CONFORMATION SPECIFIC ELECTRONIC SPECTROSCOPY OF *P*-DIBENZYLBENZENE

JOSH J. NEWBY and TIMOTHY S. ZWIER, *Department of Chemistry, Purdue University, West Lafayette, IN 47907-2804*.

Para-dibenzylbenzene (*p*DBB) is a prototypical flexible trichromophore, with a central, para-substituted phenyl ring separated from capping phenyl rings by two methylene spacers. This produces three excited states within about 600 cm^{-1} of one another. The fluorescence excitation and single vibronic level emission spectra of *p*DBB have been recorded in a supersonic jet environment. The S_1-S_0 origin region for *p*DBB was found to occur slightly red of the origin region of *p*-xylene near 36600 cm^{-1}. The origin region is spectrally congested with 23 resolved torsional transitions occurring within the first 150 cm^{-1} of the spectrum. UV-UV holeburning spectroscopy was employed to determine that two distinct conformers are present. Emission spectra are used to probe electronic energy transfer from the outer two phenyl rings to the interior ring.