SUM FREQUENCY GENERATION AND RAMAN SPECTRAL STUDY OF NITRATE-WATER SYSTEMS

M. XU, H. C. ALLEN, *Department of Chemistry, The Ohio State University, Columbus, OH 43210*.

Hydration and ion paring perturb the water structure at the interface and in the bulk. In this study, the influence of ions on the structure of surface water and bulk water is examined for aqueous solutions of $Mg(NO_3)_2$, $Ca(NO_3)_2$, $Sr(NO_3)_2$, $Ba(NO_3)_2$ and $Pb(NO_3)_2$ using sum frequency generation and Raman spectroscopies. Spectra of $NaNO_3$ and KNO_3 are also obtained to elucidate the effects of different cations. Changes in the water structure of different ionic solutions will be presented.