e energy of the photon for a K_α transition is

$$E_{K_\alpha} = -13.6\,(Z-1)^2\left(\frac{1}{4}-\frac{1}{1}\right) = 10.2(Z-1)^2 \text{ (eV)}$$

wavelength is

$$\lambda_{K_\alpha} = \frac{hc}{E_{K_\alpha}} = \frac{12400 \text{ eV.Å}}{10.2\,(Z-1)^2 \text{ eV}}$$