

$$|-\rangle = \frac{|+1\rangle + |-1\rangle}{\sqrt{2}} \quad |-\rangle = \frac{|+1\rangle - |-1\rangle}{\sqrt{2}}$$

- Level anti-crossing in zero magentic field
- $\rightarrow$  New single-spin Hamiltonian eigenstates
- $\rightarrow$  Modification of the dipole-dipole interaction

• Near-resonance of double-flip terms  $|0,+\rangle\langle -,0|$