TWO DIMENSIONAL CROSS-SPECTRA CORRELATION ANALYSIS OF TIME RESOLVED FOURIER TRANSFORM EMISSION SPECTRA: DETERMINATION OF UNKNOWN VIBRATIONAL BANDS OF A TRANSIENT RADICAL

W. McNAVAGE, and H. L. DAI , *Department of Chemistry, The University of Pennsylvania, Philadelphia PA 19104-6683, USA*.

2-D correlation analysis has been applied to the assignment of time resolved infrared emission spectra. The spectra contain emission bands from a radical species of interest, generated from photolysis of a precursor molecule. As different precursor molecules are used for generating the same radical, the different sets of spectra contain the same set of emission bands from the radical. This allows a 2-D correlation analysis across the different sets of spectra. We will demonstrate the effectiveness of these cross-spectra on the CN stretch of the OCCN radical, generated using three different precursors.