

Supplementary Information

**THFS-carbon: a theoretical prediction of metallic carbon allotrope with half-
auxeticity, planar tetracoordinate carbon, and potential application as anode for
sodium-ion batteries**

Tian-Kai Li,^a Xiao-Juan Ye,^b Lan Meng,^a Chun-Sheng Liu^{a,*}

^aCollege of Electronic and Optical Engineering, Nanjing University of Posts and
Telecommunications, Nanjing 210023, China

^bCollege of Integrated Circuit Science and Engineering, Nanjing University of Posts a
nd Telecommunications, Nanjing 210023, China

*Email: csliu@njupt.edu.cn

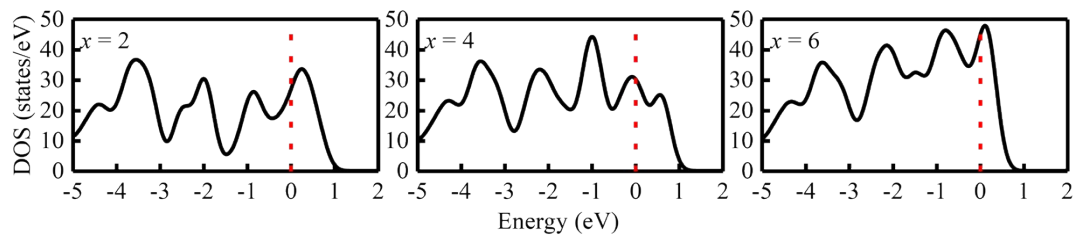


Fig. S1 Total DOS of THFS-carbon monolayer at various concentrations (x) of sodium.