

Probing ultrafast structural dynamics in solution with novel nonlinear spectroscopies

Probing ultrafast chemical dynamics in solution requires the ability to follow structural changes over a vast range of length and timescales. In this talk, I will introduce two experimental techniques our group uses to probe structural dynamics in solution. The first of these is coherent two-dimensional IR spectroscopy and the second is ultrafast x-ray absorption spectroscopy. Through examples on model complexes, I will show the ability of these techniques to measure time-dependent molecular interactions in solution.