

SLOW ELECTRON ELASTIC SCATTERING
BY Sr AND Ba ATOMS IN THE
ENERGY-DEPENDENT INTERVAL OF ANGLES

E. Yu. Remeta, Yu. Yu. Bilak¹, L. L. Shimon¹

Institute of Electron Physics, Nat. Acad. Sci. of Ukraine
(21, Universitetska Str., Uzhgorod 88000, Ukraine),

¹Uzhgorod State University
(46, Pidgirna Str., Uzhgorod 88000, Ukraine)

S u m m a r y

The use of a hypocycloidal electron spectrometer applied in contemporary experimental techniques to study the slow electron scattering by strontium and barium atoms is considered. In this case, the angular intervals of electrons scattered into the forward and backward hemispheres are defined by the spectrometer operation mode and depend on the collision energy. The theoretical analysis of elastic scattering of slow (up to 2 eV) electrons by the above atoms has allowed the structure in the energy dependence $S(E)$ to be interpreted as the manifestation of the 2D -shape resonance. The theoretical values of the $S(E)$ function and total and differential scattering cross sections are graphically correlated.