

Supporting information

Room-Temperature Synthesis of Hexagonal Boron Nitride under Pressure

Junkai Li *, Donghan Jia, Guoliang Niu, Peiyang Mu, Huiyang Gou

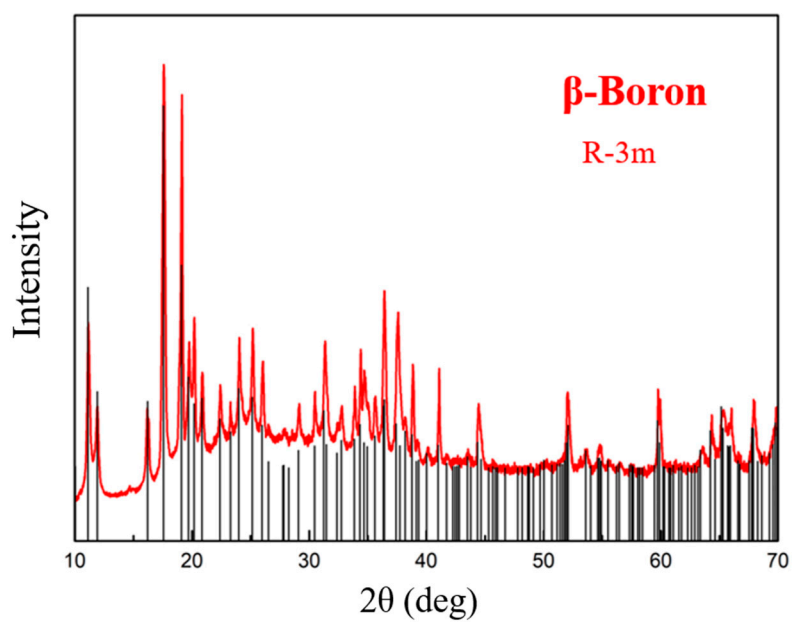


Figure S1. XRD pattern of nano boron powder.

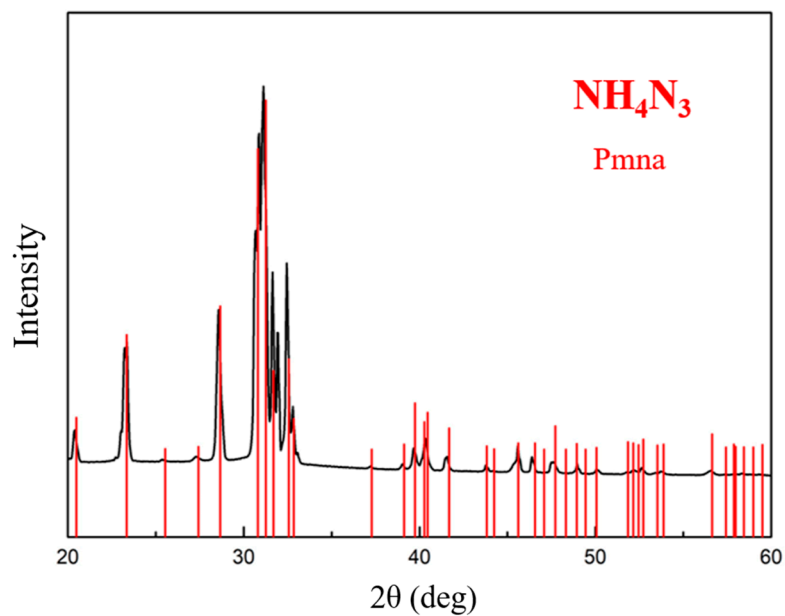


Figure S2. XRD pattern of ammonium azide.

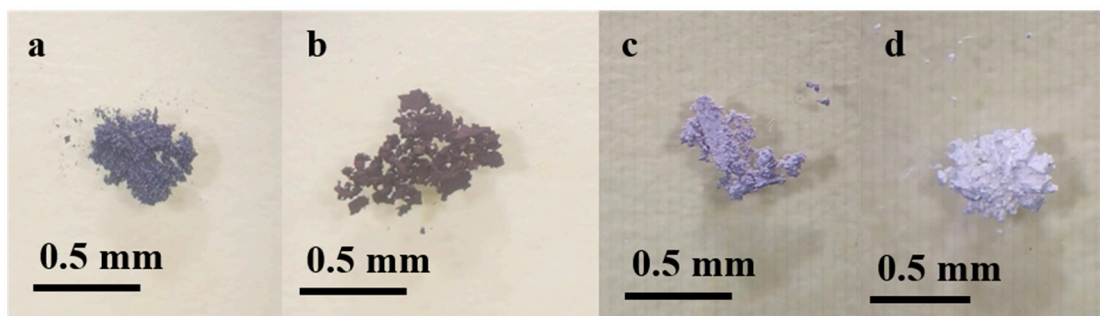


Figure S3. optical photos of samples and precursors. (a) nano boron powder; (b) sample obtained at 28 GPa and room temperature; (c) sample obtained at 28 GPa and 200 °C; (d) commercial h-BN.

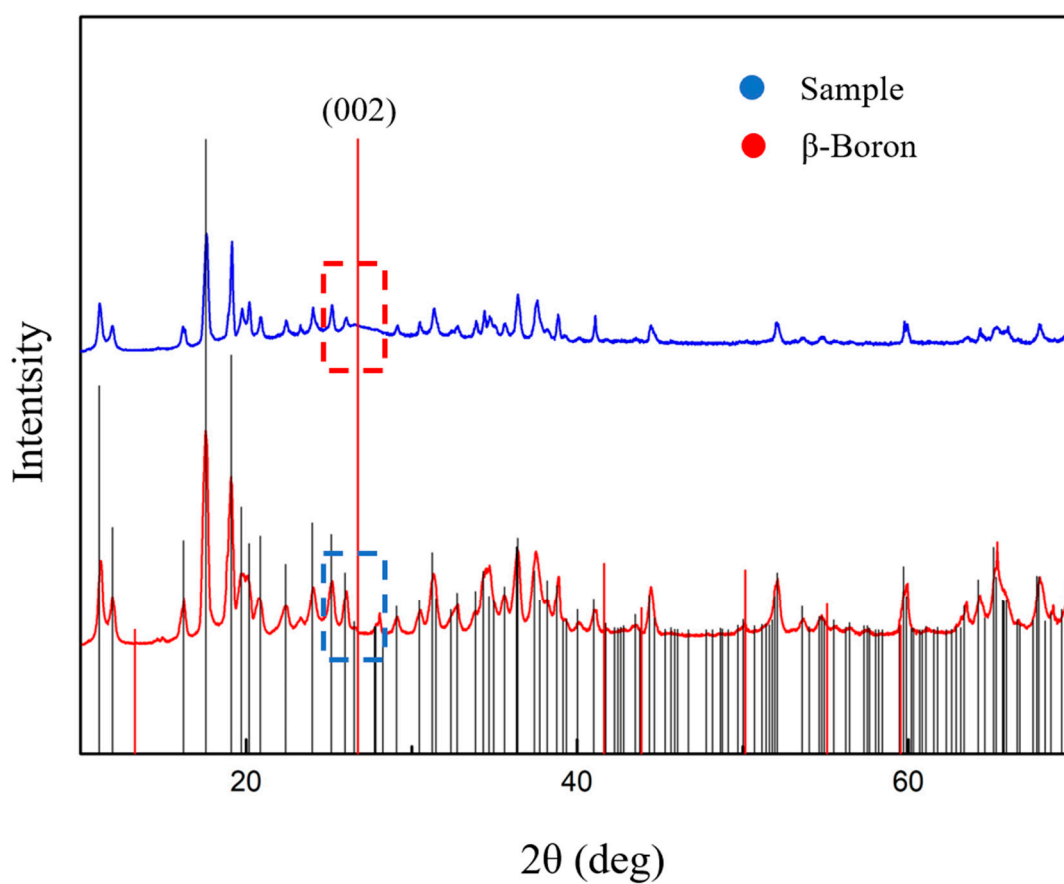


Figure S4. XRD pattern of the sample obtained at 28 GPa room temperature.

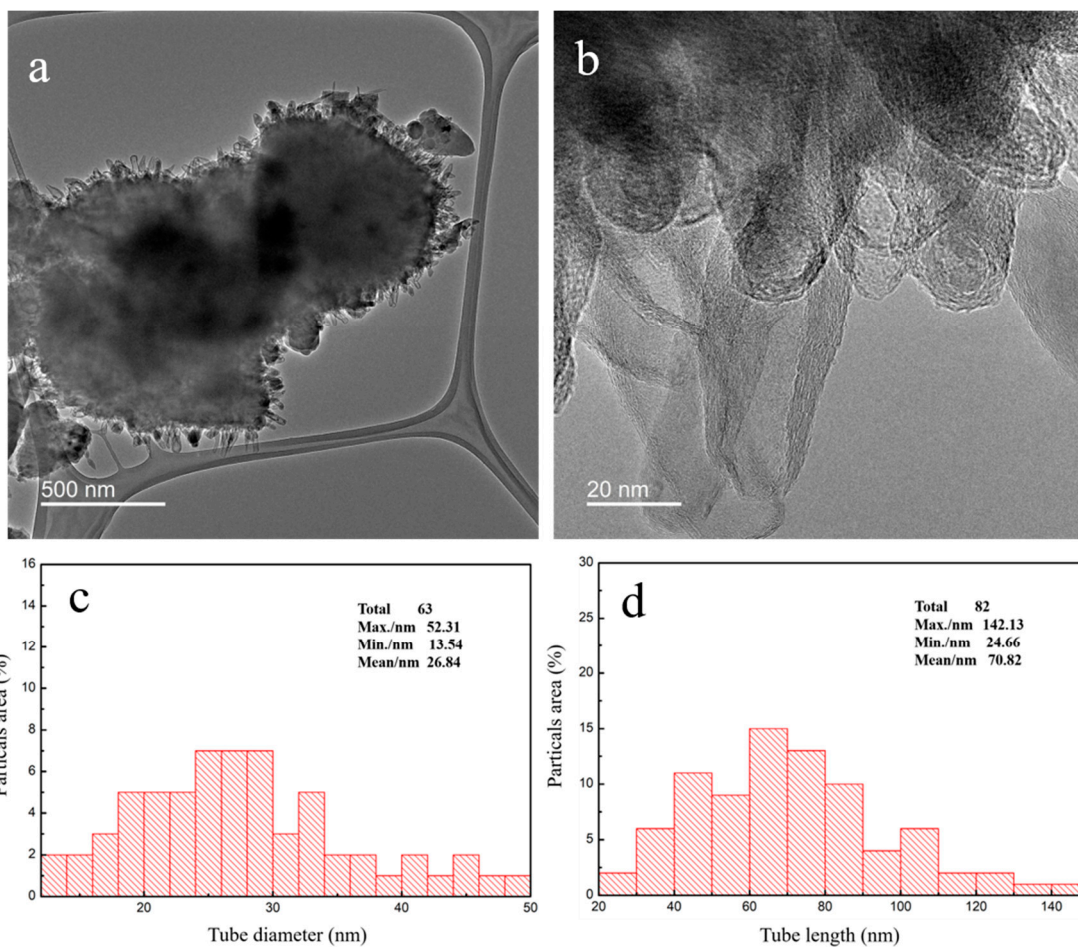


Figure S5. (a, b) TEM images and size statistics (c, d) of tube-shaped h-BN for the sample obtained from 28 GPa and room temperature.

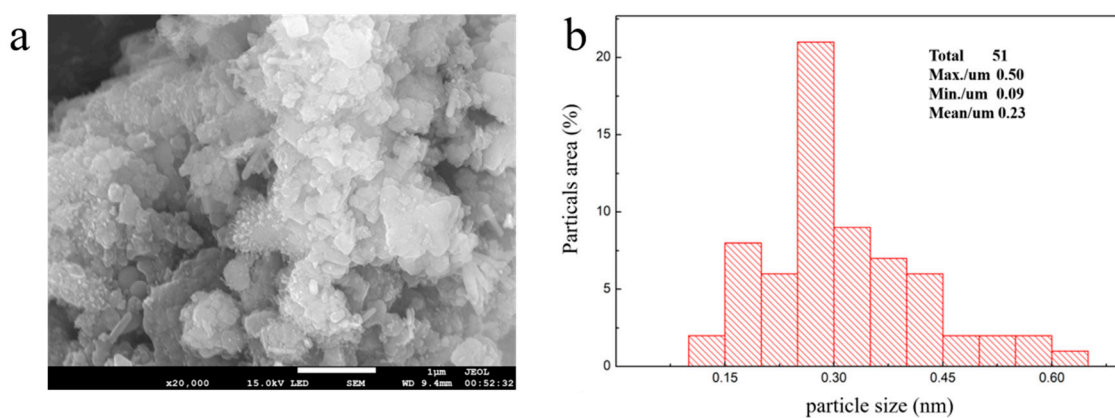


Figure S6. (a) SEM images and size statistics (b) of boron particles for the sample obtained from 28 GPa and room temperature.

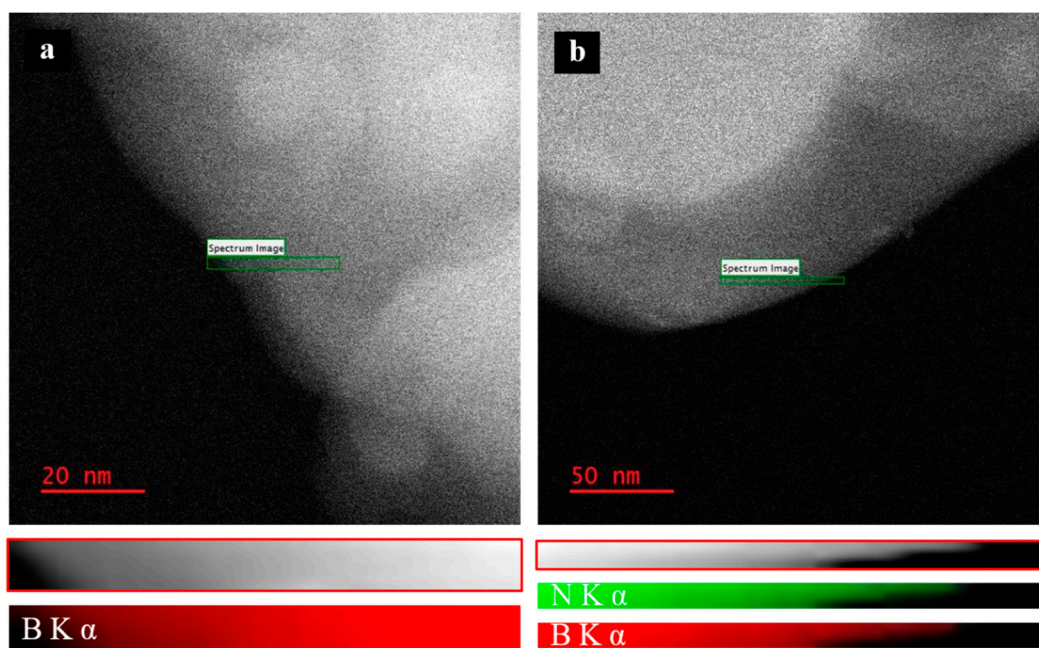


Figure S7. (a) Electron energy loss spectrum (EELS) mapping of nano boron powder and (b) commercial h-BN.

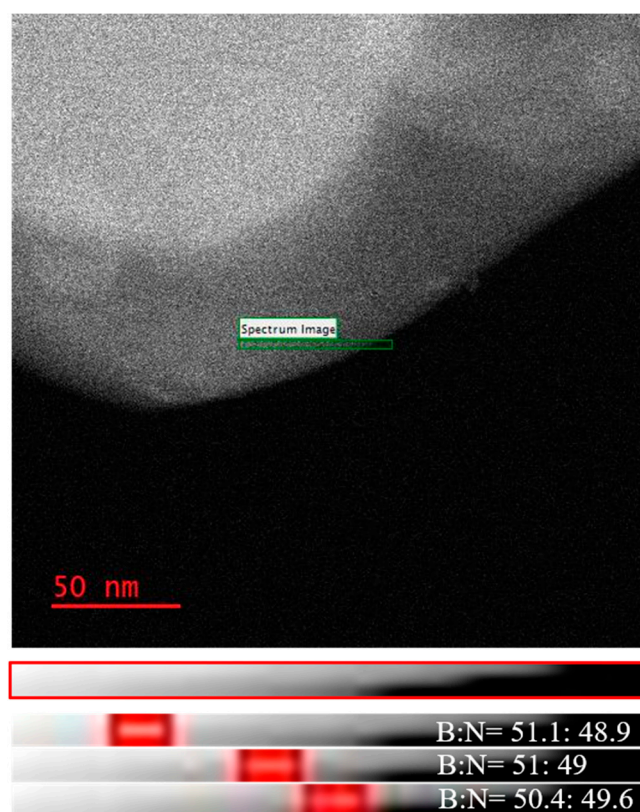


Figure S8. Quantitative analysis of EELS in different segments of commercial h-BN.

Table S1.TEM-EDS results at different areas of sample obtained from 28 GPa and room temperature.

Different positions	Atomic ratio (B)	Atomic ratio (N)
1	46.1%	53.9%
2	47.7%	52.3%
3	46.9%	53.1%
4	90.7%	9.3%
5	89.3%	10.7%
6	91.1%	8.9%