

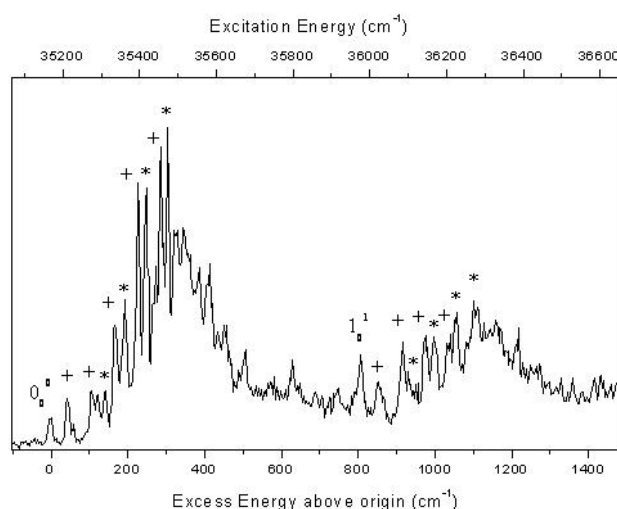
## Complete Set of UV Spectroscopy Techniques within a Cryogenic Cooled Quadrupole Ion Trap

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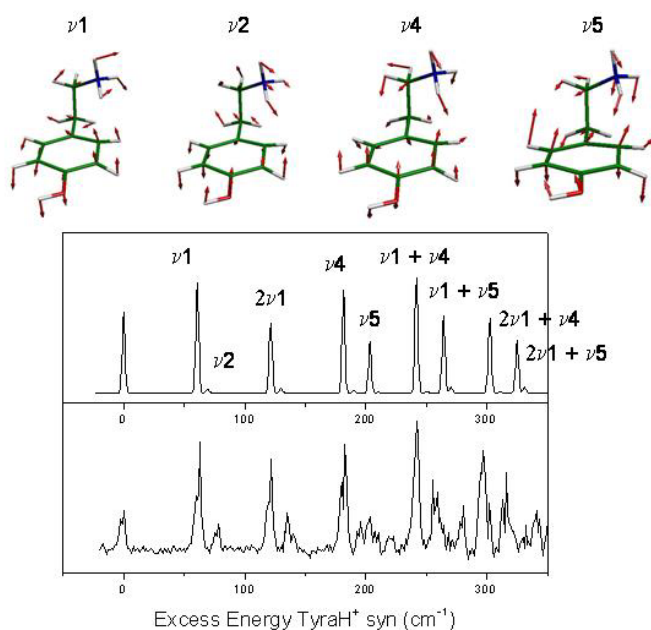
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### Electronic Supporting Information ESI



SI 1 : Excitation spectrum of TyraH<sup>+</sup> recorded on a large spectral domain with the picosecond OPA laser. The marked bands refer to the vibronic transitions of syn (cross) and anti (star) conformers used to monitor the evolution of the excited state lifetime of TyraH<sup>+</sup> as a function of the excess energy in S<sub>1</sub>.



SI 2 : Mode analysis of the Franck Condon simulation of TyraH<sup>+</sup> syn conformer.