IMPROVING SIGNAL-TO-NOISE OF 2D IR SPECTRA USING A HIGH REPETITION RATE LASER SYSTEM.

SUDIPTA MUKHERJEE, MARTIN.T.ZANNI, *DEPARTMENT OF CHEMISTRY,UNIVERSITY OF WISCONSIN AT MADISON,MADISON,WI-53706*.

We propose to build a 2D IR spectrometer based on a 30 KHz repetition rate laser system(cryo-wyvern,KM Labs) and a mid IR pulse shaper.This new shaper will allow a different waveform to be generated each laser shot.With this system we estimate that we will be able to collect a 2D spectra in less than 0.5 S.This talk will focuss on the laser system and the pulse shaping methodology.