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Electronic structures of hybrid graphene/boron nitride nanoribbons with hydrogen adsorption[1] CHI-HSUAN LEE, CHIH-KAI YANG, National Chengchi University — Electronic properties of hybrid graphene/boron nitride nanoribbons are investigated using density functional calculations. It is found that hydrogen adsorption on a graphene nanoribbon alters band structures drastically. Furthermore, H-vacancy chains and lines can effectively shape the conduction properties. Influences of edge atoms with nonzero magnetic moments and the interface between B and N are also prominent in the electronic structures.

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