

Abstract Submitted  
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**Correlated crystallographic etching of graphene and nanoribbon formation** STEPHEN JOHNSON, D. PATRICK HUNLEY, University of Kentucky, JOSEPH STIEHA, ABHISHEK SUNDARARAJAN, ARUNITA KAR, University of Kentucky, A.T. CHARLIE JOHNSON, University of Pennsylvania, DOUGLAS STRACHAN, University of Kentucky — Catalytic etching is a promising method for constructing crystallographically defined graphene structures such as nanoribbons. Catalytic etching experiments are performed and shown to contain significant correlation yielding crystallographic graphene nanoribbons. This correlation is investigated as a function of etching conditions and compared to simulations with possible sources discussed. Supported in part by NSF Award No. DMR-0805136, the Kentucky NSF EPSCoR program, the University of Kentucky Center for Advanced Materials, and the University of Kentucky Center for Nanoscale Science and Engineering.

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