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## **Supplementary Information for**

## Ti<sub>4</sub>-Decorated B/N-Doped Graphene as High-Capacity Hydrogen Storage Material: A DFT Study

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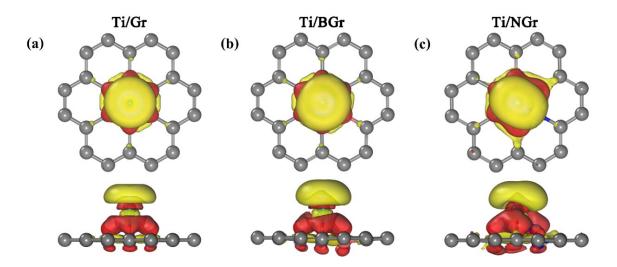
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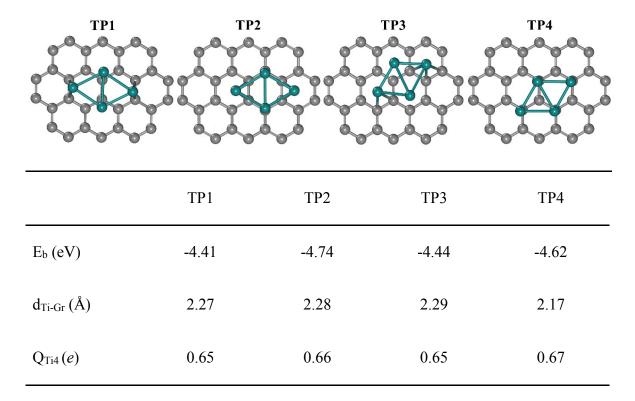
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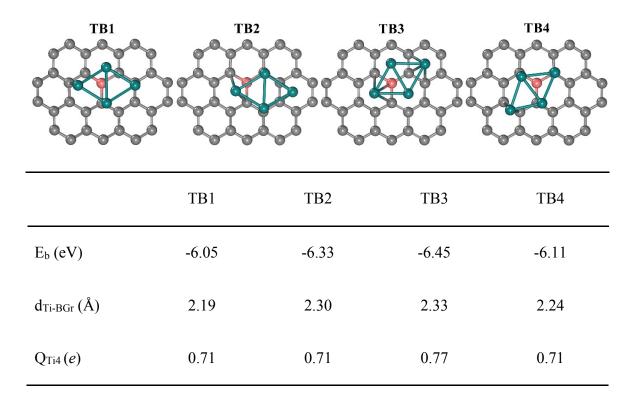
- **Fig. S1.** The isosurfaces of the EDD for Ti decorated graphene (a) Ti/Gr, (b) Ti/BGr, and (c) Ti/NGr are presented. In the EDD plots, the red and yellow colors represent electron accumulation and depletion regions, respectively. The isosurfaces of EDD is taken to be 0.02 e/Å<sup>3</sup>.
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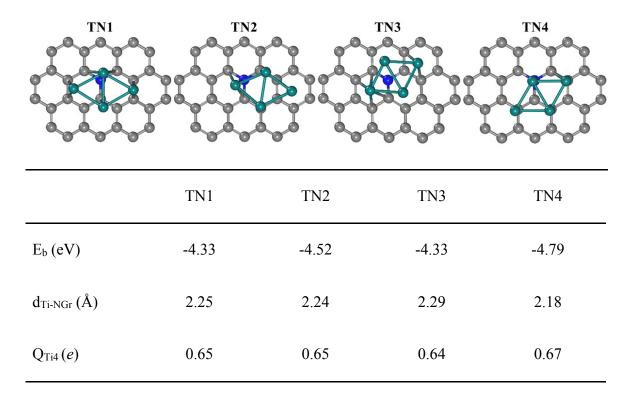
**Fig. S1.** The isosurfaces of the EDD for Ti decorated graphene (a) Ti/Gr, (b) Ti/BGr, and (c) Ti/NGr are presented. In the EDD plots, the red and yellow colors represent electron accumulation and depletion regions, respectively. The isosurfaces of EDD is taken to be  $0.02 \text{ e/Å}^3$ .



**Fig. S2.** All possible optimized configurations of the Ti<sub>4</sub> cluster decorated on pristine graphene.



**Fig. S3.** All possible optimized configurations of the  $Ti_4$  cluster decorated on B-doped graphene.



**Fig. S4.** All possible optimized configurations of the Ti<sub>4</sub> cluster decorated on N-doped graphene.