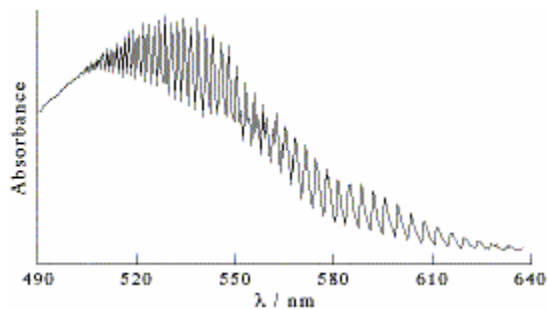


LAB #4: SPECTRUM AND DISSOCIATION ENERGIES OF I₂: Pre-lab Questions

1. Using the information in the lab handout, assign the peaks to a transition between vibrational quantum numbers, $v' \leftarrow v''$ for the transitions between ~530-600 nm in the following spectrum of I₂ (Fig 13.9 from McQuarrie & Simon).



2. Describe how you would use the information from #1 to create a Birge-Sponer plot.

3. Describe in words the parameters: \tilde{T}_e' , $\tilde{x}_e''\tilde{v}_e''$, \tilde{D}_e' , and E^* .