Abstract Submitted
for the MAR12 Meeting of
The American Physical Society

Boron Nitride Nanoribbons: Synthesis and Future Directions[1]
ASHLEY GIBB, KRIS ERIKSON, UC Berkeley, ALEX SINITSKII, University of Nebraska Lincoln, MICHAEL ROUSSEAS, NASIM ALEM, UC Berkeley, JAMES TOUR, Rice University, ALEX ZETTL, UC Berkeley, Lawrence Berkeley National Lab — Boron Nitride Nanoribbons (BNNR) have been theorized to have many interesting electrical and magnetic properties and edge states, but these characteristics have not been experimentally verified due to challenges in synthesis and purification. We have produced BNNRs by longitudinally splitting boron nitride nanotubes (BNNT) using potassium vapor as an intercalant. Due to the strong interactions between boron nitride sheets, separation of nanoribbons from their parent tubes is challenging. We have used various solvent systems to assist with separation of the ribbons with the goal of probing their properties.

[1]Research supported in part by the National Science Foundation.

Ashley Gibb
UC Berkeley

Date submitted: 19 Nov 2011 Electronic form version 1.4