

## Supplementary Information

### **Optical properties of armchair graphene nanoribbons with Stone-Wales defects and the hydrogenation on the defects**

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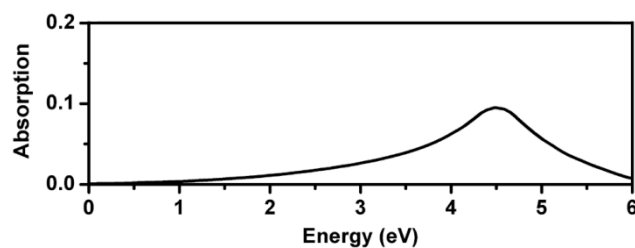


Fig. S1 Optical absorption spectrum of graphene.

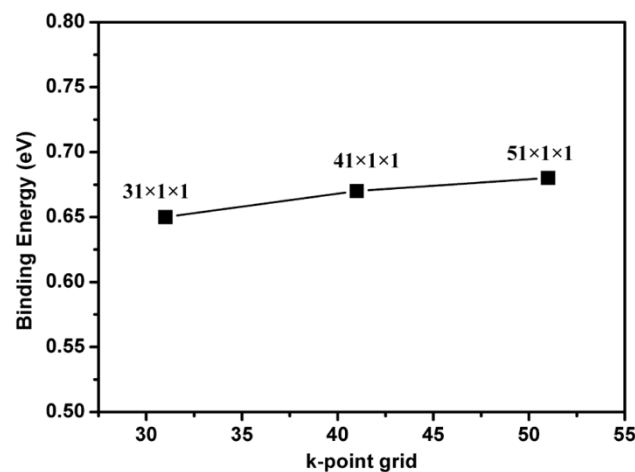


Fig. S2 The relation of binding energy and k-point grid in W9-SW.