Erratum: Multislit interference patterns in high-order harmonic generation in C_{60} [Phys. Rev. A 76, 063406 (2007)]

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In our paper we have used a spherical model to analyze how the radius of the fullerene cage can be obtained from the high-order harmonic spectra in C_{60}. We have noticed that the numerical results, obtained from Eq. (12) and shown as dashed lines in the panels (c) of the figures, are imprecise. Therefore, we have reanalyzed the model and found for small harmonic orders good agreement between the results for the recombination matrix elements, obtained from the full calculation and the spherical model, by setting $\alpha_{l_i}=0$ for both $l_i=4$ and $l_i=5$ in Eq. (12). The comparison between the results from the full calculation (solid lines) and the spherical model (dashed lines) is shown in Fig. 1 for (a) the h_u HOMO, (b) the h_g HOMO-1, and (c) the g_g HOMO-2. The physical interpretation of the results remains unchanged. Using $\alpha_{l_i}=0$ we obtain the radius of the fullerene cage as $R_1=6.73$ a.u. and $R_2=6.08$ from the respective minima $n_1=39$ and $n_2=70$ of the high-order harmonic spectrum for the h_u HOMO (cf. Fig. 2 below). Please note the revised intensity scale in Fig. 2, as compared to the scale in the corresponding Fig. 1(b) of our original paper. The revision allows a comparison with the spectra from the other orbitals, showing that the spectra from the different orbitals are of similar strength. We may also take this opportunity to correct a typewriting mistake in the definition of V_0 below Eq. (10). It should read $V_0^2=1/2R^2\Delta(1+\Delta^2/3R^2)^{-1}$.

We thank Professor H. Kono for drawing our attention to the imprecise predictions from the spherical model.

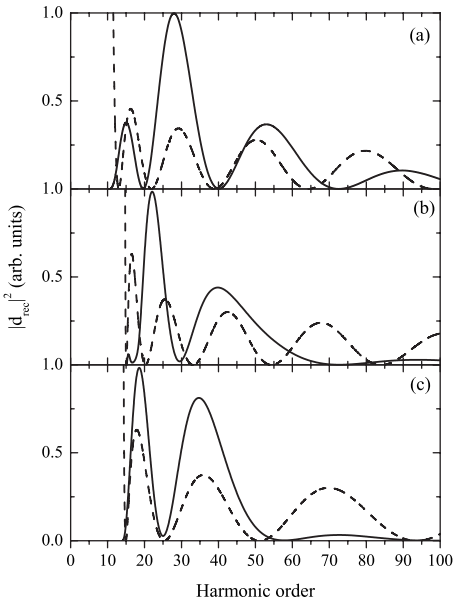

FIG. 1. Recombination matrix element as obtained from the full calculation (solid lines) and the spherical model (dashed lines) for (a) the h_u HOMO, (b) the h_g HOMO-1, and (c) the g_g HOMO-2. For the presentation of the recombination matrix element as a function of the harmonic order n we have used the relation $n\omega_{1800}=k^2/2+I_p$ with $\omega_{1800}=0.0253$ a.u. ($\lambda=1800$ nm) and $I_p^{HOMO}=0.272$ a.u., $I_p^{HOMO\text{-}1}=0.343$ a.u. and $I_p^{HOMO\text{-}2}=0.353$ a.u., respectively.

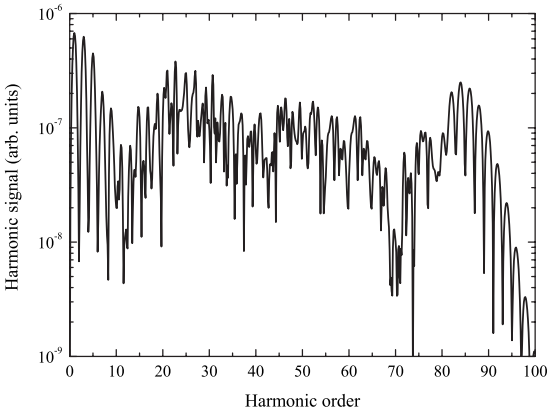

FIG. 2. Harmonic signal for the h_u HOMO of an ensemble of aligned C_{60} molecules at $\lambda=1800$ nm, a peak laser intensity of $I_0=5\times10^{13}$ W/cm^2, a pulse duration of 30 fs, and a $\sin^2$ pulse shape. Please note the change in the intensity scale of the harmonic scale as compared to Fig. 1(b) of the original paper.

