scientific reports

Published online: 17 February 2023

Check for updates

OPEN Author Correction: TeV/m catapult acceleration of electrons in graphene layers

Cristian Bonțoiu, Öznur Apsimon, Egidijus Kukstas, Volodymyr Rodin, Monika Yadav, Carsten Welsch, Javier Resta-López, Alexandre Bonatto & Guoxing Xia

Correction to: Scientific Reports https://doi.org/10.1038/s41598-023-28617-w, published online 24 January 2023

The original version of this Article contained an error in the legend of Figure 1.

"Overview of the catapult electron acceleration scheme in graphene layers. Moving from left to right, as indicated by the blue arrows, a single 3 fs-long laser pulse of 100 nm wavelength and 10²¹ W/cm² peak intensity, ionizes a 1.5 µm-long (y) and 1.2 µm-thick (x) stack of graphene layers. The interaction results in self-injected electrons being accelerated to \simeq 7 MeV. The image is at scale, with a 150 nm bar drawn, and for better visibility, only 15 out of 60 graphene layers are shown. The simulated normalized transverse electric field (E_x) is shown as a surface colour plot for the same laser pulse before entering the target (left) and after leaving the target (right). This work contains 2D PIC simulations carried out in the yx-plane indicated in the image."

now reads:

"Overview of the catapult electron acceleration scheme in graphene layers. Moving from left to right, as indicated by the blue arrows, a single 3 fs-long laser pulse of 100 nm wavelength and 10^{21} W/cm² peak intensity, ionizes a 1.5 µm-long (y) and 1.2 µm-thick (x) stack of graphene layers. The interaction results in self-injected electrons being accelerated to ~7 MeV. The image is at scale, and for better visibility, only 15 out of 60 graphene layers are shown. The simulated normalized transverse electric field (E_x) is shown as a surface colour plot for the same laser pulse before entering the target (left) and after leaving the target (right). This work contains 2D PIC simulations carried out in the yx-plane indicated in the image."

The original Article has been corrected.

Open Access This article is licensed under a Creative Commons Attribution 4.0 International \odot License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit http://creativecommons.org/licenses/by/4.0/.

© The Author(s) 2023