Electronic Supplementary Material (ESI) for RSC Advances.

First-principles study on the electronic properties of biphenylene, net-graphene, graphene+, and T-graphene based nanoribbons

Wensheng Zhou[a,†], Cheng Luo[a,†], Yun Chao[a,b*], Songbo Xiong[a], Menegqiu Long[c], Tong Chen[a,b*]

a. Energy materials computing center, Jiangxi University of Science and Technology, Nanchang 330013, PR China

b. State Key Laboratory of Surface Physics and Department of Physics, Fudan University, Shanghai 200433, PR China

c. Hunan Key laboratory of Super Micro-structure and Ultrafast Process, Central South University, Changsha 410083, China

†. Wensheng Zhou and Cheng Lou contributed equally to this work.

E-mail addresses: 279916153@qq.com(Y. Chao); chentong@jxust.edu.cn (T. Chen)

Supplementary material

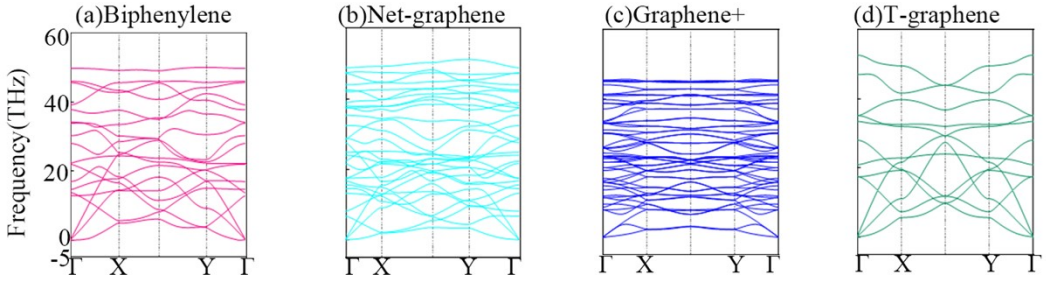

Figure. S1 (a) - (d) Phonon spectra of biphenylene, net-graphene, graphene+, and T-graphene, respectively.

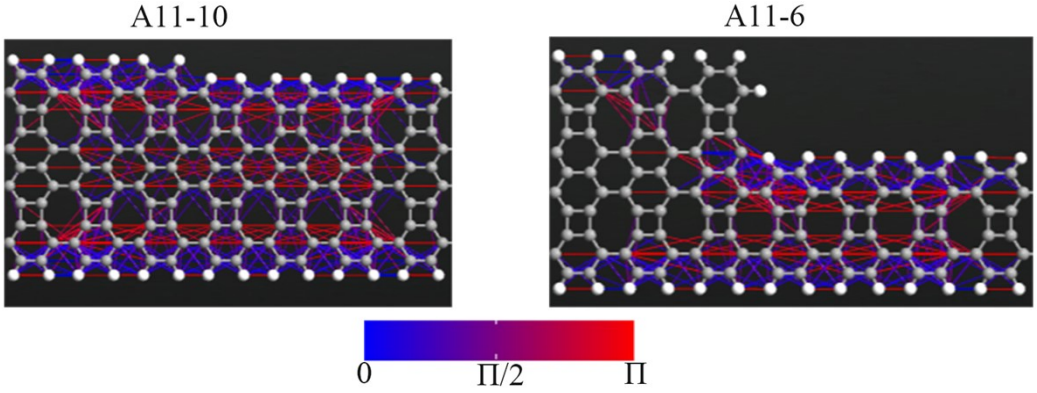

Figure. S2. Transmission paths of A11-10 and A11-6 nanodevices under 0 bias voltage. The color bar displays from 0 (blue) to π The data in red.