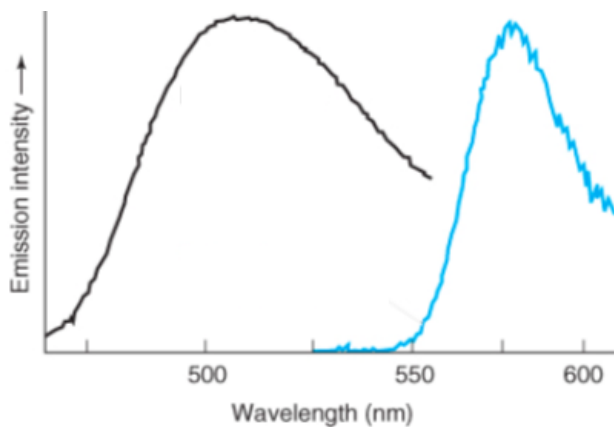


Worksheet 3: Spectroscopy II

1. Identify the peak that corresponds to phosphorescence and the peak that corresponds to fluorescence in the figure below.



2. What is the typical relationship between emission spectra and absorbance spectra?
3. Identify the four major components of a spectrophotometer and arrange them in the order they would be used in an absorbance experiment.
4. What three conditions have to be met for Beer's Law to be a useful tool?
5. Find the absorbance and transmittance of a 2.4×10^{-3} M solution of a substance with a molar absorptivity of $313 \text{ M}^{-1} \text{ cm}^{-1}$ in a cell with a 2.0 cm path length.