THE ROTATIONAL SPECTRUM OF NONAFLUORO-TERT-BUTYL ALCOHOL

JOSHUA E. ISERT, *Department of Chemistry, Missouri University of Science and Technology, Rolla, MO, USA*; ZAYRA LETICIA GONZALEZ, KARLA V. SALAZAR, DIEGO RODRIGUEZ, *Department of Chemistry, University of Texas Rio Grande Valley, Brownsville, TX, USA*; NICOLE MOON, *Department of Chemistry, Missouri University of Science and Technology, Rolla, MO, USA*; WEI LIN, *Department of Chemistry, University of Texas Rio Grande Valley, Brownsville, TX, USA*; G. S. GRUBBS II, *Department of Chemistry, Missouri University of Science and Technology, Rolla, MO, USA*.

In a collaborative effort with the University of Texas-Rio Grande Valley, a chirped pulse microwave (CP-FTMW) spectroscopy experiment was carried out on nonafluoro-tert-butyl alcohol (NFTBA) monomer from 5.5 to 18.75 GHz. Calculations were run in order to identify the lowest energy conformation and these will be compared to the experimentally determined structure. In addition to the structure, the spectrum of NFTBA exhibits large amplitude motion and these complexities will be examined and discussed. NFTBA exhibits high acidity comparable to carboxylic acids, and this presentation will draw comparisons between these two classes of molecules.