

Abstract Submitted
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Relativistic convergent close-coupling calculation of the spin polarization of electrons scattered from indium¹ CHRISTOPHER BOSTOCK, DMITRY FURSA, IGOR BRAY, Curtin University — The measurements of the spin asymmetry parameter (Sherman function) for elastic and inelastic electron-indium scattering by Bartsch *et al.* [J. Phys. B 25(1992)1511] are compared with corresponding relativistic convergent close-coupling calculations. The RCCC results provide the first theoretical data to span the full range of energies (1-14 eV) and transitions measured by Bartsch *et al.*. The spin asymmetry parameter is presented for $(5p)^2P_{1/2}^o \rightarrow (5p)^2P_{1/2}^o$ elastic scattering, $(5p)^2P_{1/2}^o \rightarrow (5p)^2P_{3/2}^o$, $(5p)^2P_{1/2}^o \rightarrow (6s)^2S_{1/2}$, and $(5p)^2P_{3/2}^o \rightarrow (6s)^2S_{1/2}$ inelastic transitions. There is very good agreement between theory and experiment for the elastic spin asymmetries. Some discrepancies still exist between theory and experiment for excited state spin asymmetries.

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