

NMR Fundamentals

Nuclear Spin in Magnetic Field

^1H , ^{13}C , ^{15}N , ^{31}P nuclei have spin $1/2$

Chemical Shift (δ)

Electronic environment. ppm scale. TMS reference.

J-coupling

Spin-spin splitting. Connectivity information.

2D NMR

COSY, NOESY, HSQC for structure determination

Biomolecular NMR

Protein structure in solution. Dynamics information.