

Support Information file:

## Growth of single-layer boron nitride dome-shaped nanostructures catalysed by iron clusters

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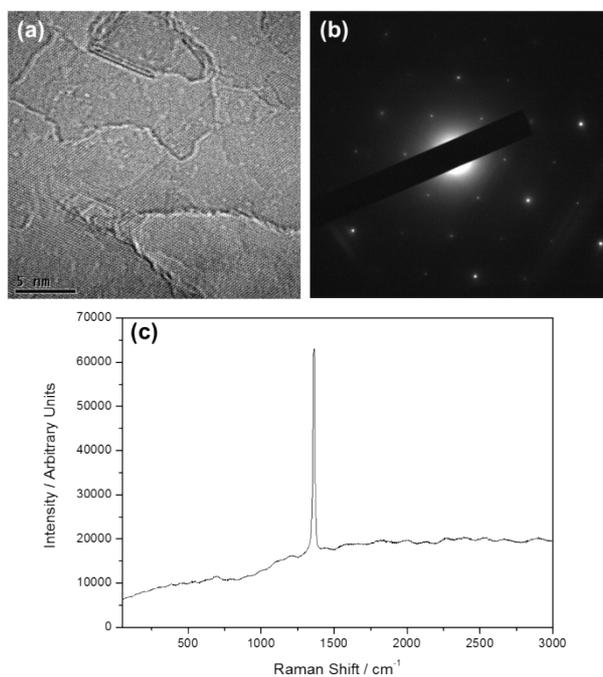
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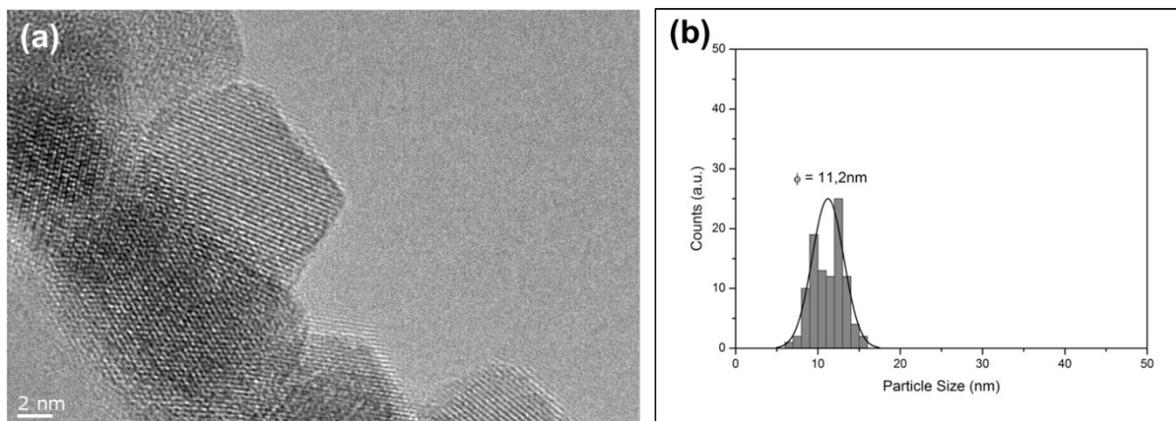
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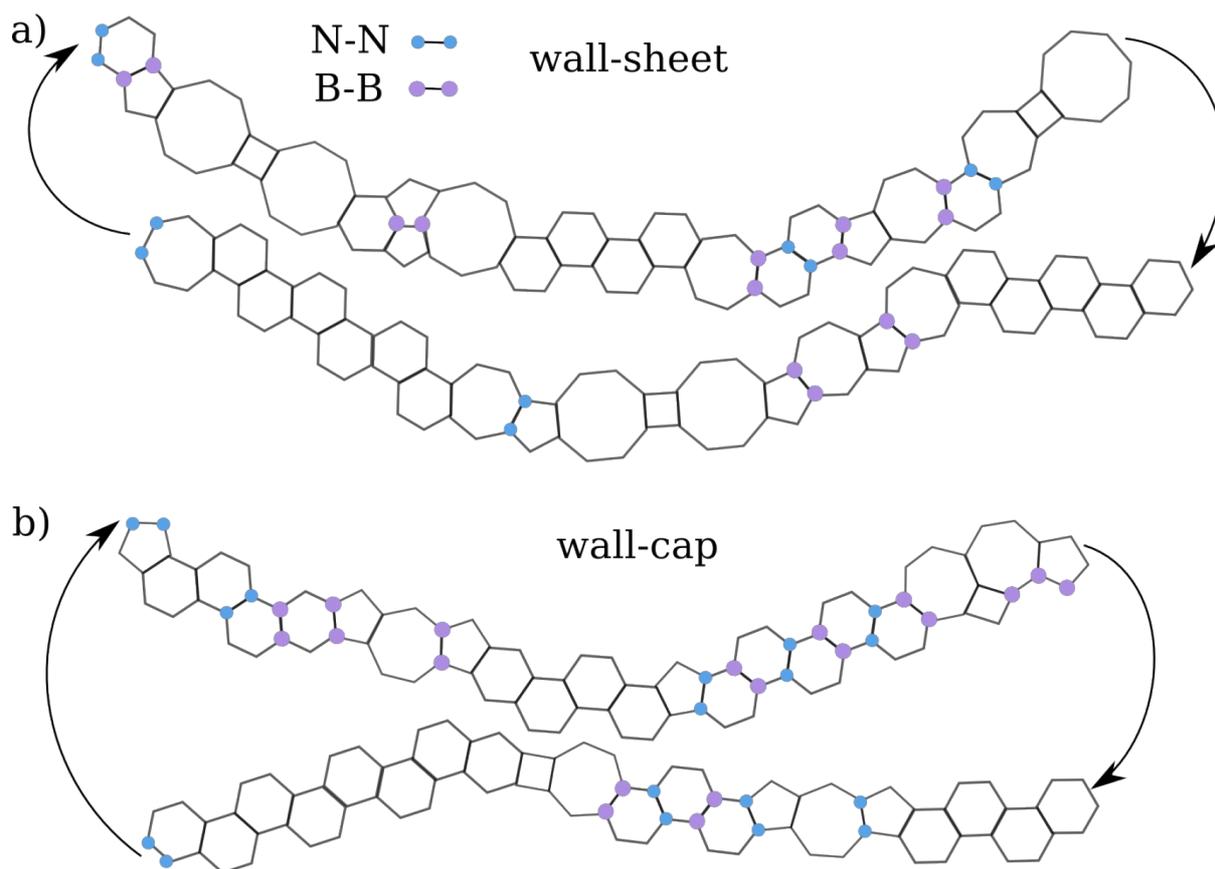
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**Figure S1:** (a) Bright field TEM image of an FLBN flake; (b) associated SADP showing hexagonal symmetry, typical for the *h*-BN phase; and (c) Raman spectrum of the FLBN flake.



**Figure S2:** HRTEM of  $\text{Fe}_2\text{O}_3$  NP with an associated particle size histogram.



**Figure S3:** The exact atomic structures circling the bottom (wall-sheet) and top (wall-cap) of the dome shaped structure modelled with molecular dynamics simulations, shown in Figure 5 of the paper. The highlighted blue and purple circles represent the atoms forming the unfavourable N-N and B-B bonds, respectively.