

## LIST OF SYMBOLS

$e$	the charge on the electron
$I$	the nuclear spin quantum number
$\gamma$	the gyromagnetic ratio of a quadrupole nucleus
$\mathcal{H}$	the Hamiltonian
$q = \text{EFG}$	the electric field gradient
$Q$	the nuclear quadrupole moment
$e^2Qq/\hbar = \text{QCC}$	the quadrupole coupling constant
$\hbar$	the Plank's constant
$\eta = (q_{xx} - q_{yy})/q_{zz}$	the asymmetry parameter of electric field gradient
$\nu$	the frequency of nuclear quadrupole resonance transition
$H_0$	the strength of a perturbing static magnetic field