

X-ray Absorption

X-ray Emission

Thomson Scattering

ionization
potentialunoccupied
statesoccupied
states

core state

$$\frac{e}{m_e} \mathbf{p} \cdot \mathbf{A}^+$$

$$\frac{e}{m_e} \mathbf{p} \cdot \mathbf{A}^-$$

$$\frac{e^2}{2m_e} \mathbf{p} \cdot \mathbf{A}^2$$

