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

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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/D_2O interface for SSP, PPP, and SPS polarizations. Variations in the temporal profiles of the SFG signals for these three polarizations will be also discussed.