

Abstract Submitted
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Photoionization of Xe 3*d* electrons in molecule Xe@C₆₀: interplay of intra-doublet and confinement resonances MIRON YA AMUSIA¹, Racah Institute of Physics, The Hebrew University, Jerusalem 91904, Israel, ARKADIY S. BALTEKOV, Arifov Institute of Electronics, Tashkent, 700125, Uzbekistan, LARISSA V. CHERNYSHEVA, Ioffe Physical-Technical Institute, St.-Petersburg 194021, Russia — We demonstrate rather interesting manifestations of co-existence of resonance features in characteristics of the photoionization of 3*d*-electrons in Xe@C₆₀. It is shown that the reflection of photoelectrons produced by the 3*d* Xe photoionization affects greatly partial photoionization cross-sections of 3*d*_{5/2} and 3*d*_{3/2} levels and respective angular anisotropy parameters, both dipole and non-dipole adding to all of them additional maximums and minimums. The calculations are performed treating the 3/2 and 5/2 electrons as electrons of different kinds with their spins “up” and “down”. The effect of C₆₀ shell is accounted for in the frame of the “orange” skin potential model. It is essential that in the considered photon frequency region presented resonance features are not affected by the C₆₀ polarization. For details see <http://arxiv.org/abs/physics/0609121>.

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