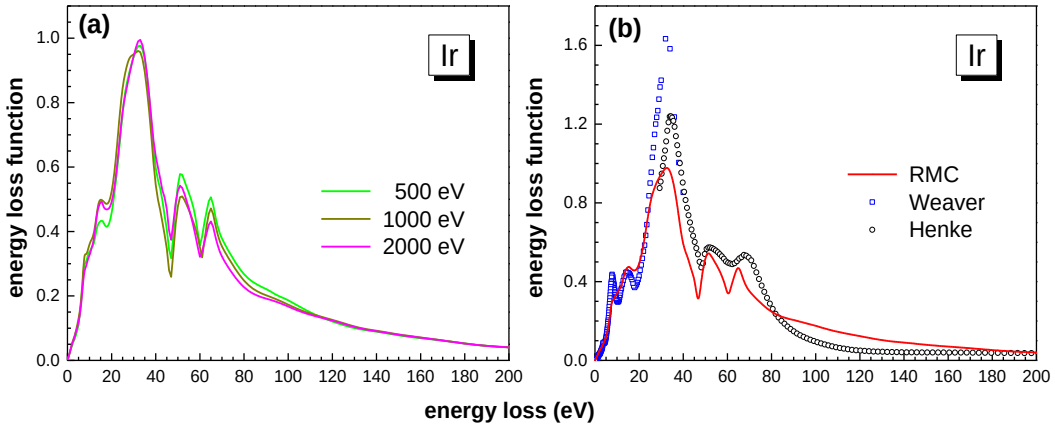

Figure 1. (a) ELFs of Ir derived from REELS spectra measured at 500, 1000 and 2000 eV primary energies. (b) Comparison for the ELFs of Ir. Red line: recent ELF, averaged for the three primary energies; open square: optical measurements of Weaver; open circles: calculated from the atomic scattering factors presented by Henke.

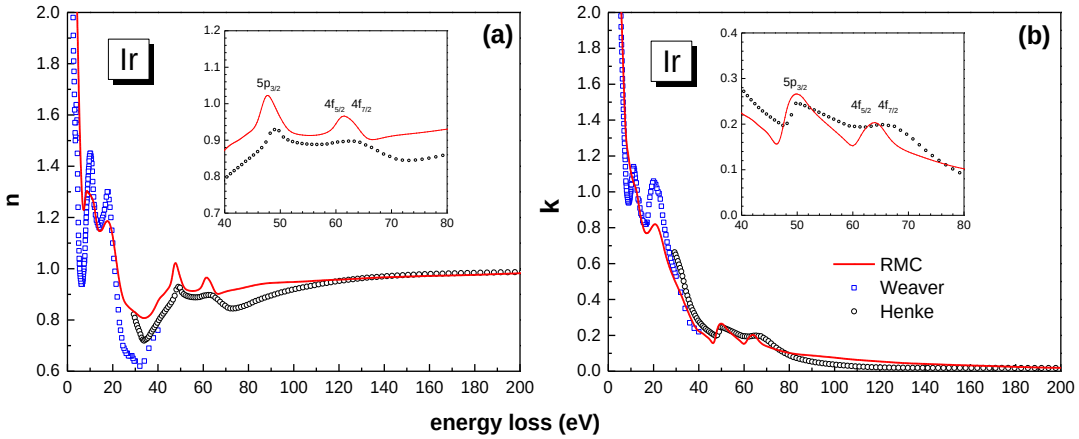

Figure 2. The present refractive index n and extinction coefficient k of Ir in comparison with the data of Weaver and Henke. In the inset we enlarged the energy region of 40-80 eV.

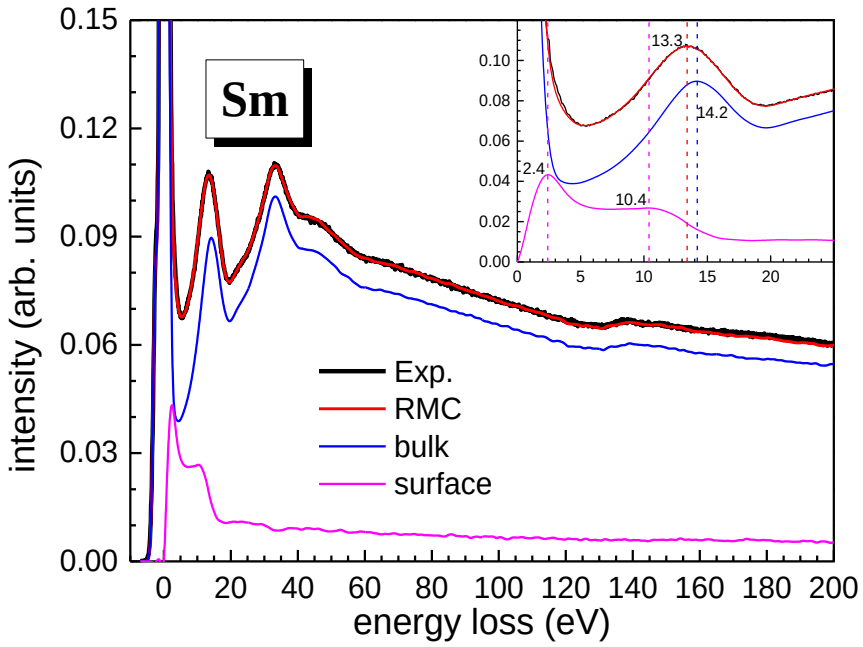

Figure 3. Comparison of the final simulated REELS spectrum (red) of Sm with experimental spectrum (black) for a primary electron beam of 2000 eV. Pure bulk excitation component (blue) and surface excitation component (magenta) are also calculated based on the derived ELF by Monte Carlo simulation.