

## ELECTRONIC SPECTRA OF TRIS(2,2'-BIPYRIDINE)-METAL COMPLEX IONS IN GAS PHASE

SHUANG XU, *Department of Physics, JILA - University of Colorado, Boulder, CO, USA*; JAMES E. T. SMITH, *JILA and the Department of Chemistry and Biochemistry, University of Colorado-Boulder, Boulder, CO, USA*; J. MATHIAS WEBER, *Department of Chemistry and Biochemistry, JILA - University of Colorado, Boulder, CO, USA*.

Tris(bpy)-metal complexes (bpy = 2,2'-bipyridine) and their derivatives are important systems in metal-organic chemistry. While tris(bpy)-ruthenium,  $\text{Ru}(\text{bpy})_3^{2+}$ , has been extensively studied, less attention has been paid to analogous complexes involving first row transition metals. Here we report the electronic spectra of a series of dicationic tris(bpy) chelates with different transition metals, measured by photodissociation spectroscopy of cryogenically prepared ions. We focus our attention on the  $\pi$ - $\pi^*$  transitions in the UV region of the spectrum.