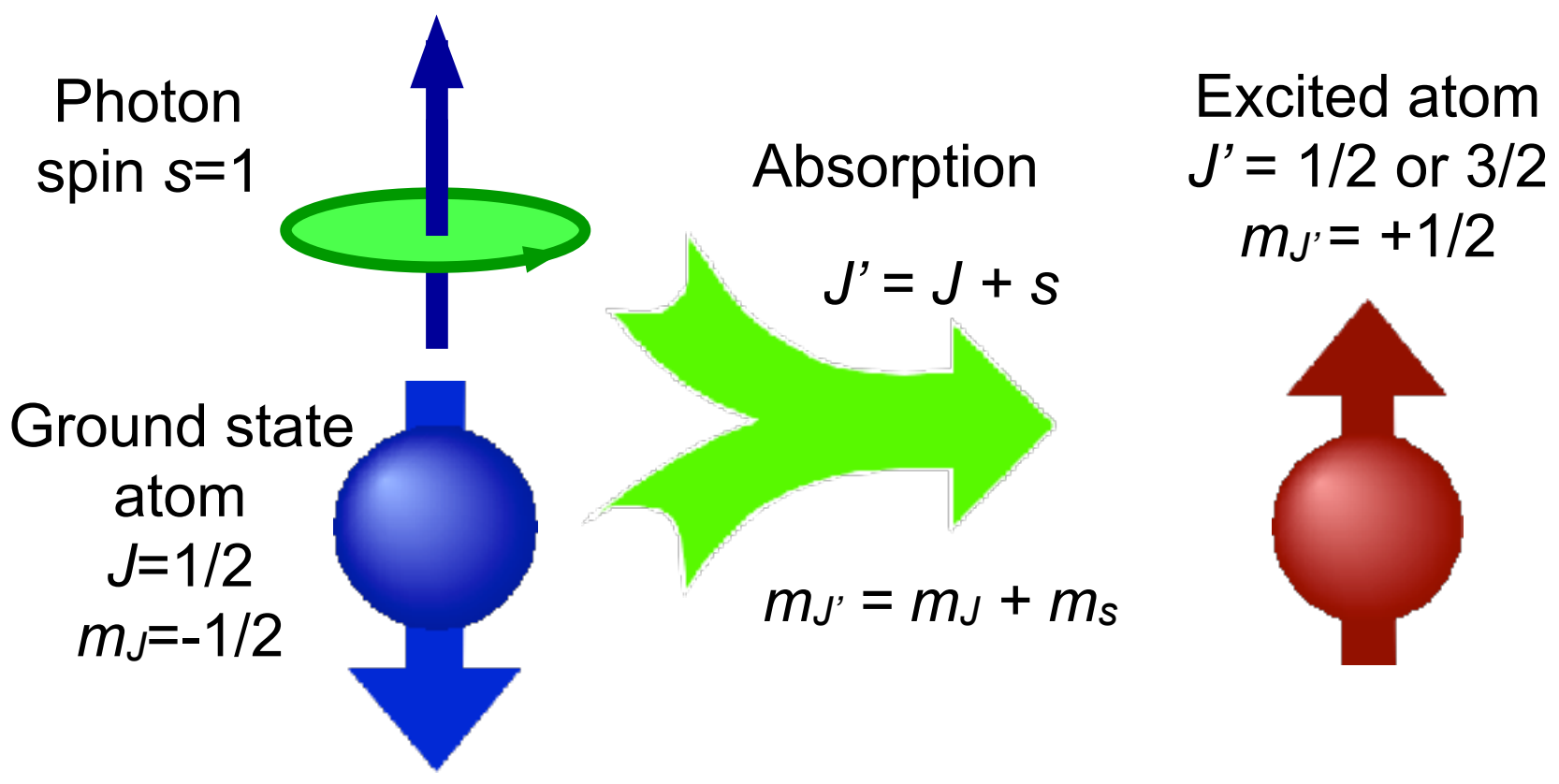
Photon
spin s=1
Ground state
atom
J=1/2
mJ=-1/2
Absorption
J' = J + s
mJ' = mJ + ms
Excited atom
J' = 1/2 or 3/2
mJ' = +1/2