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**Spin polarized Auger electrons in Core-Valence-Valence decays of 3d impurities in metals** G.P. BRIVIO, A. ZANETTI, G. FRATESI, Dept. Materials Science, Universita di Milano-Bicocca (Italy), M.I. TRIONI, CNISM and CNR-INFM, Milano-Bicocca (Italy) — The spin polarization of the emitted electrons from 3d impurities and adatoms in simple metal hosts in a Core-Valence-Valence Auger process is analyzed in terms of a first principle density functional theory approach, by using the golden rule. The relationship between the spin dependent local density of states, the magnetic moments of the 3d atoms and the energy dependent and total spin polarization of the Auger electrons is discussed. It is shown how to estimate the magnetic moment of the impurities from a measure of the total spin polarization of the Auger electrons. This can be achieved considering i) that the Auger signal is simply due to the impurities only, ii) the very locality of the Auger phenomenon, and iii) a simple and general relationship between the spin polarization and the magnetic moment of the impurity which we show to be independent of the metal host.

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