

DYNAMICS OF DANGLING OD-STRETCH AT THE AIR/WATER INTERFACE BY HETERODYNE-DETECTED SFG SPECTROSCOPY

I. V. STIOPKIN, C. WEERAMAN, F. SHALHOUT, A. V. BENDERSKII, *Department of Chemistry, Wayne State University, Detroit, MI 48202.*

SFG spectra of dangling OD-stretch at the air/water interface contain information on vibrational dephasing dynamics, ultrafast reorientational molecular motion, and vibrational energy transfer. To better separate these processes we conducted heterodyne-detected SFG experiments to measure real and imaginary contributions of the SFG spectrum of the dangling OD-stretch at the air/D₂O interface for SSP, PPP, and SPS polarizations. Variations in the temporal profiles of the SFG signals for these three polarizations will be also discussed.