STRUCTURAL IDENTIFICATION OF *p*-METHOXYPHENETHYLAMINE (A NEUROTRANSMITTER) BY HIGH RESOLUTION ELECTRONIC SPECTROSCOPY[a]

JOHN T. YI, and DAVID W. PRATT, *Department of Chemistry, University of Pittsburgh, Pittsburgh, PA 15260*; EVAN G. ROBERTSON, *School of Chemistry, Monash University, Victoria 3800, Australia*.

p-Methoxyphenethylamine (MPEA) is a neurotransmitter and has attracted much interest due to the assignment of its molecular conformers. Its flexible side chain gives rise to multiple possible conformations. In this work, high resolution $S_1 \leftarrow S_0$ fluorescence excitation spectra of several MPEA bands have been recorded and analyzed. The results from the fully resolved spectra include the rotational constants and the electronic transition moment (TM) orientations, which are unique to each conformer. Combining this information with theoretical calculations, we provide an assignment for seven of the conformers of MPEA. This conformational landscape will be discussed in detail.

[a]Work supported by NSF.