

3. What are the two shortest wavelengths for a Zinc($Z=30$) atom?
4. An unknown single element target is used in a *PIXE* experiment and characteristic x-rays are produced with wavelengths of 1.55×10^{-10} m and 1.31×10^{-10} m. What is the elemental make up of the target?
5. Show that the Moseley's law for K_α radiation may be expressed as $\sqrt{f} = \sqrt{\frac{3}{4} \left(\frac{13.6eV}{h} \right)} (Z-1)$ where f is the x-ray frequency.