

The fluorescence spectrum of anthracene is shown below. The two spectra shown were taken from anthracene films with different thickness.

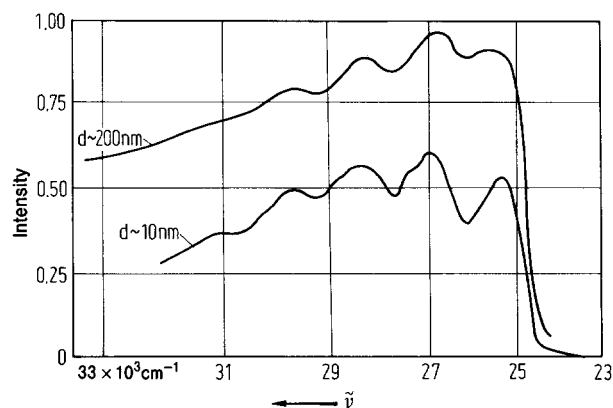


Fig. 47. Fluorescence excitation spectra of two thin anthracene films of differing thickness

- (a) Explain the different shape of the two spectra.
- (b) Convert the wave numbers into wave lengths [nm]. Then look up the absorption spectrum of anthracene in your copy of Pretsch et al. Discuss and explain the differences; consider the electronic and the vibrational changes!