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Continued Growth on Graphene Edges ZHENGTANG LUO, Hong Kong Univ of Sci Tech — Previously, we have shown that the large-size single crystal graphene can be obtained by suppressing the nucleation density during Chemical Vapor Deposition (CVD) growth. Here we demonstrate that the graphene single crystal can be amplified by a continued growth method. In this process, we used a mild oxidation step after the first-growth, which lead to the observed fromation of oxides at the vicinity of graphene edges, which allows the graphene growth at seed edges due to reduced activation energy. Consequently, we successful grown a secondary single-crystal graphene structures with the same lattice structure, orientation on the graphene edges. This amplification method would enable the production of graphene electronics with controlled properties.

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