

Abstract Submitted
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Exploring the Structure of Graphene Nanoribbons Using Scanning Tunneling Microscopy YEN-CHIA CHEN, JUANJUAN FENG, CHENG-GANG TAO, LIYING JIAO, XIAOWEI ZHANG, OLEG YAZYEV, RODRIGO CAPAZ, ALEX ZETTL, STEVEN LOUIE, HONGJIE DAI, MICHAEL CROMMIE — The confined dimension and edges of graphene nanoribbons (GNRs) are predicted to result in novel magnetic edge states and tunable energy gaps. Such properties should be strongly dependent on GNR nanoscale structure. Here we report a scanning tunneling microscopy (STM) study of the structure of GNRs derived from unzipped carbon nanotubes that are deposited onto different substrates. These GNRs are found to have different chiralities and widths, and show some unexpected geometrical structure near the edges. We will also present new results obtained from GNRs with disordered edges.

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