

Abstract Submitted  
for the DAMOP07 Meeting of  
The American Physical Society

**Dipole angular distribution and spin polarization of photoelectrons from semi-filled shell atoms** MIRON AMUSIA<sup>1</sup>, Racah Institute of Physics, the Hebrew University, Jerusalem 91904, Israel, LARISSA CHERNYSHEVA, 2 A. F. Ioffe Physical- Technical Institute, St. Petersburg 194021, Russia — We calculated photoelectrons' dipole angular anisotropy and spin-polarization parameters for a number of semi-filled shell atoms in the frame of the Spin Polarized Random Phase Approximation with Exchange. We consider photoelectrons from semi-filled and closed shells that are neighbours. We studied also photoelectrons from Cr\* and Mo\* that are formed by spin-flip of the outer  $s$ -electrons. To see the role of the nuclear charge variation, we have treated the case of  $3p$  - electrons in K, Ar and K<sup>+</sup>. The following subshell were considered: N ( $2p$ ), P ( $3p$ ), Ar ( $3p$ ), K<sup>+</sup> ( $3p$ ), K ( $3p$ ), Cr ( $3p, 3d$ ), Cr\* ( $3d$ ), Mn ( $3p, 3d$ ), As ( $3d, 4p$ ), Mo ( $4p, 4d$ ), Mo\* ( $4d$ ), Tc ( $4p, 4d,$ ), Sb ( $4d, 5p$ ), Eu ( $4f$ ). The detailed information can be found in [1]. The peculiarities of obtained parameters as functions of photon frequency are quite prominent and deserve experimental investigation.

[1] M. Ya. Amusia and L. V. Chernysheva, <http://arxiv.org/abs/physics/0701040>

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Date submitted: 26 Jan 2007

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