Laser spectroscopy probes of biomolecular conformation: Valley-to-valley searches for molecular-scale mountain passes

TIMOTHY ZWIER, Purdue University

This talk will describe recent studies of the spectroscopy and conformational isomerization dynamics of isolated gas-phase biomolecules with several flexible coordinates. These studies employ conformation-specific excitation and detection, taking advantage of the unique infrared and ultraviolet signatures of the individual conformations when cooled in a supersonic expansion. The examples given will include recent studies of the bichromophore 3-(4-hydroxyphenyl)-N-benzyl-propionamide (HNBPA) and of the ‘double-chain’ molecule O-(acetamidoethyl)-N-acetyltymamine (OANAT).

In collaboration with Jasper Clarkson, Esteban Baquero, Virgil Shubert, Tracy LeGreve and William James, Dept. of Chemistry, Purdue University.

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