

Abstract Submitted  
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**The synthesis of planar sp<sup>2</sup>-bonded system from molecular building blocks**<sup>1</sup> XIN ZHANG, HONG LUO, University at Buffalo, GONG GU, University of Tennessee, Knoxville — Biphenyl and pyrene molecules were deposited onto atomically flat Cu (100) surface as building blocks for the synthesis of planar, conjugated, sp<sup>2</sup>-bonded system. In situ STM observation confirmed the formation of highly-ordered lattice structure after annealing under UHV condition, as a result of the substrate-assisted dehydrogenation. The electronic properties of the system were examined by STS and will be presented.

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