, Mn, AND Cr)

P. D. CARNEGIE, B. BANDYOPADHYAY and M. A. DUNCAN, *Department of Chemistry, University of Georgia, Athens, GA, 30602-2556.*

$M^{2+}(H_2O)Ar_n$ (M = Sc, Cr, and Mn) complexes are created by laser vaporization in a pulsed supersonic expansion and analyzed by infrared photodissociation spectroscopy. Shifts in the OH stretching frequencies and IR intensities are determined for each metal cation water complex studied. These spectral features change based on the metal cation in the complex and the dependence of the doubly charged metal cation on these two features will be presented.