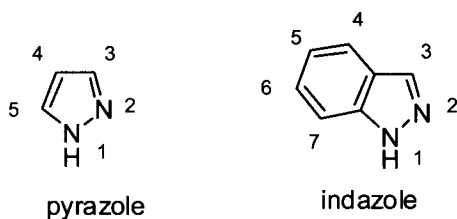


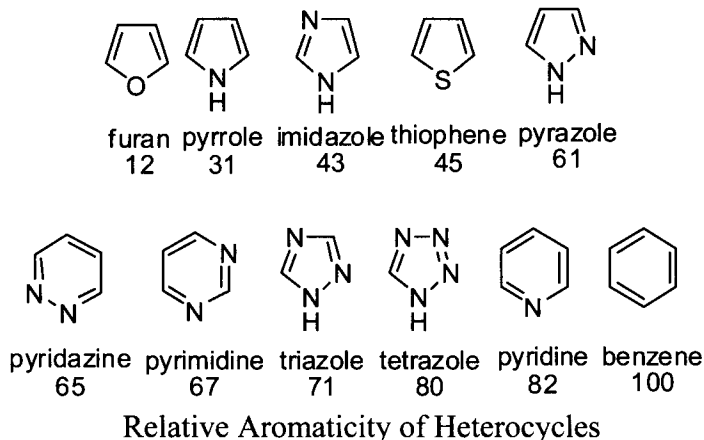
Chapter 5 Pyrazoles, Pyrazolones, and Indazoles

Jie Jack Li

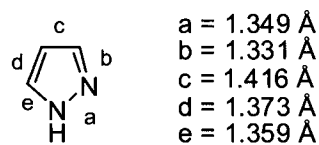
5.1 Introduction



The parent compound pyrazole itself is a colorless crystalline solid with a melting point of 66–70 °C. It is corrosive and is an irritant to both skin and eyes. Pyrazole is a five-membered aromatic heterocycles with two N heteroatoms. Its N-1 is similar to the NH of pyrrole, and its N2 behaves similarly to that pyridine. Pyrazole's aromaticity lies somewhere in the middle of the scale in comparison with other heterocycles:



The bond lengths are shown below, which impact the coupling constants in their $^1\text{H-NMR}$ spectra.



Pyrazole's Bond Lengths