Supporting Information

Covalently cross-linked reduced functionalized graphene oxide/polyurethane composite based on Diels-Alder chemistry and the potential application in healable flexible electronics

Jinhui Li[a,b], Guoping Zhang[a, c*], Rong Sun[a], and Ching-Ping Wong[c,d]

[a] Shenzhen Institutes of Advanced Technology, University of Chinese Academy of Sciences, Shenzhen 518055, China.

[b] Shenzhen College of Advanced Technology, University of Chinese Academy of Sciences, Shenzhen 518055, China

[c] Department of Electronic Engineering, Faculty of Engineering, The Chinese University of Hong Kong, Hong Kong, China

[d] School of Materials Science and Engineering, Georgia Institute of Technology, 771 Ferst Drive, Atlanta, GA 30332, USA

E-mail: gp.zhang@siat.ac.cn; Fax: +86-755-86392299; Tel: +86-755-86392104

1. AFM image of the GO sheets.

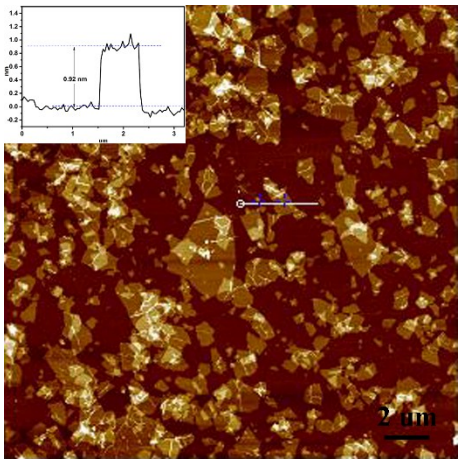

Fig. S1. AFM image of GO.

2. XRD patterns of GO and RFGO

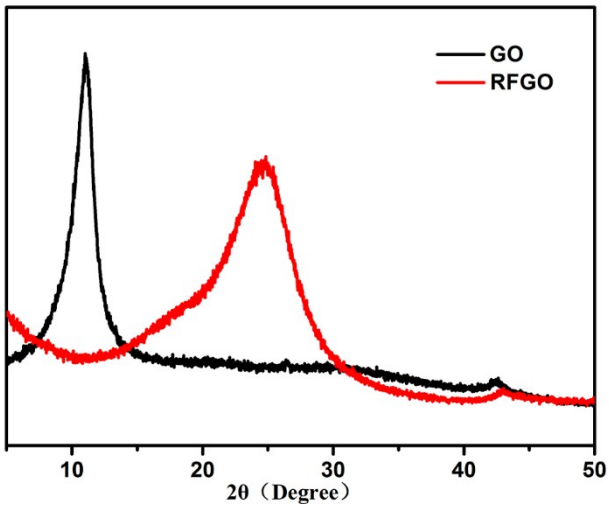

Fig. S2. XRD patterns of GO and RFGO.

3. TGA curves of GO and RFGO

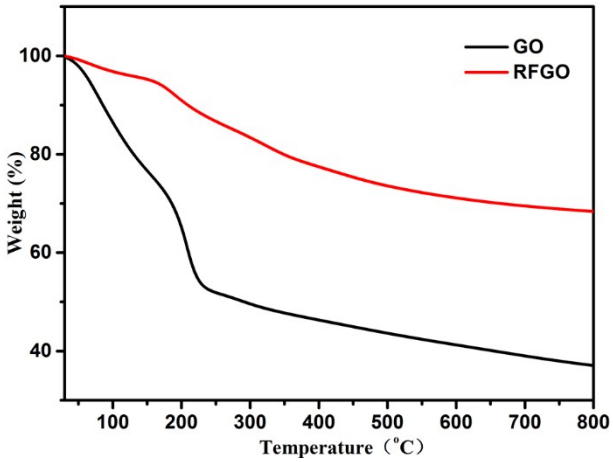

Fig. S3. TGA curves of GO and RFGO.

4. ^{1}H NMR of 2F2OH

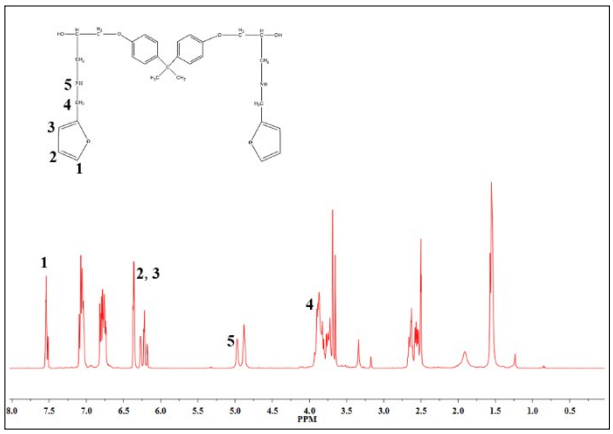

Fig. S4. ^{1}H NMR of 2F2OH.

5. The SEM images of FGF

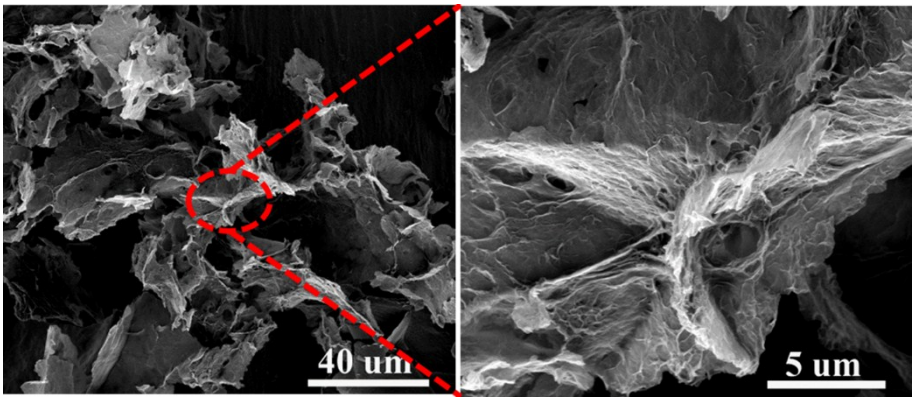

Fig. S5. SEM images of FGF at different magnifications.

6. The cross-section SEM image of FGF/RFGO-DAPU-3 composite

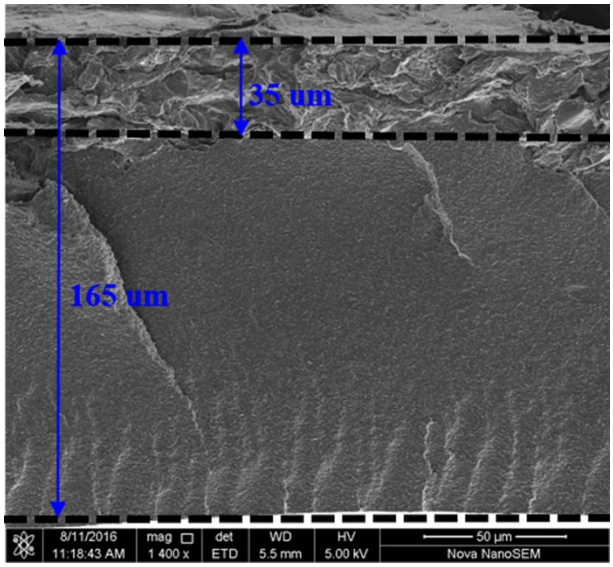

Fig. S6.The cross-section SEM image of FGF/RFGO-DAPU-3 composite

7. The flexibility of FGF/RFGO-DAPU-3 as conductor

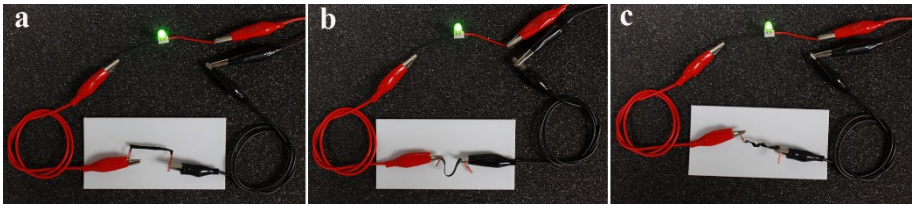

Fig. S7. The flexibility of FGF/RFGO-DAPU-3 as conductor