

INSTRUMENT DEVELOPMENT FOR CHIRPED PULSE FOURIER-TRANSFORM MICROWAVE SPECTROSCOPY
OF ALCOHOL:WATER CLUSTERS

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This talk will discuss the design and performance of a novel high-throughput instrument for Chirped Pulse Fourier-transform Microwave (CP-FTMW) spectroscopy, and demonstrate its efficacy through the identification of the lowest energy conformers of the ethanol trimer and mixed water:ethanol trimers. Computational characterization of the target clusters will be described, as will experimental details and resulting conclusions as to the structure of the observed clusters. In addition, the increased speed of data collection and resulting sensitivity of the instrument will be addressed, with the new target species made available by these improvements.