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Supporting information for article:

AB-stacked nanosheet-based hexagonal boron nitride

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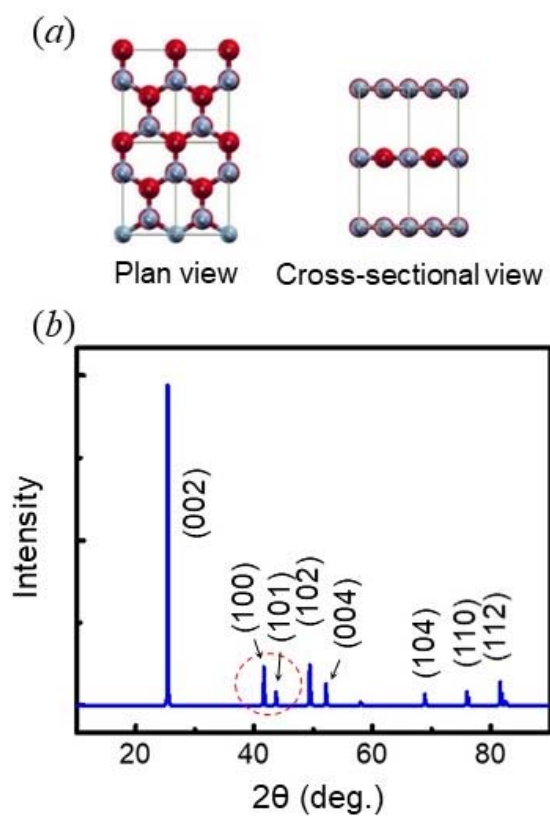


Fig. S1. Crystal structure and simulated XRD patterns for AA *h*-BN. (a) crystal unit for AA *h*-BN. (b) Simulated XRD pattern of *h*-BN bulk. The relative intensity of (100) and (101) for bulk is similar to the typical pattern for *h*-BN.

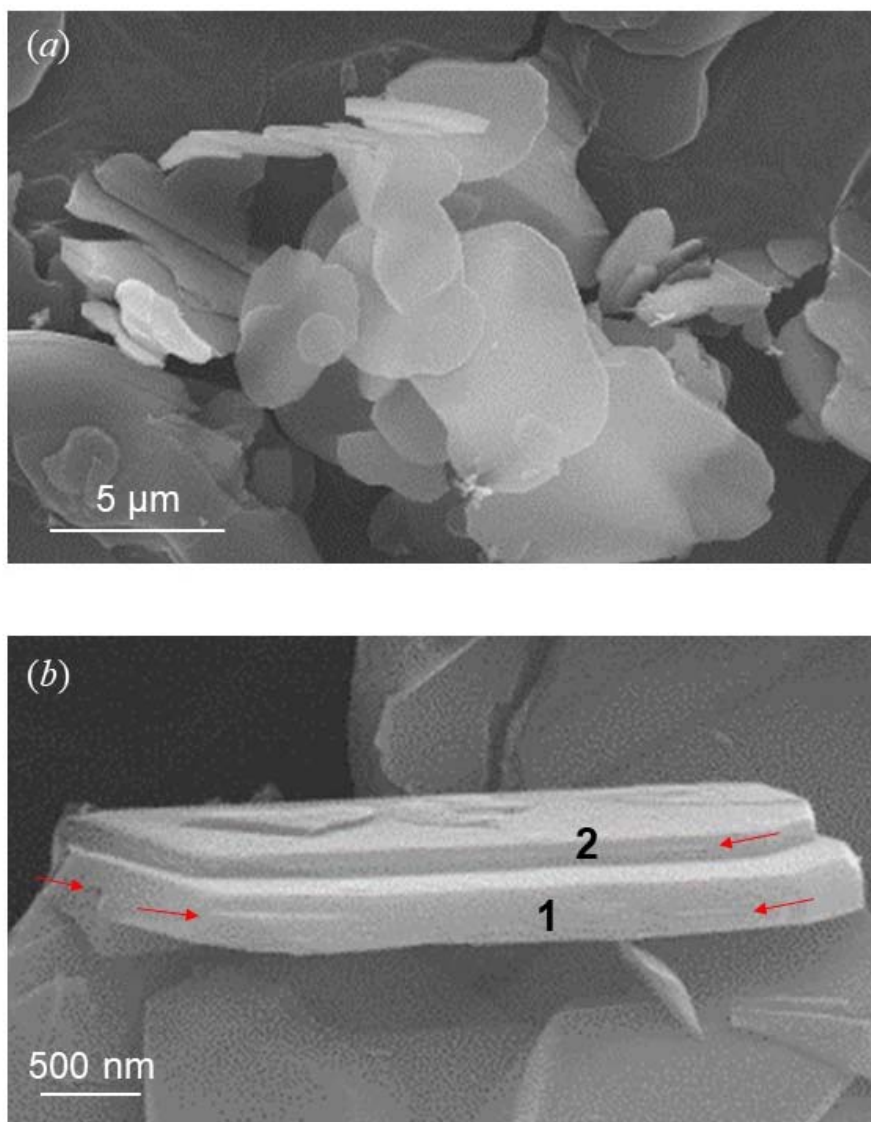


Fig. S2. SEM image of typical platelet *h*-BN. Overlapped two platelets (1 and 2) reveal the trace of layered structure (red arrows in (b)). We expect that each platelet is composed of many nanosheets (Fig. 1(b)).

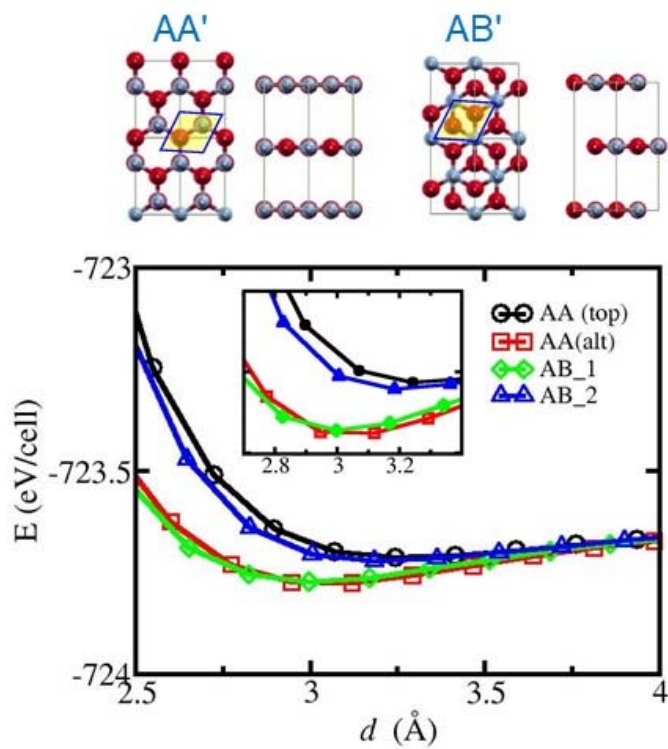


Fig. S3. Calculated stacking energy of bilayer *h*-BN. AB and AA' stackings reveal minimum energy configuration. Inset shows expanded graphs.

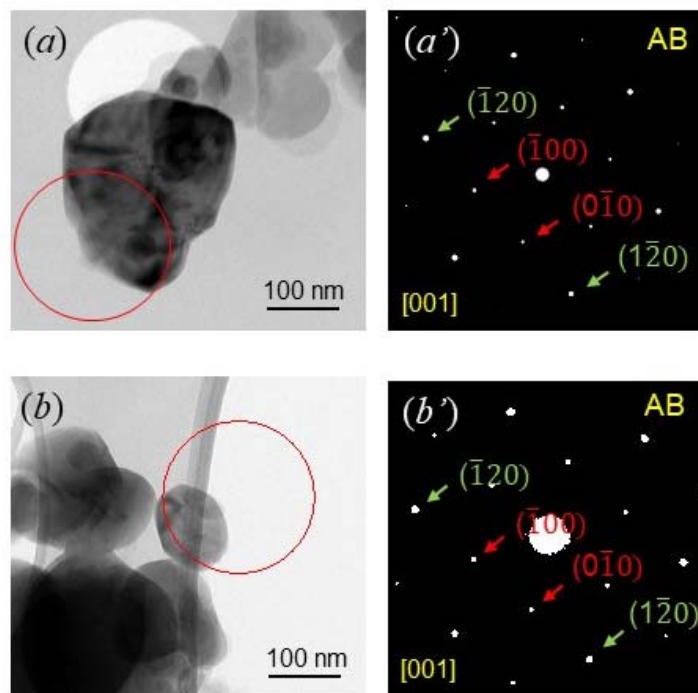


Fig. S4. TEM images and SAED patterns for *h*-BN nanosheet samples. Both patterns reveal evidence for AB stacking. Circle in (a) and (b) indicates the areas measured.

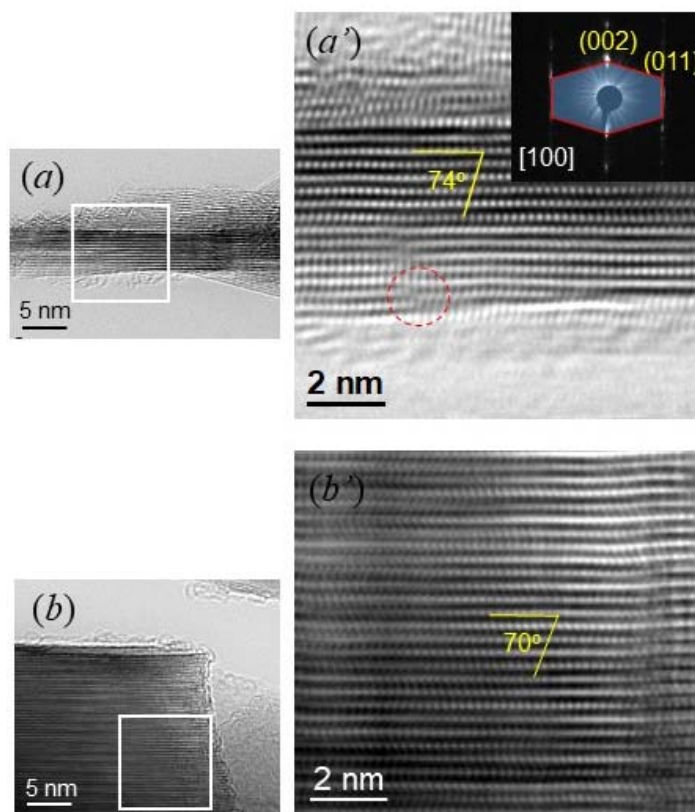


Fig. S5. Cross-sectional HRTEM images for *h*-BN samples. Both samples reveal evidence for AB stacking. (*a'*) and (*b'*) show the images for rectangles in (*a*) and (*b*), respectively. The red circle in (*a'*) indicates a stacking fault.