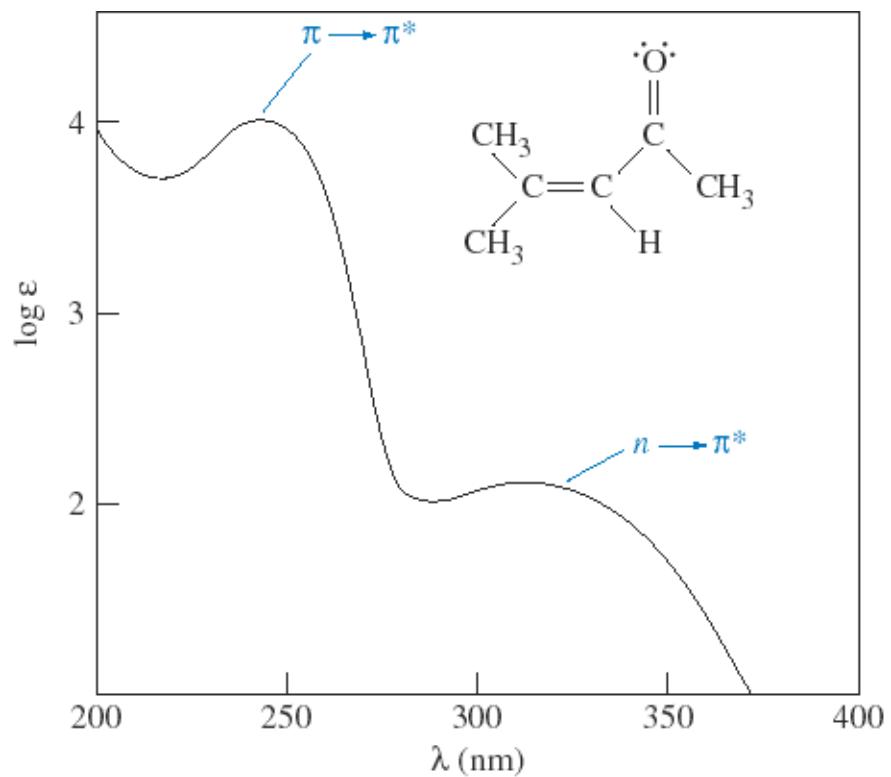
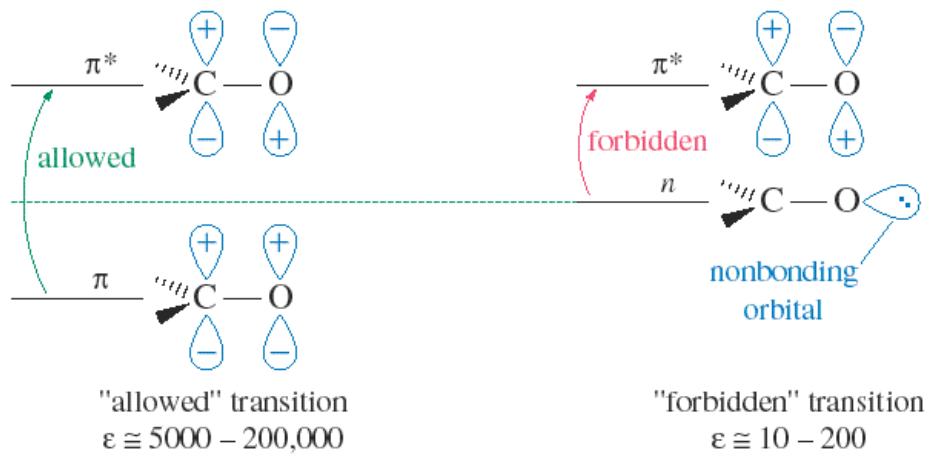
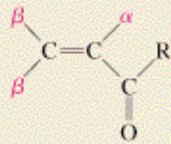


Ultraviolet Absorbances



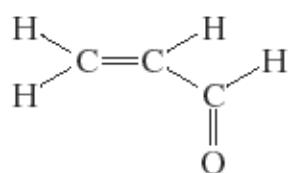
The Woodward–Fieser Rules for Conjugated Ketones and Aldehydes



general structure

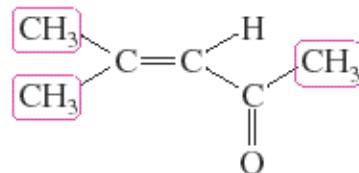
Base values: 210 nm if R = H (aldehyde)
215 nm if R = alkyl (ketone)

| Grouping | Position | Correction |
|-----------------------------------|----------|------------|
| alkyl group, α | | +10 nm |
| alkyl group, β | | +12 nm |
| exocyclic position of a C=C bond | | +5 nm |
| additional conjugated double bond | | +30 nm |



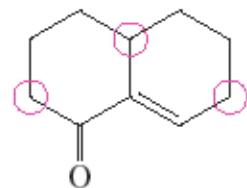
propenal

$\lambda_{\max} = 210 \text{ nm}$, $\epsilon = 11,000$



three alkyl groups

$\lambda_{\max} = 237 \text{ nm}$, $\epsilon = 12,000$



three alkyl groups

$\lambda_{\max} = 244 \text{ nm}$, $\epsilon = 12,500$