Photoionization of Ce$^{3+}$ and Ce$^{3+}@C_{60}$\textsuperscript{1} ZHIFAN CHEN, ALFRED Z. MSEZANE, Clark Atlanta University — Photoionization of the Ce$^{3+}$ and Ce$^{3+}@C_{60}$ in the energy region 100-150 eV has been studied using our recently developed random phase approximation with exchange method and model potential for the C$_{60}$ fullerene. Comparison of the results of the Ce$^{3+}$ photoionization with a recent measurement confirms the value of the measured cross section for Ce$^{3+}$ and indirectly supports the observed suppression effect of the carbon cage in the endohedral fullerene Ce@C$_{60}$$^{2+}$ photoionization. Our calculation of the Ce$^{3+}@C_{60}$ photoionization process demonstrates both the suppression and the resonance effect of the C$_{60}$ shell.

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