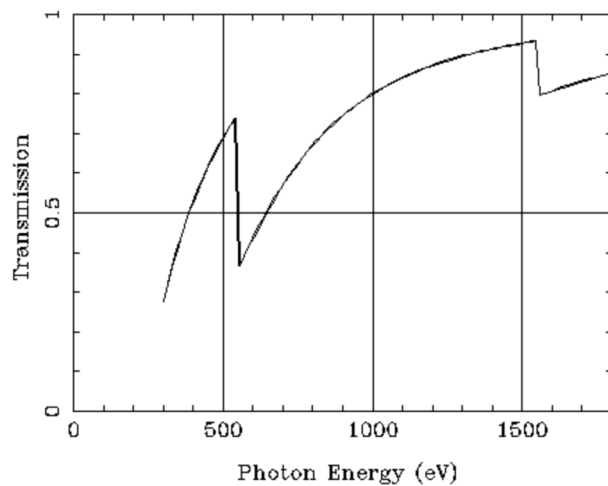


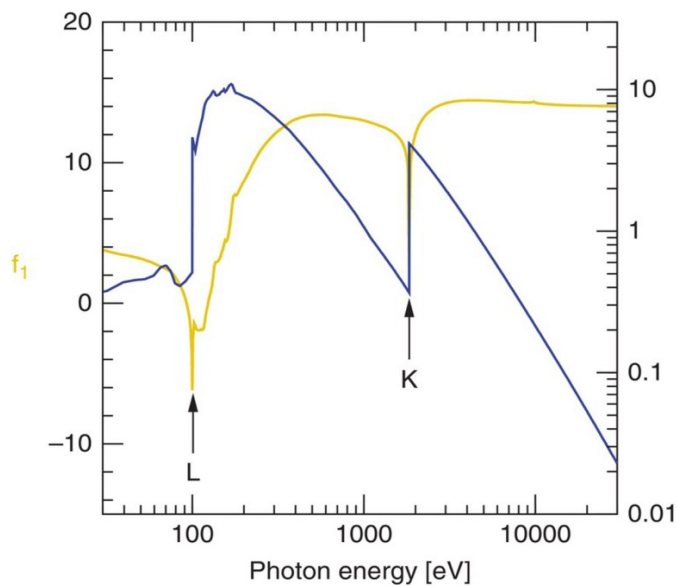
CH314 – Structural Analysis

Part III : X-ray Tools

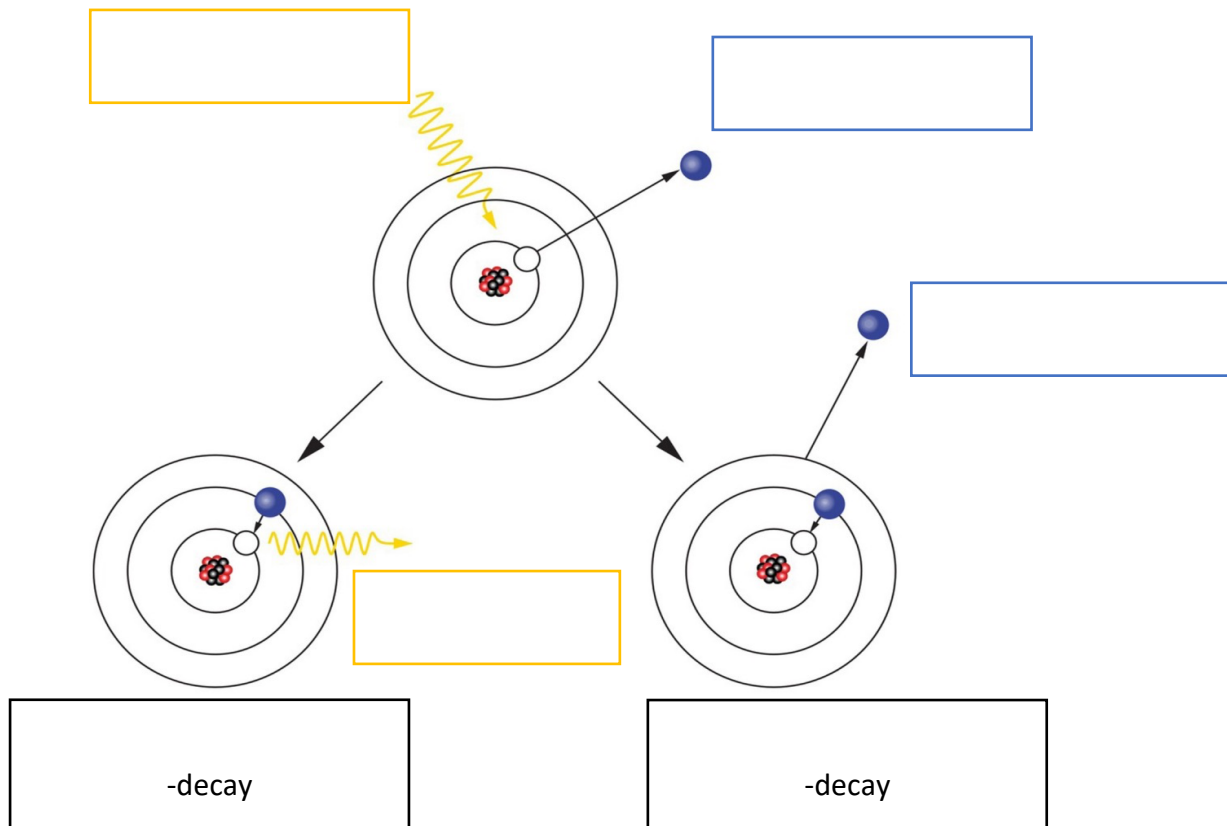
The Phoenix beamline at the Swiss Light Source can record absorption scans in the soft X-ray regime. Figure out the elements in the following sample. Use the electron binding energy tables from the x-ray data booklet on moodle or table on slide 18. Can you guess the material?



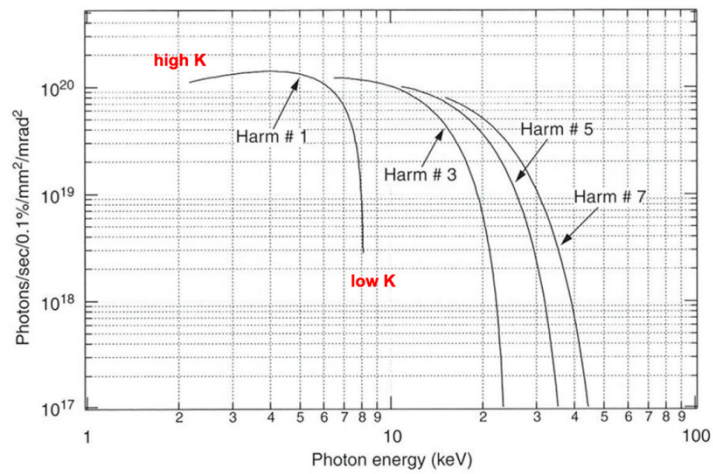
In the next figure the atomic scattering factors f_1 and f_2 of a single and simple element are plotted. How many electrons does each atom contain? What is the material?

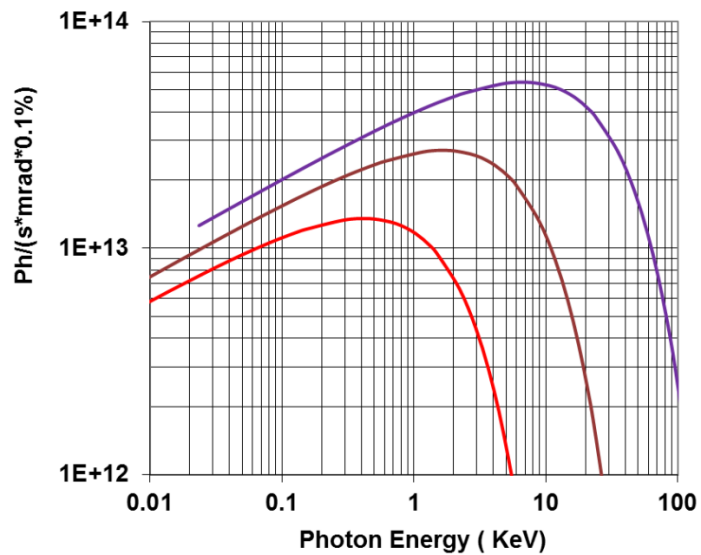


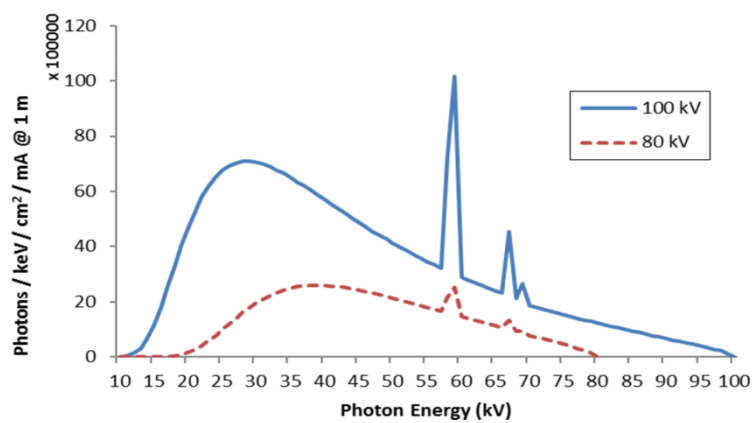
Label the following figure



To which X-ray source do the following characteristic output spectra belong?







Draw the light rays for the following lenses in the optical and x-ray regime. Assume an ideal refractive material for both cases.

Optical regime



X-ray regime



What is the difference between the optical and x-ray regime?