Supplementary Information

High-Efficient Production of Boron Nitride Nanosheets via an Optimized Ball Milling Process for Lubrication in Oil

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1. Raman spectroscopy

Figure S1 shows the Raman spectra from starting h-BN powder and BN nanosheets after ball milling at 800 rpm using 0.1-0.2 mm balls at a ball-to-powder ratio of 10:1 for 10 h. Raman analysis of the prepared dispersion was performed on STR 750 Confocal Dispersive Micro Raman Spectrometer equipped with 633nm Ar laser (70mW) and Princeton Instruments Acton SP2750 Spectrograph having a 1.4cm^{-1} dispersive pixel resolution.
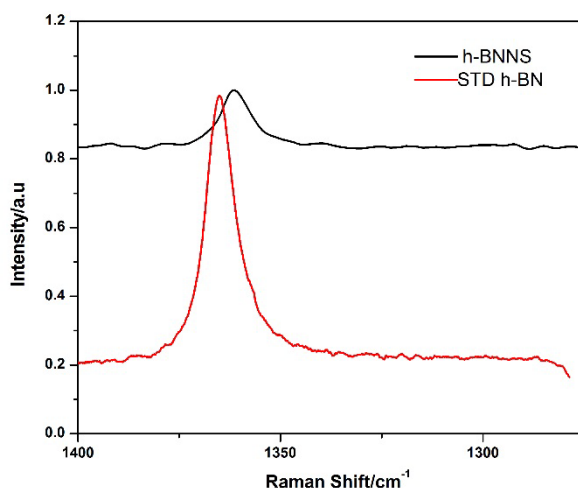

Figure S1. Raman spectra of the BN before and after ball milling treatment.

2. Statistics of the size of the BN nanosheets

Figure S2 shows the statistics of the diameters of the BN nanosheets produced by ball milling at 800 rpm using 0.1-0.2 mm balls at a ball-to-powder ratio of 10:1 for 10 h. It shows that most of the nanosheets have a diameter between 1.0 and 1.5 μm and a small portion of the nanosheets is less than 0.6 μm.
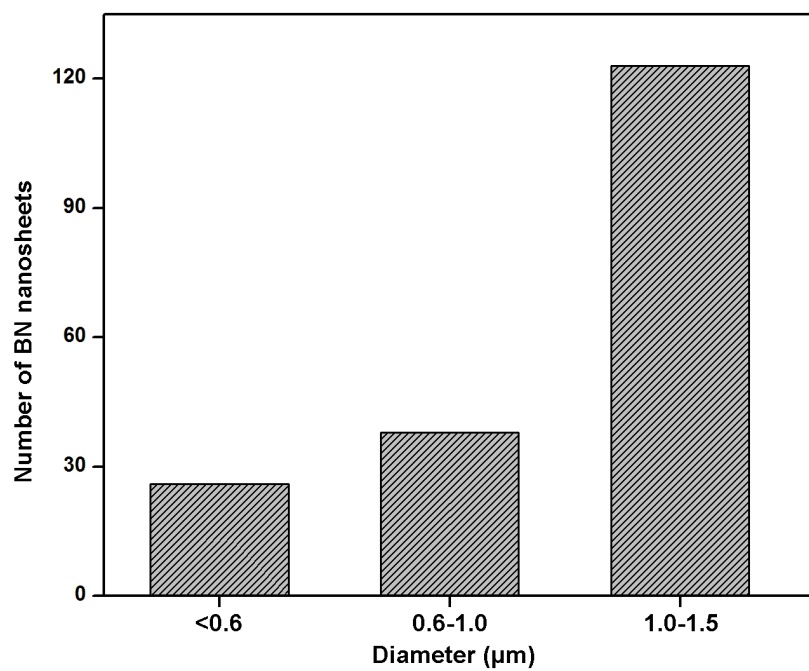
Figure S2. Statistics of the size of the BN nanosheets.