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Scaled Synthesis of Boron Nitride Nanotubes, Nanoribbons, and Nanococoons Using Direct Feedstock Injection into an Extended-Pressure, Inductively-Coupled Thermal Plasma AIDIN FATHALIZADEH, THANG PHAM, WILLIAM MICKELSON, ALEX ZETTL, Department of Physics, University of California at Berkeley; Materials Sciences Division, Lawrence Berkeley National Laboratory — A variable pressure (up to 10 atm) powder or gas injection inductively coupled plasma system has been developed and used to produce high-quality boron nitride nanotubes (BNNTs) at continuous production rates of 35 g/h. Under suitable conditions, collapsed BN nanotubes (i.e., nanoribbons), and closed shell BN capsules (i.e., nanococoons) are also obtained. The process is adaptable to a large variety of feedstock materials.

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