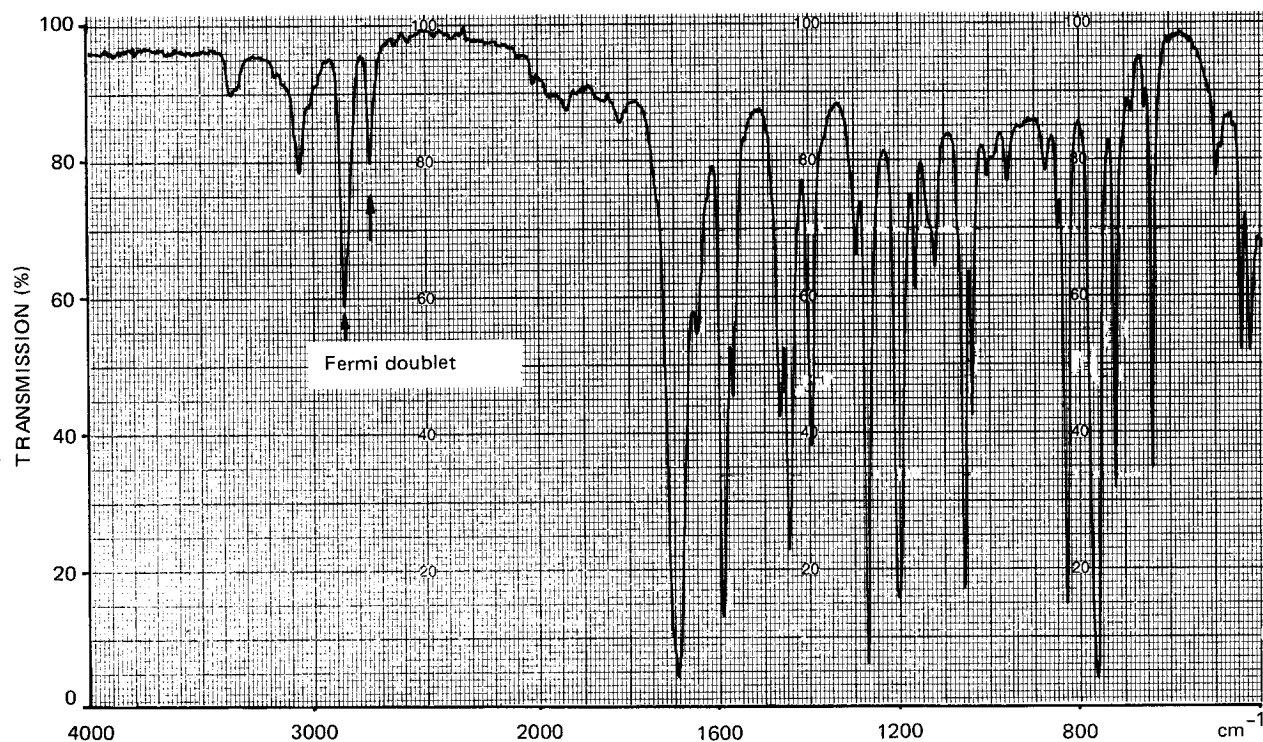


Applications of IR/Raman Spectra: Fermi Resonance in Benzaldehyde

The IR spectrum is shown of the aromatic aldehyde 2-chlorobenzaldehyde. For aldehydes in general, we would expect to find two bands for the C-H stretching frequency in the region about cm^{-1} because of _____ resonance. The band at 2710 cm^{-1} is always diagnostic for aldehydes. The 2820 cm^{-1} band not always is as clearly visible as in the case of the aromatic system shown.

- (a) Explain the cause for the doublet.
- (b) Explain what other bands can overlap with the high-energy aldehyde group frequency in the case of aliphatic aldehydes. Find an example to illustrate the point.



(from Lambert, page 194)