

Abstract Submitted
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Electronic focusing in carbon nanotubes¹ PATRICIO HÄBERLE, UTFSM, Chile, SAMUEL HEVIA, PUC, Chile, RODRIGO SEGURA, UV, Chile — Slow electrons traveling close to a surface exhibit modifications of their trajectories due to the polarization charge they induce on the surface. This image charge interaction, in the case of carbon nanotubes (CNTs), is responsible for focusing electrons traveling in the vicinity of a nanotube. The consequences of this effect on the electronic trajectories are more significant for both low kinetic energies and small tube diameters. Numerical calculations indicate low energy electron spectroscopies are especially sensitive to this phenomenon. We have observed evidence of this electronic focusing in inverse photoemission spectroscopy from different CNTs samples.

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