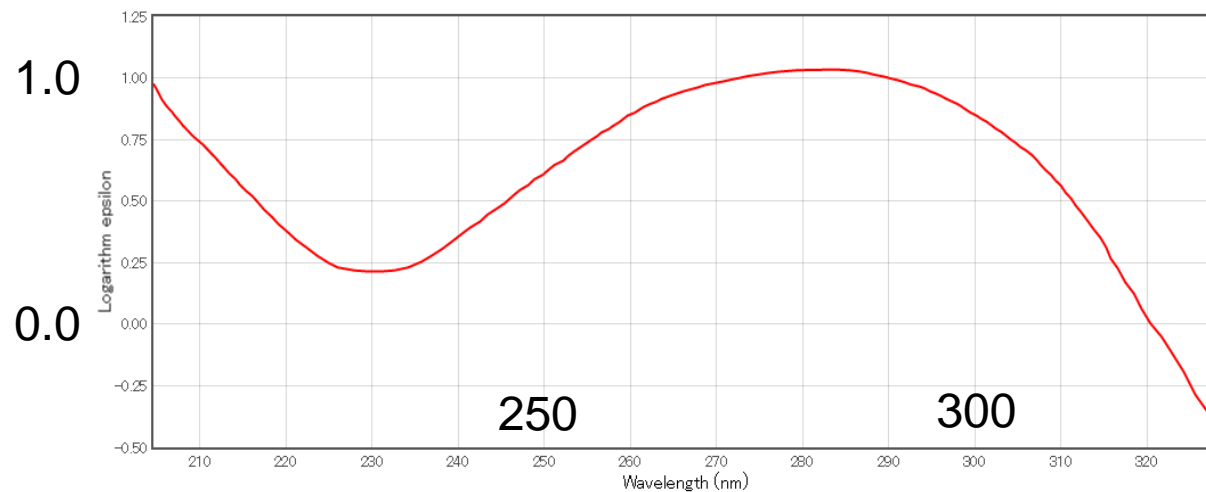
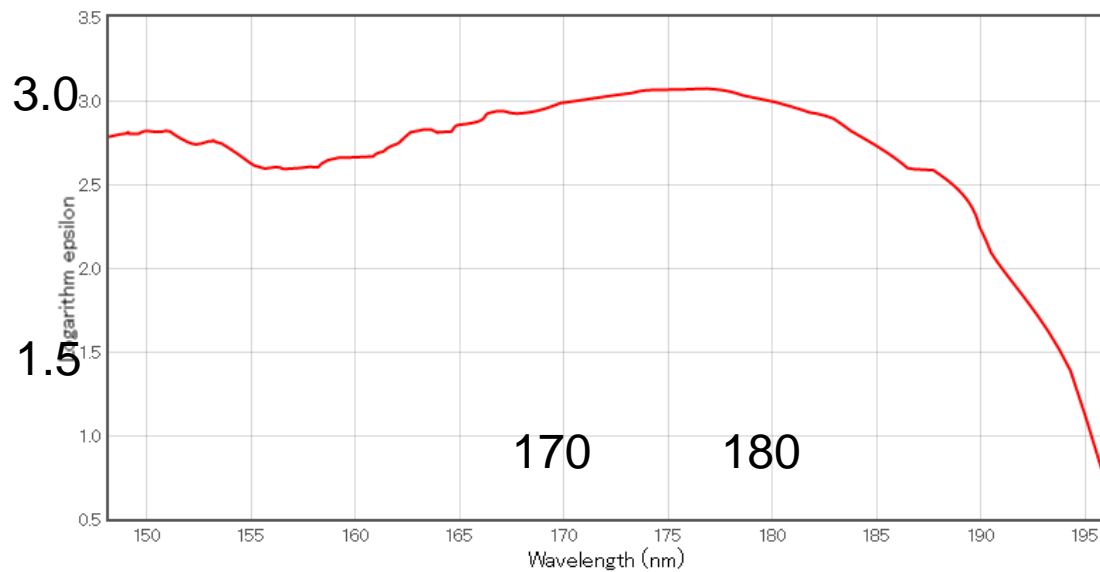


C=O vs C=C

propionaldehyde  $\text{CH}_3\text{CH}_2\text{CH}=\text{O}$

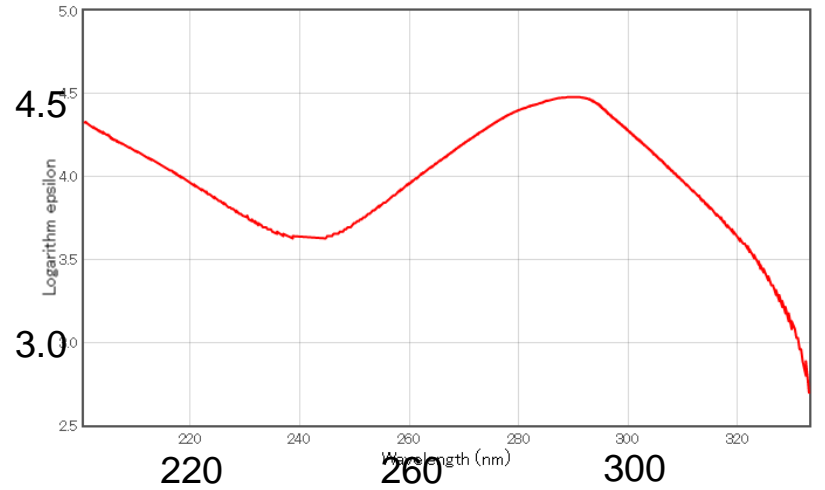


but-1-ene  $\text{CH}_3\text{CH}_2\text{CH}=\text{CH}_2$

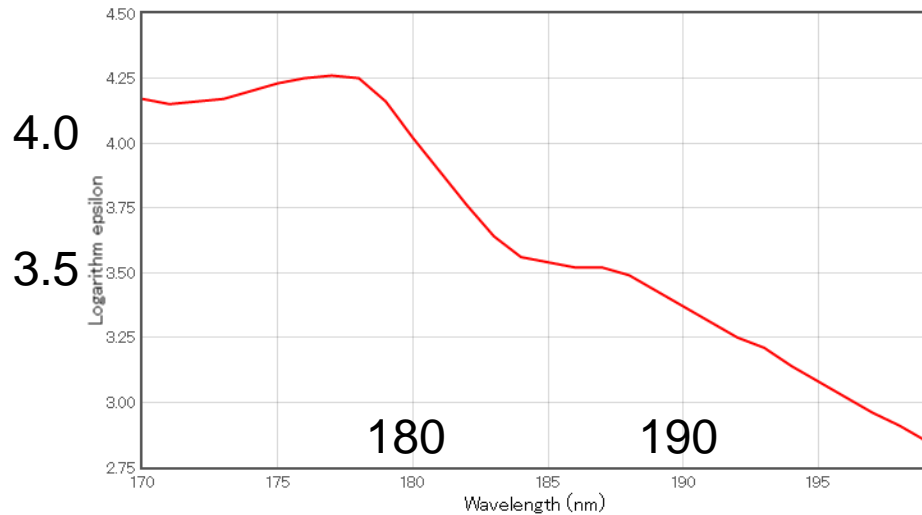


# ジエンのUV/visスペクトル UV/vis spectra of dienes

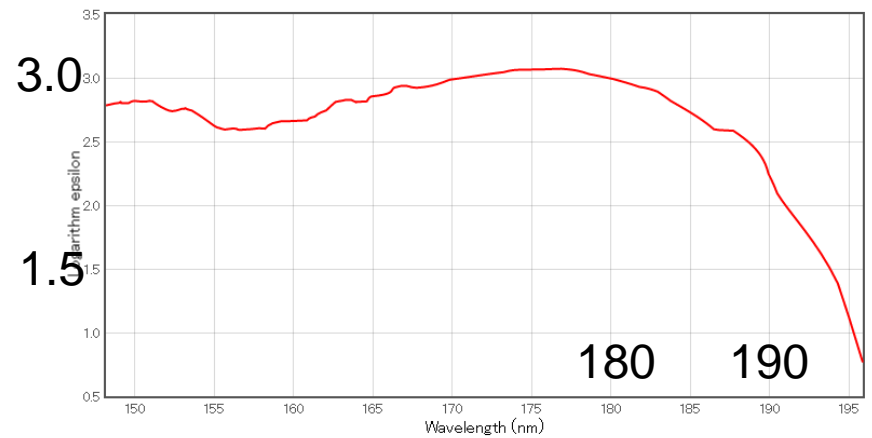
1,3-butadiene  $\text{CH}_2=\text{CH}-\text{CH}=\text{CH}_2$



1,2-butadiene  $\text{CH}_2=\text{C}=\text{CH}-\text{CH}_3$

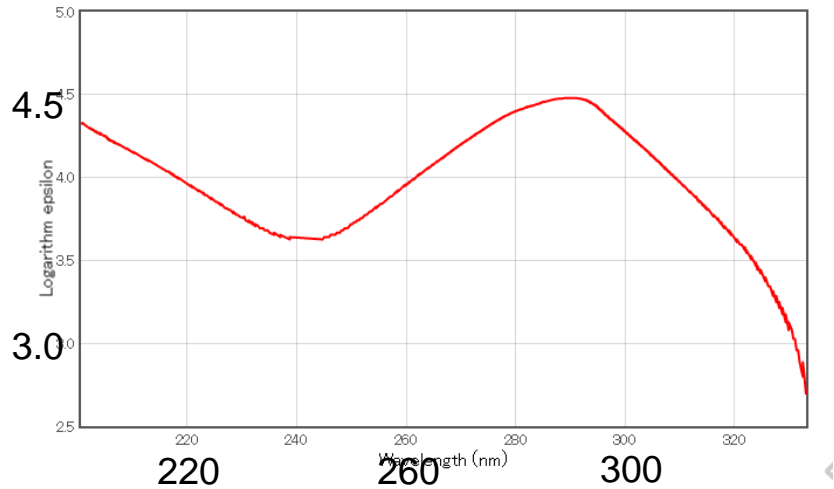


cf. but-1-ene  $\text{CH}_3\text{CH}_2\text{CH}=\text{CH}_2$

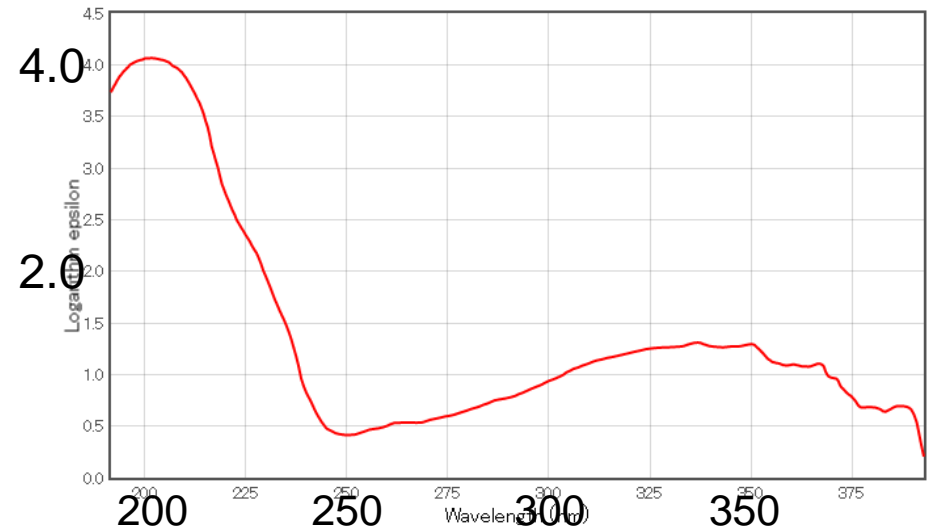


# Diene vs enal

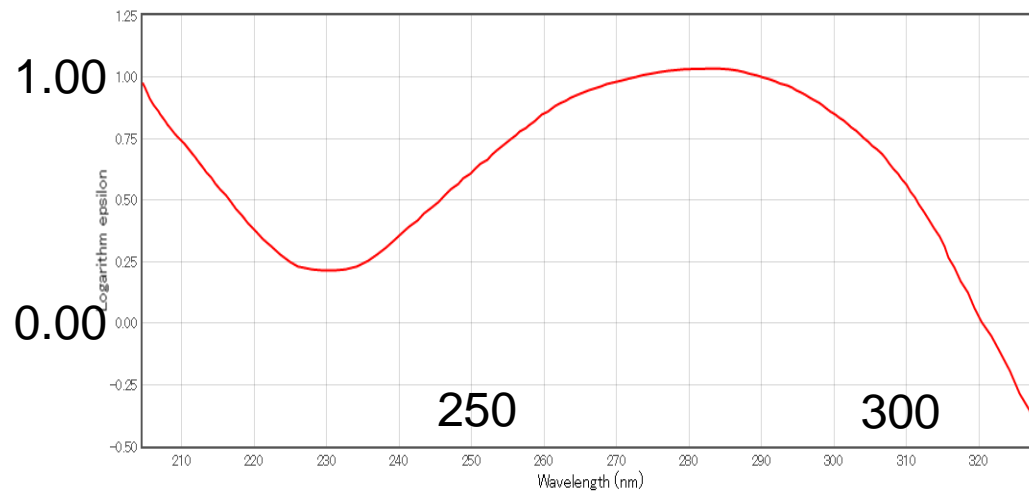
1,3-butadiene  $\text{CH}_2=\text{CH}-\text{CH}=\text{CH}_2$



propenal  $\text{CH}_2=\text{CH}-\text{CH}=\text{O}$

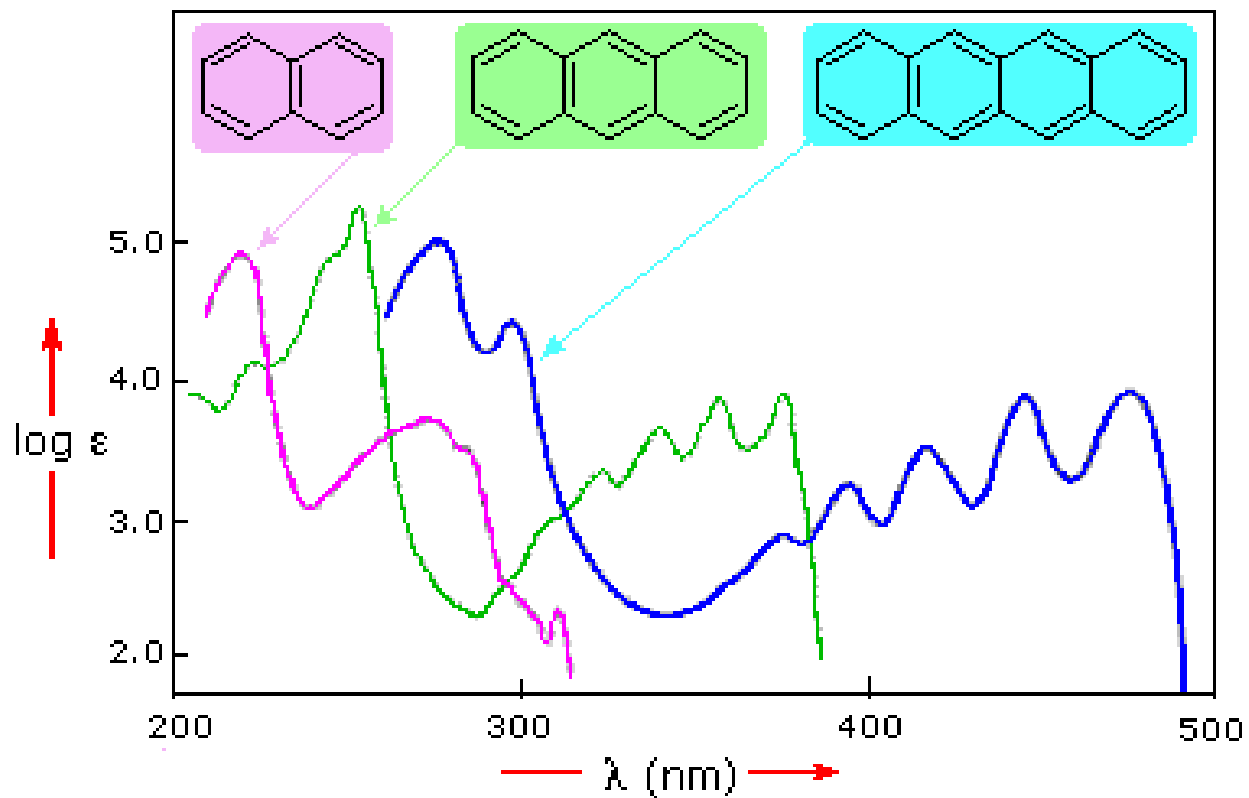


cf. propionaldehyde  $\text{CH}_3\text{CH}_2\text{CH}=\text{O}$

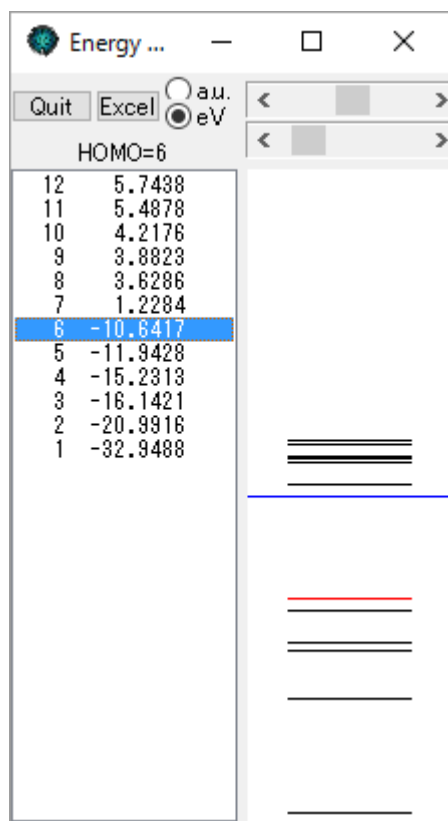


# 多環式芳香族化合物のUV/visスペクトル

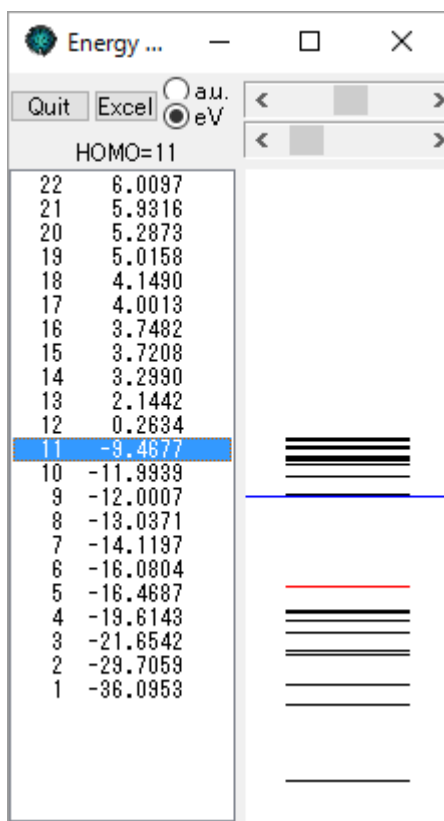
Spectra of polycyclic aromatic compounds



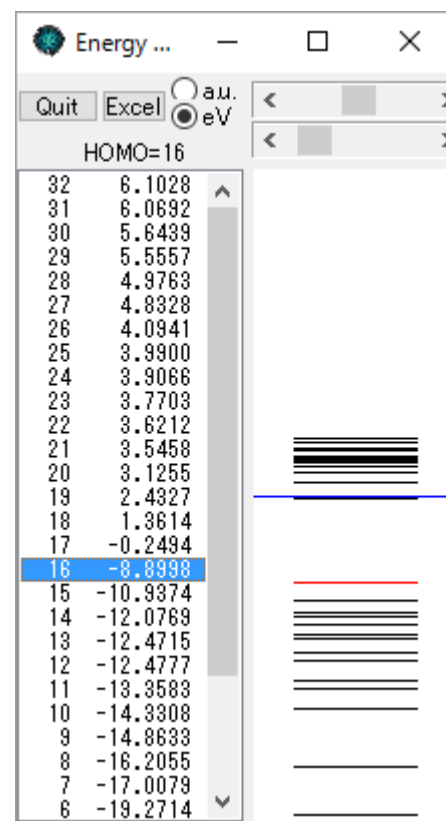
## 非局在化と $\pi$ 電子のエネルギー準位



Ethylene -10.64/ 1.23  
-21.28 -42.56 -63.84



Butadiene -9.47/0.26  
10(-12.00),11 -42.94



Hexatriene -8.90/-0.25  
12(-12.48),15(-10.94),16 -64.64