



AVVISO DI SEMINARIO



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Biblioteca dell'Istituto di Metodologie Inorganiche e dei Plasmi

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ELECTRON COLLISION BY METAL ATOMS

Measurements of electron interactions with metal vapour atoms have been performed in a systematic study of fundamental interactions of atomic particles. These lead toward deeper understanding of collisional dynamics and types of interaction potentials that govern the electron scattering phenomena. The crucial observable in these processes is differential cross section (DCS). The experimental method used to determine DCS is based on crossed beam technique where effusive atomic beam is perpendicularly crossed by electron beam. A monochromatic electron beam of energies from 10 to 100 eV was elastically and inelastically scattered by an effusive beam of metal vapours and angular distributions of scattered electrons are recorded. Absolute values for the resonance states are obtained by normalization of relative differential cross sections to the optical oscillator strengths, while the absolute values for the elastic scattering are obtained from the intensity ratios at particular scattering angles. Results for Pb and Ag will be presented and discussed in terms of agreement between experimental findings and calculation predictions.