Infrared Spectra of Some Common Functional Groups

- n-Alkanes

  - look for stretching and bending of C–H and C–C bonds
    - C–C bends: ca. 500 cm^{-1} (out of spectral window)
    - C–C stretches: 1200–800 cm^{-1}, weak bands not of value for interpretation (fingerprint)

  More characteristic
    - C–H stretches: occurs from 3000 - 2840 cm^{-1}

      CH_3: 2962 cm–1, asymmetrical stretch
      2872 cm–1, symmetrical stretch

      CH_2: 2926 cm–1, asymmetrical stretch
      2853 cm–1, symmetrical stretch
    - C–H bends:

      CH_3: ca. 1375 cm–1

      CH_2: ca. 1465 cm–1

39