

Supporting information for

**“A dispersion-corrected DFT study on
adsorption of battery active materials
anthraquinone and its derivatives on
monolayer graphene and *h*-BN”**

Yang-Xin Yu*

*Laboratory of Chemical Engineering Thermodynamics, Department of
Chemical Engineering, Tsinghua University, Beijing 100084, P. R. China*

E-mail: yangxyu@mail.tsinghua.edu.cn

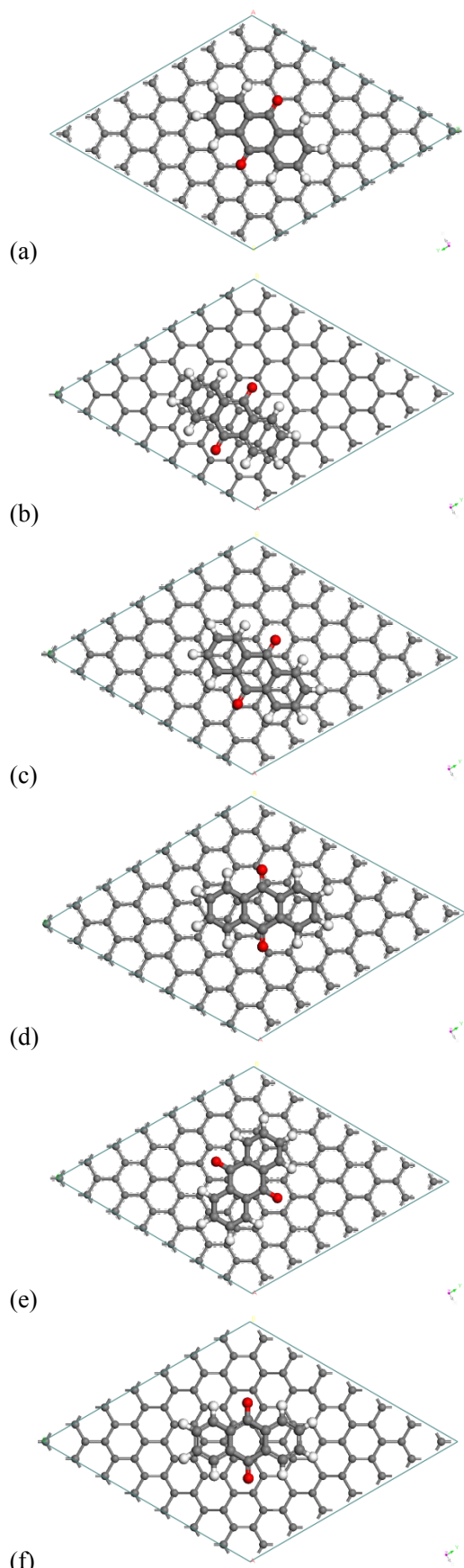


Figure S1. Equilibrium geometries of an AQ molecule on different adsorption sites of a graphene nanosheet: (a) AA, (b) BP, (c) AB, (d) BS, (e) Cross and (f) SC.

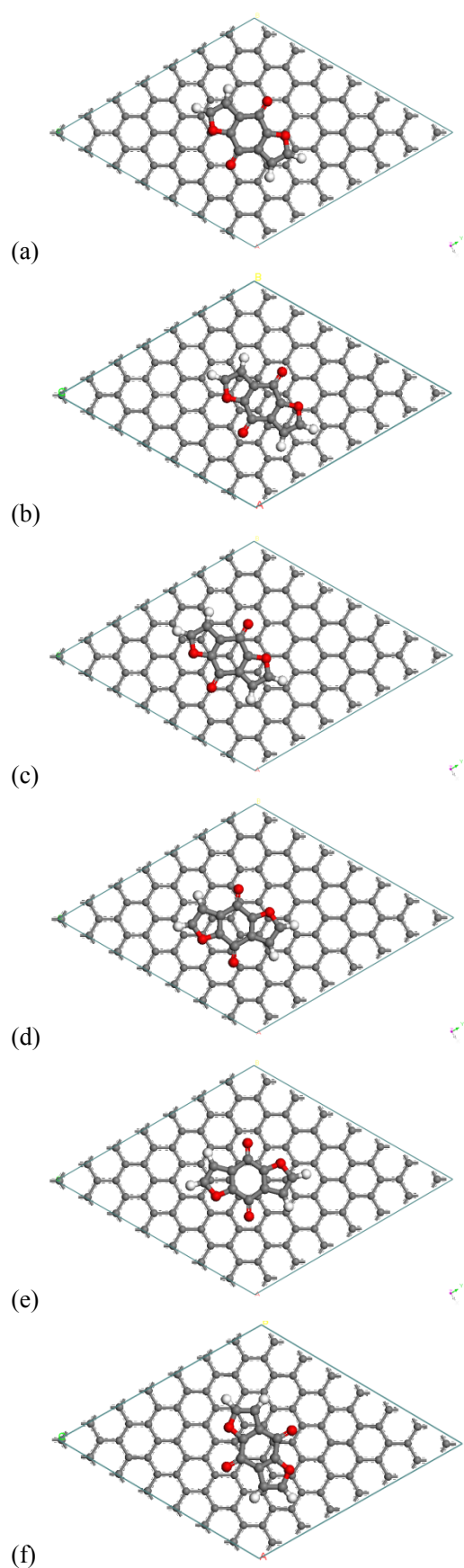
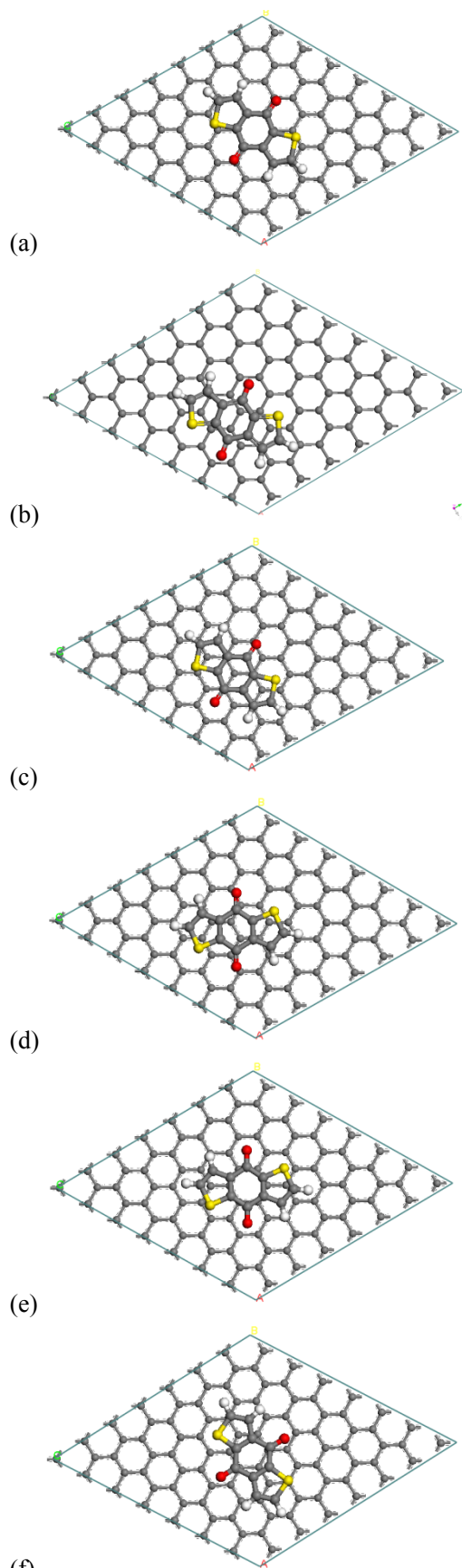
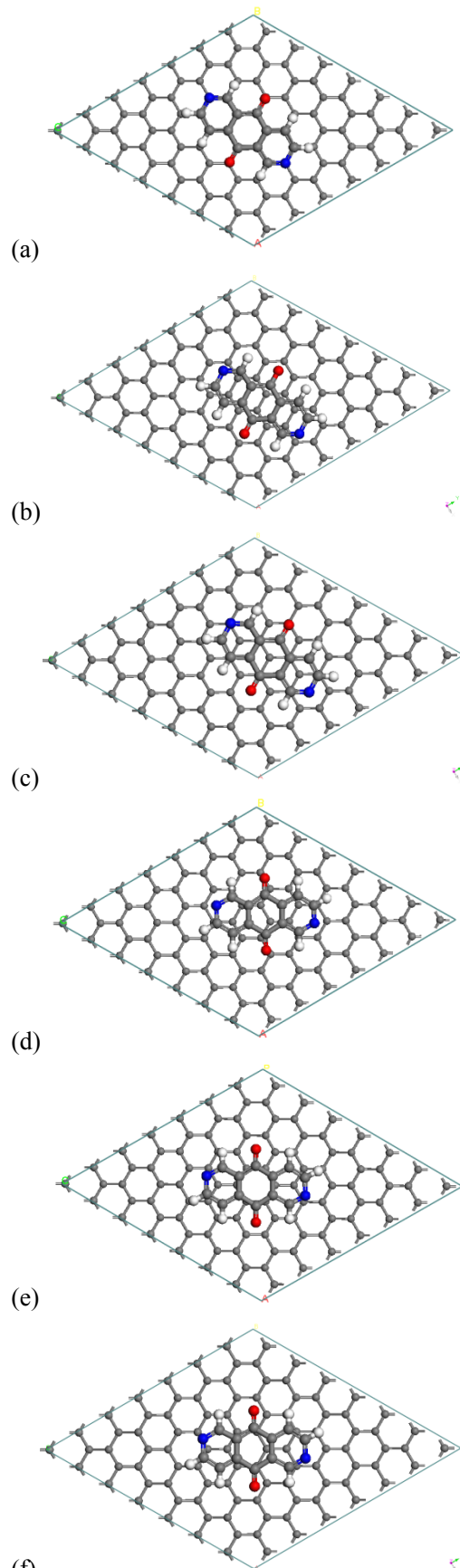


Figure S2. Equilibrium geometries of a BFFD molecule adsorbed on different adsorption sites of a graphene nanosheet: (a) AA, (b) BP, (c) AB, (d) BS, (e) Cross and (f) SC.



(f)
Figure S3. Equilibrium geometries of a BDTD molecule adsorbed on different sites of a graphene nanosheet: (a) AA, (b) BP, (c) AB, (d) BS, (e) Cross and (f) SC.



(f)
Figure S4. Equilibrium geometries of a PID molecule adsorbed on different adsorption sites of a graphene nanosheet: (a) AA, (b) BP, (c) AB, (d) BS, (e) Cross and (f) SC.

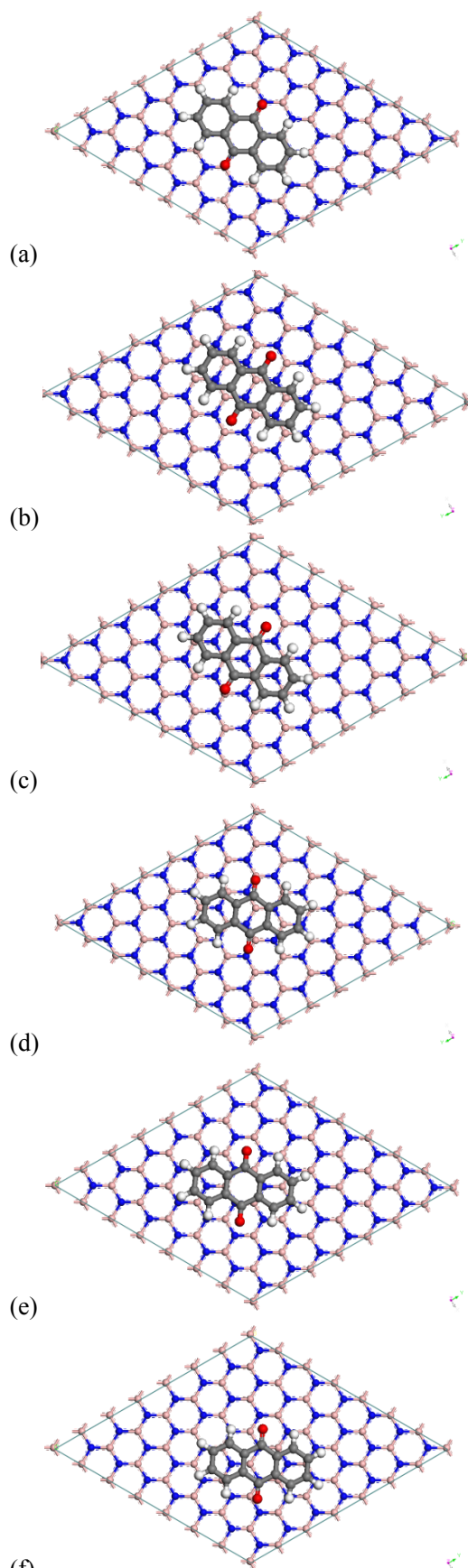


Figure S5. Equilibrium geometries of an AQ molecule adsorbed on different adsorption sites of a BN nanosheet: (a) AA, (b) BP, (c) AB, (d) BS, (e) Cross and (f) SC.

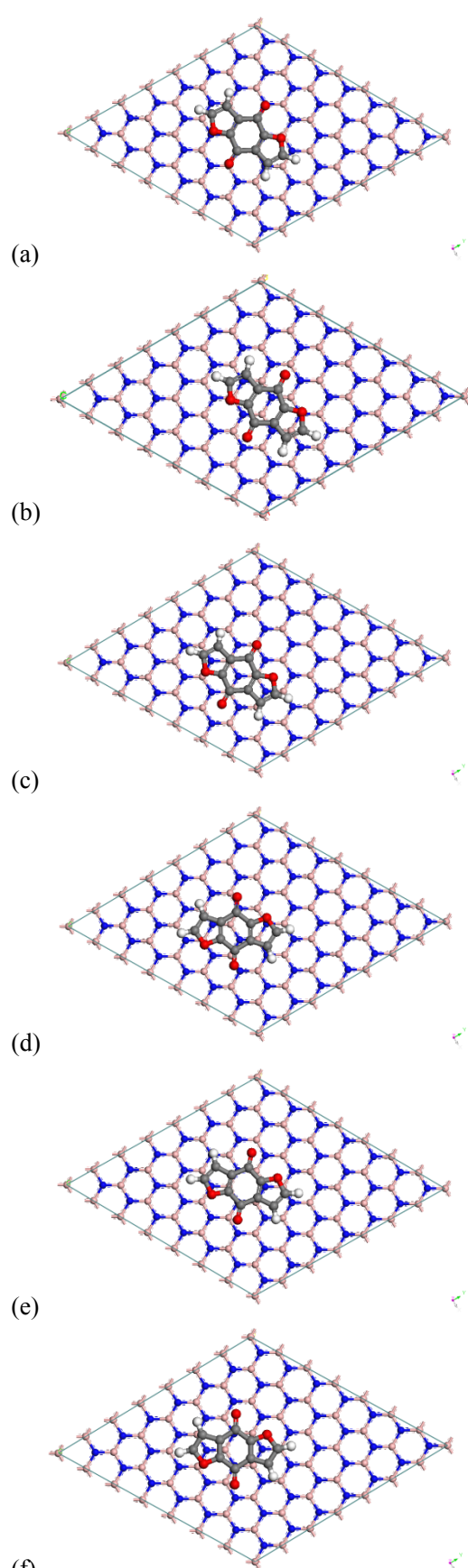


Figure S6. Equilibrium geometries of a BFFD molecule adsorbed on different adsorption sites of a BN nanosheet: (a) AA, (b) BP, (c) AB, (d) BS, (e) Cross and (f) SC.

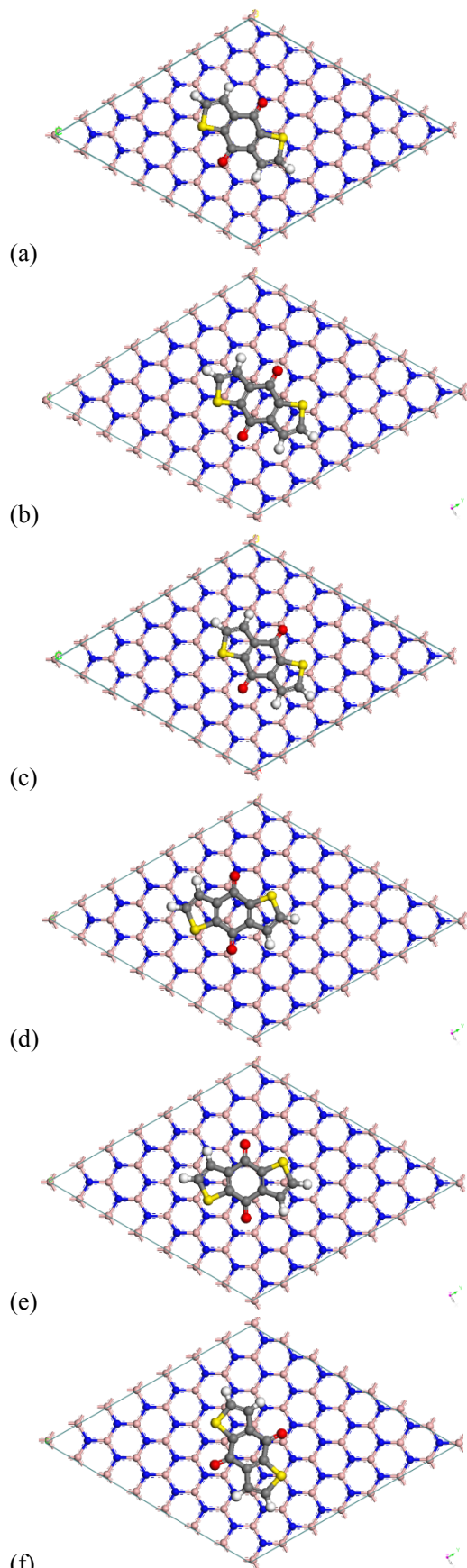


Figure S7. Equilibrium geometries of a BDTD molecule adsorbed on different adsorption sites of a BN nanosheet: (a) AA, (b) BP, (c) AB, (d) BS, (e) Cross and (f) SC.

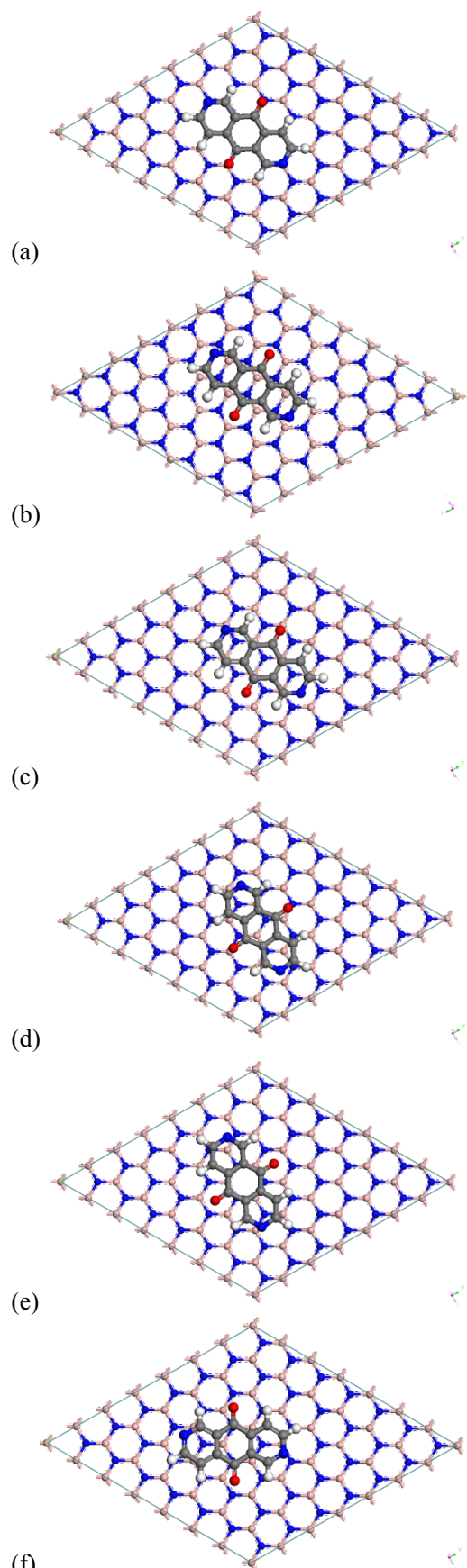


Figure S8. Equilibrium geometries of a PID molecule adsorbed on different adsorption sites of a BN nanosheet: (a) AA, (b) BP, (c) AB, (d) BS, (e) Cross and (f) SC.