

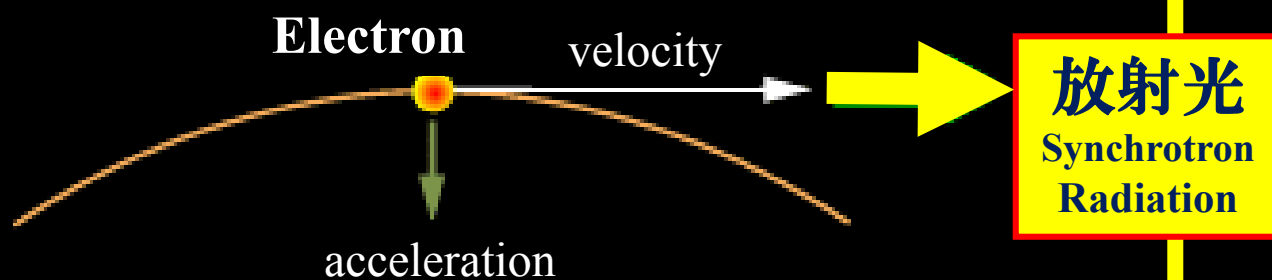
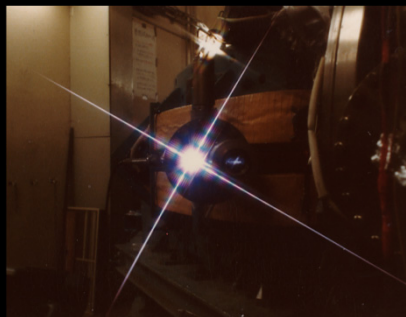
2017

光物性物理学

Optical Properties and Spectroscopy of Materials

Lecture Note 1

Synchrotron Radiation

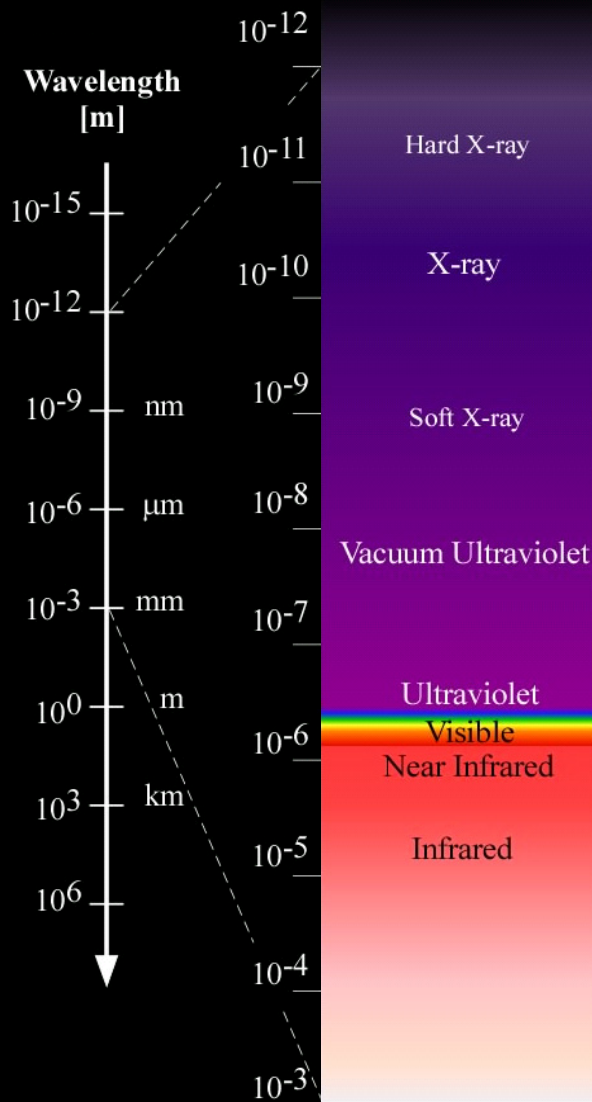


SPRING-8
放射光施設
(兵庫県播磨)



Photon Factory
放射光施設
(茨城県つくば)

光の波長領域 Wavelength



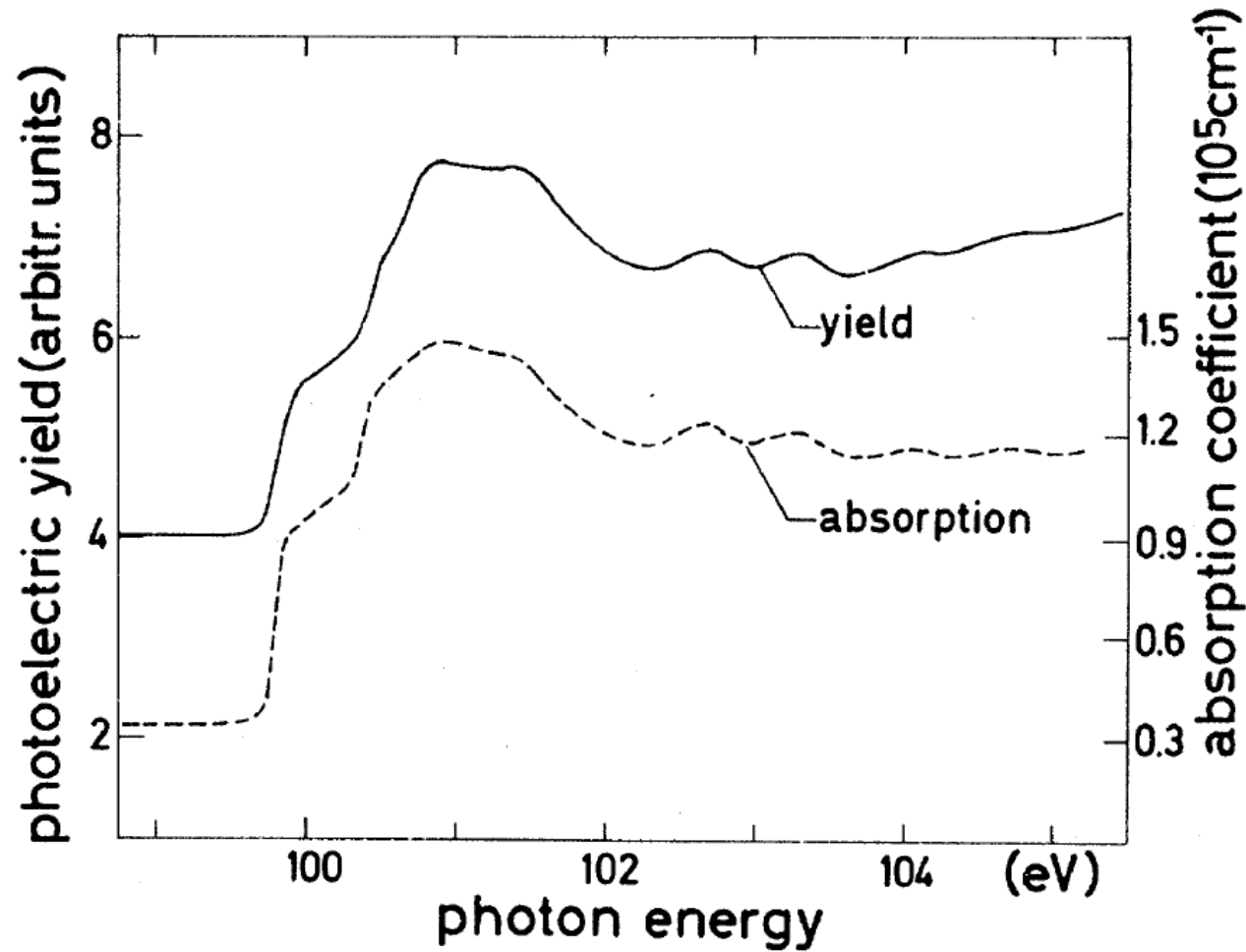


FIG. 3. Comparison of the photoelectric yield measured on a cleaved Si single crystal surface (solid curve) and the absorption coefficient (dashed curve) of a polycrystalline Si film, after Brown and Rustgi (Ref. 20).

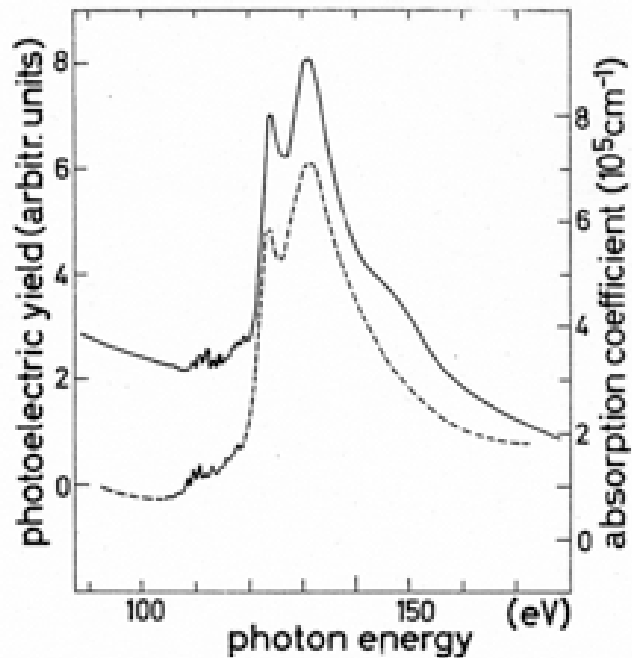


FIG. 1. Comparison of photoelectric yield (solid curve) and absorption (dashed curve) spectra for Pr.

W. Gudat and C. Kunz, Phys. Rev. Lett., **29**, 169-172 (1972).

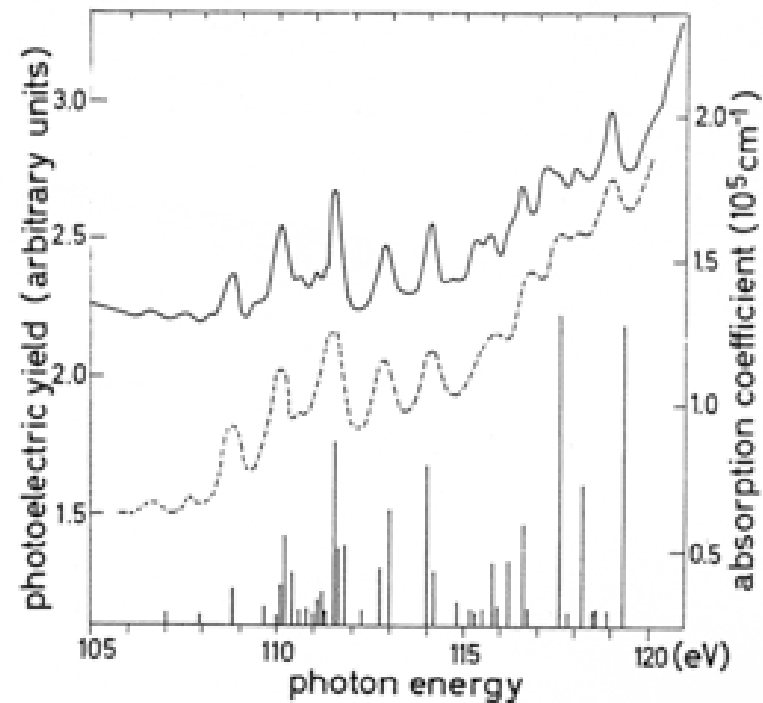


FIG. 2. Energy region of fine structure, yield (solid curve) and absorption (dashed curve) for Pr. The vertical lines are the result of an atomic calculation (Ref. 19); the length of the lines represents the oscillator strength.

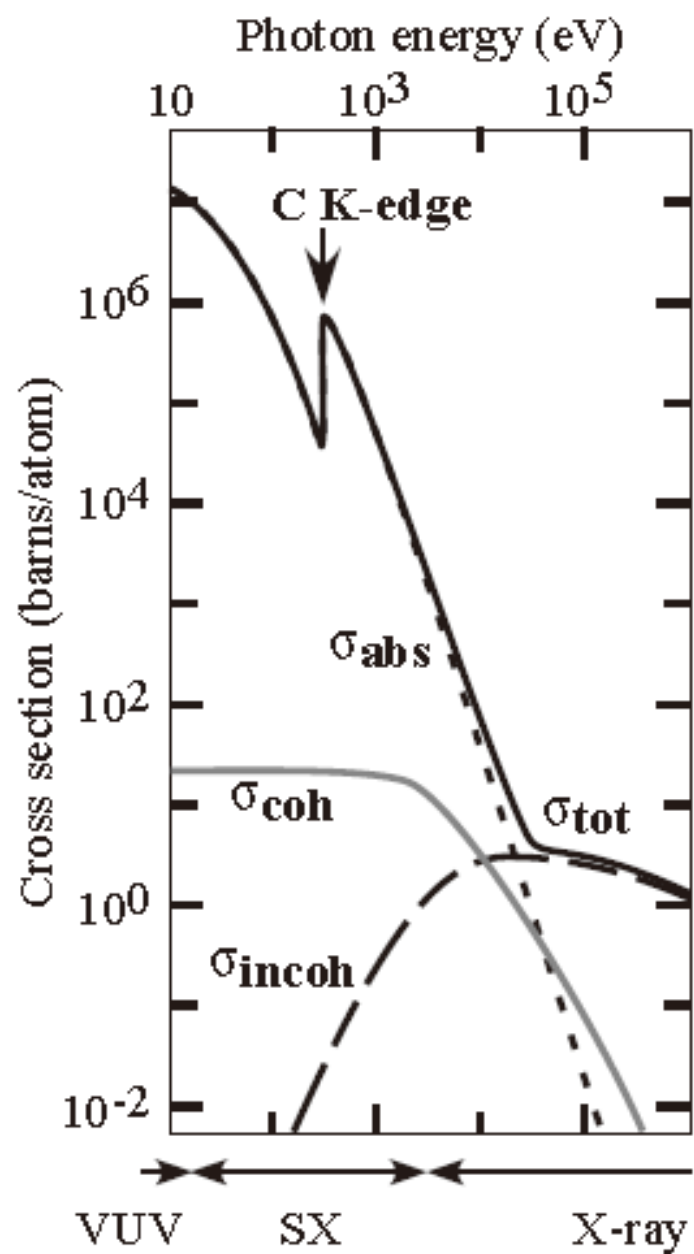
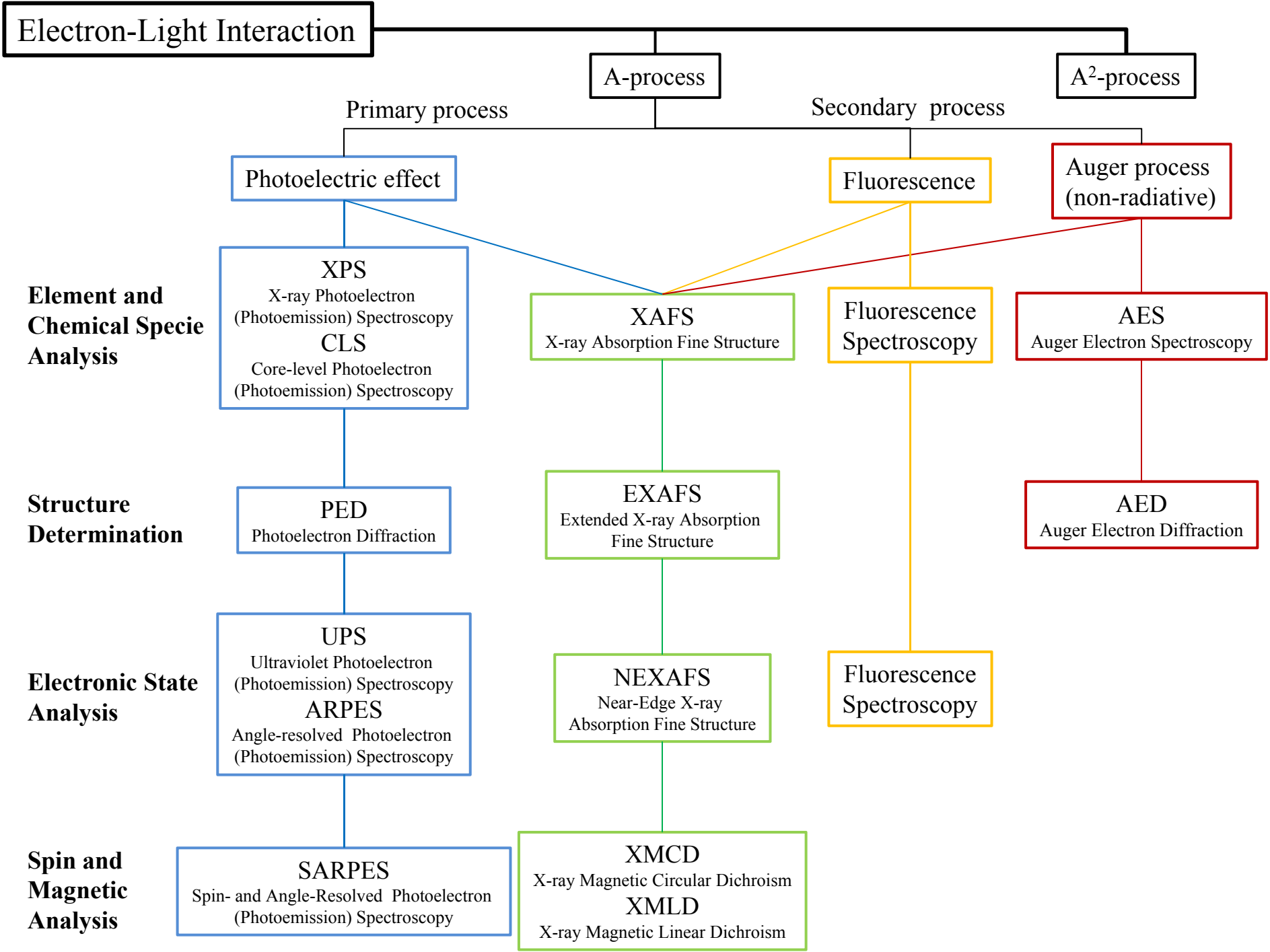
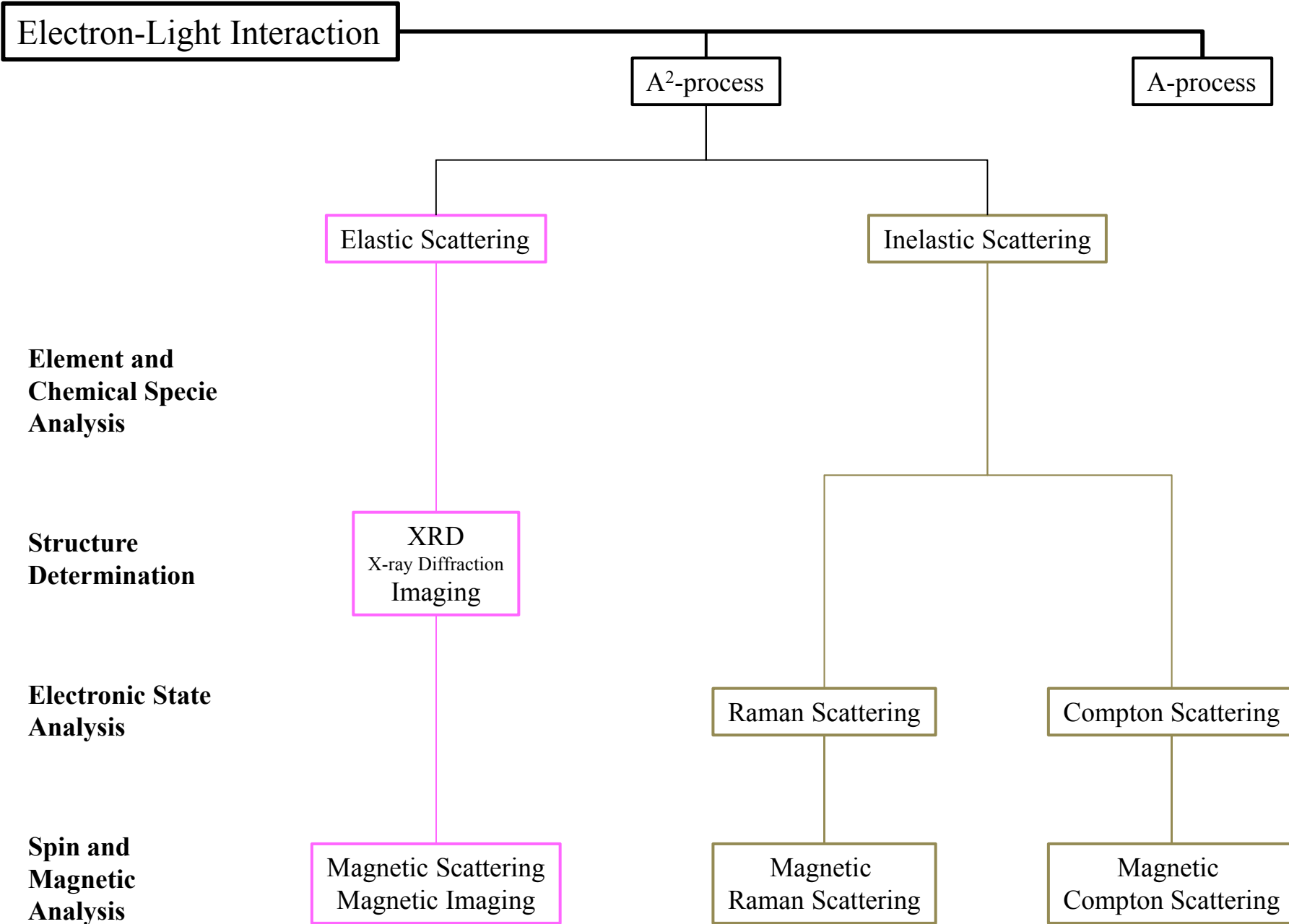


FIG. 4: 炭素原子の全光断面積 (σ_{tot}) のエネルギー依存性 (概観図)。 σ_{abs} : 吸収断面積、 σ_{coh} : コヒーレント散乱 (レイリー散乱)、 σ_{incoh} : インコヒーレント散乱 (コンプトン散乱)。





**Element and
Chemical Specie
Analysis**

**Structure
Determinatoin**

**Electronic State
Analysis**

**Spin and
Magnetic
Analysis**