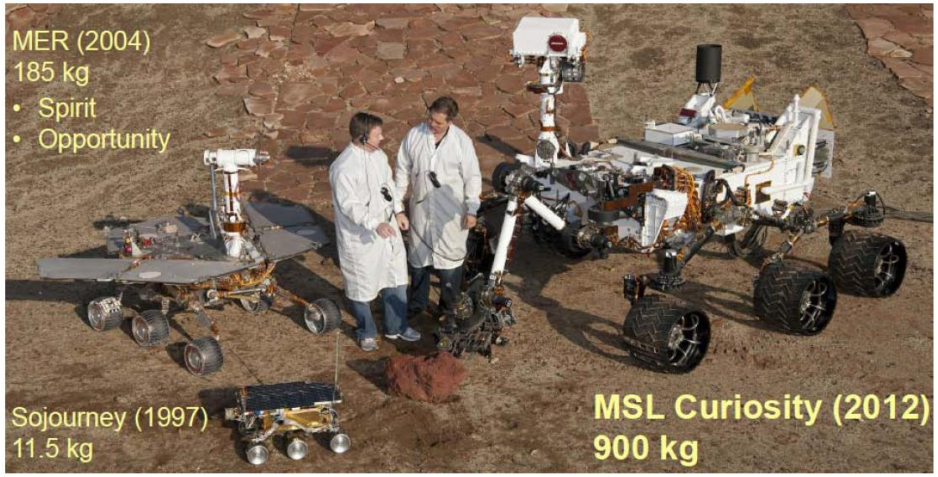
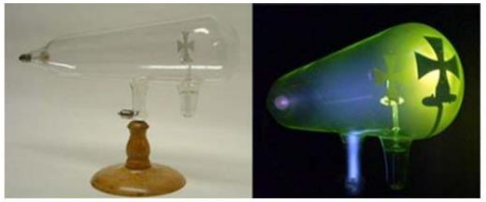
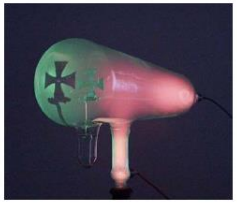
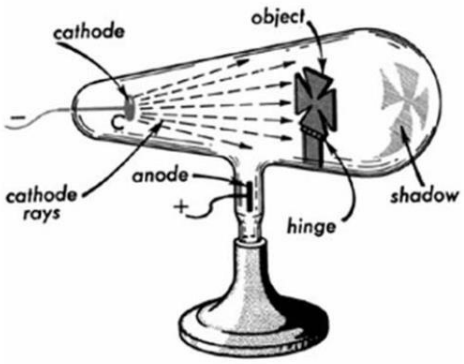
형광 X선 분석법
[X-ray Fluorescence Analysis]



뢴트겐의 음극선 실험, X-ray 발견 (1895)



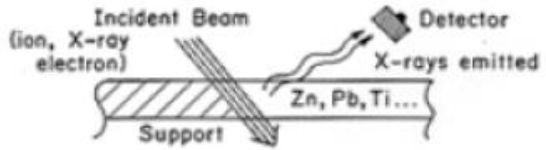




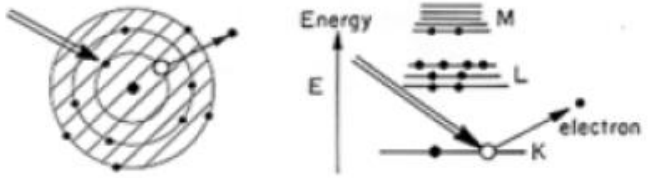
DELTA
Dynamic XRF

A NEW BREED OF
HANDHELD XRF

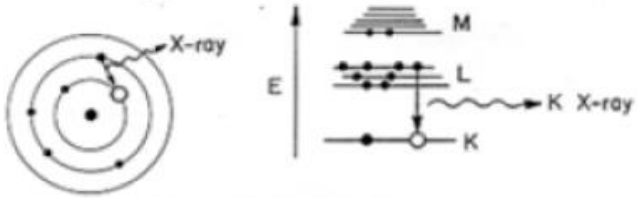
Ion-, Electron- and X-ray-Induced X-ray Analysis



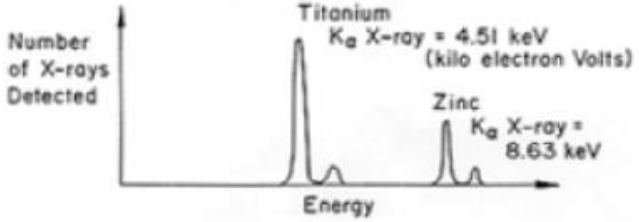
- Incident particle knocks electrons out of the occupied states around the atom leaving empty states (vacancies)

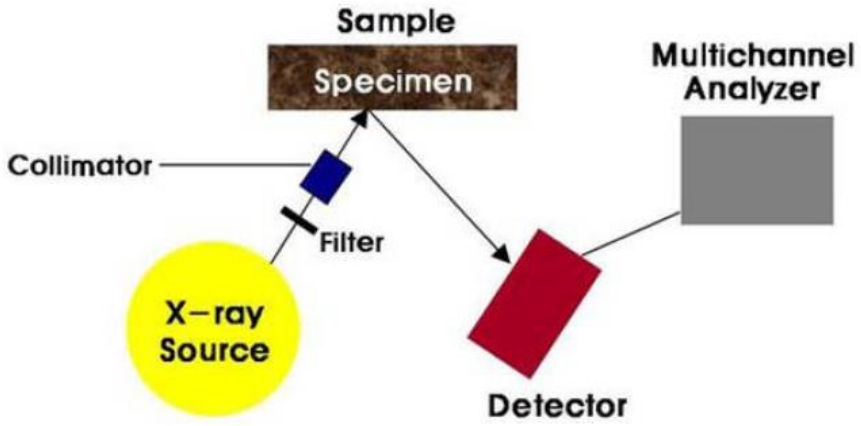


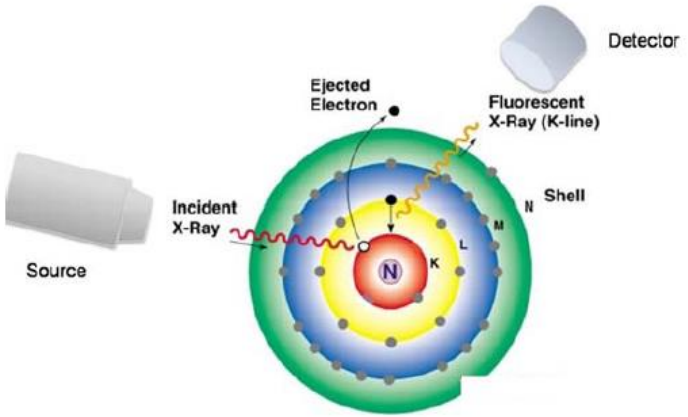
- Electron in occupied state makes transition to unfilled vacancy. X-ray is emitted to conserve energy.

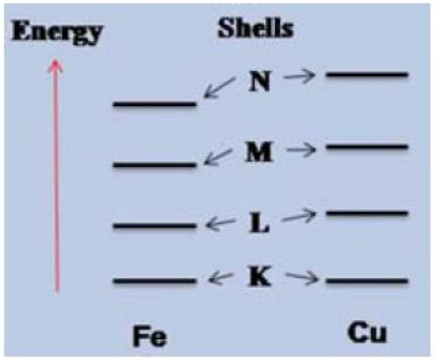


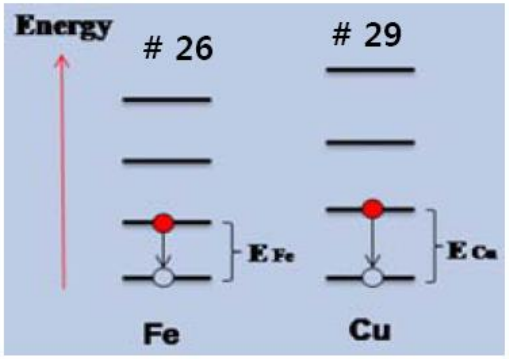
- Energy of the X-ray identifies the atom




Sample
Specimen
Multichannel
Analyzer
Collimator
Filter
X-ray
Source
Detector


Detector
Ejected
Electron
Fluorescent
X-Ray (K-line)
Shell
Incident
X-Ray
Source
N
M
L
K


Energy
Shells
N
M
L
K
Fe
Cu


Energy
26
29
E Fe
E Cu
Fe
Cu

6.4 keV 8.0 keV

- **Chem**istry = X-Ray Fluorescence (XRF)
- **Min**eralogy = X-Ray Diffraction (XRD)