

Facile synthesis of graphene nanoribbons with adjustable width at surfaces

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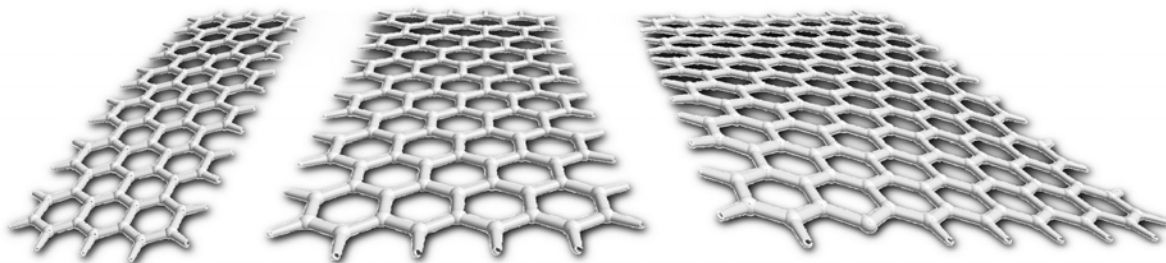
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Graphene Nanoribbons (GNRs) have been predicted to show interesting electronic properties that depend largely on their width and edge structure. Despite the many curious theoretical investigations demonstrating the particular properties of GNRs [1], the experimental verification is still challenging because the production of GNRs of well-defined width and edge structure are still limited. Recently the possibility to grow narrow nanoribbons from poly-aromatic hydrocarbon precursors has been demonstrated at surfaces [2].

Here, we present the synthesis of armchair nanoribbons at surfaces with adjustable width using specially designed precursor molecules with an unusual coupling scheme. The class of precursors allows for the facile modification of the edge structure with heteroatoms.



- [1] Li Yang et. Al., *Phys. Rev. Lett.* **99**, 186801 (2007).
[2] J. Cai et. Al., *Nature* **466**, 470 (2010).