Erratum: Wrinkling of monolayer graphene: A study by molecular dynamics and continuum plate theory [Phys. Rev. B 80, 155445 (2009)]

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In the paper, Fig. 6 does not correctly reflect the force distributions given by Eq. (A9) in the Appendix (see Ref. 50 of our paper). However, all the equations and conclusions are correct.

The corrected figure is shown below (see Figure 1). Accordingly, the description to the dependence of the prewrinkling forces on the radial coordinate (in the last paragraph of Sec. III on page 4) should be changed to "We can see that N_r is positive in the range of $0 \leqslant r \leqslant R$. Positive N_θ is also found at $r < 0.476R$. However, at $0.476R \leqslant r \leqslant R$ N_θ is negative. These indicate that prior to wrinkling the graphene is stretched out in the radial direction but compressed in the circumferential direction at $r \geqslant 0.476R$ due to its perimeter reduction when the material is pulled to its center by the nanoindentation."

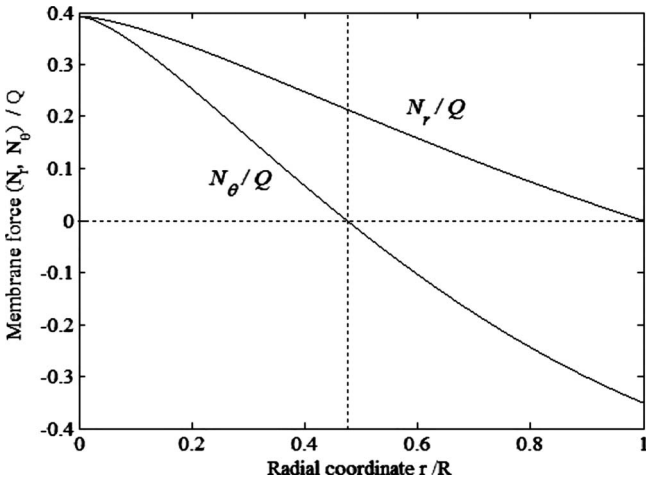

FIG. 1. The distribution of prewrinkling axis-symmetric membrane forces N_r and N_θ of a simply supported circular graphene sheet whose boundary is free to move in $r-\theta$ plane. Here $Q=(K_{extension} \cdot w_0^2)/R^2$.

