# Electronic Supplementary Material

# Exceptionally flame-retardant flexible polyurethane foam composites: synergistic effect of the silicone resin/graphene oxide coating

**Qian Wu* [1], Jincheng Zhang* [1], Shengpeng Wang [3], Bajin Chen [3], Yijun Feng [3], Yongbing Pei (✉) [1,2], Yue Yan [1], Longcheng Tang [1], Huayu Qiu [1,2], Lianbin Wu (✉) [1,2]**

1 Key Laboratory of Organosilicon Chemistry and Materials Technology of Ministry of Education, Hangzhou Normal University, Hangzhou 311121, China

2 Collaborative Innovation Center of Zhejiang Province for Manufacturing of Fluorine Silicon Fine Chemicals and Materials, Hangzhou Normal University, Hangzhou 311121, China

3 Transfar Zhilian Co., Ltd., Hangzhou 311215, China

* These authors contributed equally to this work.

Emails: wulianbin@hznu.edu.cn (Wu L.); peiyongbing@hznu.edu.cn (Pei Y.)

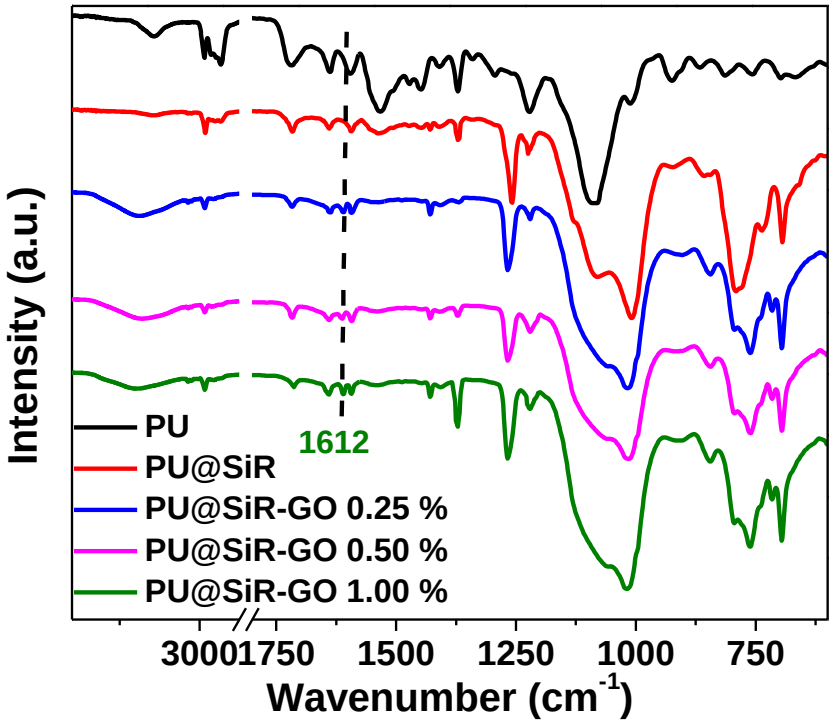


Fig. S1. FTIR spectra of pristine PU foam and PU foam composites.

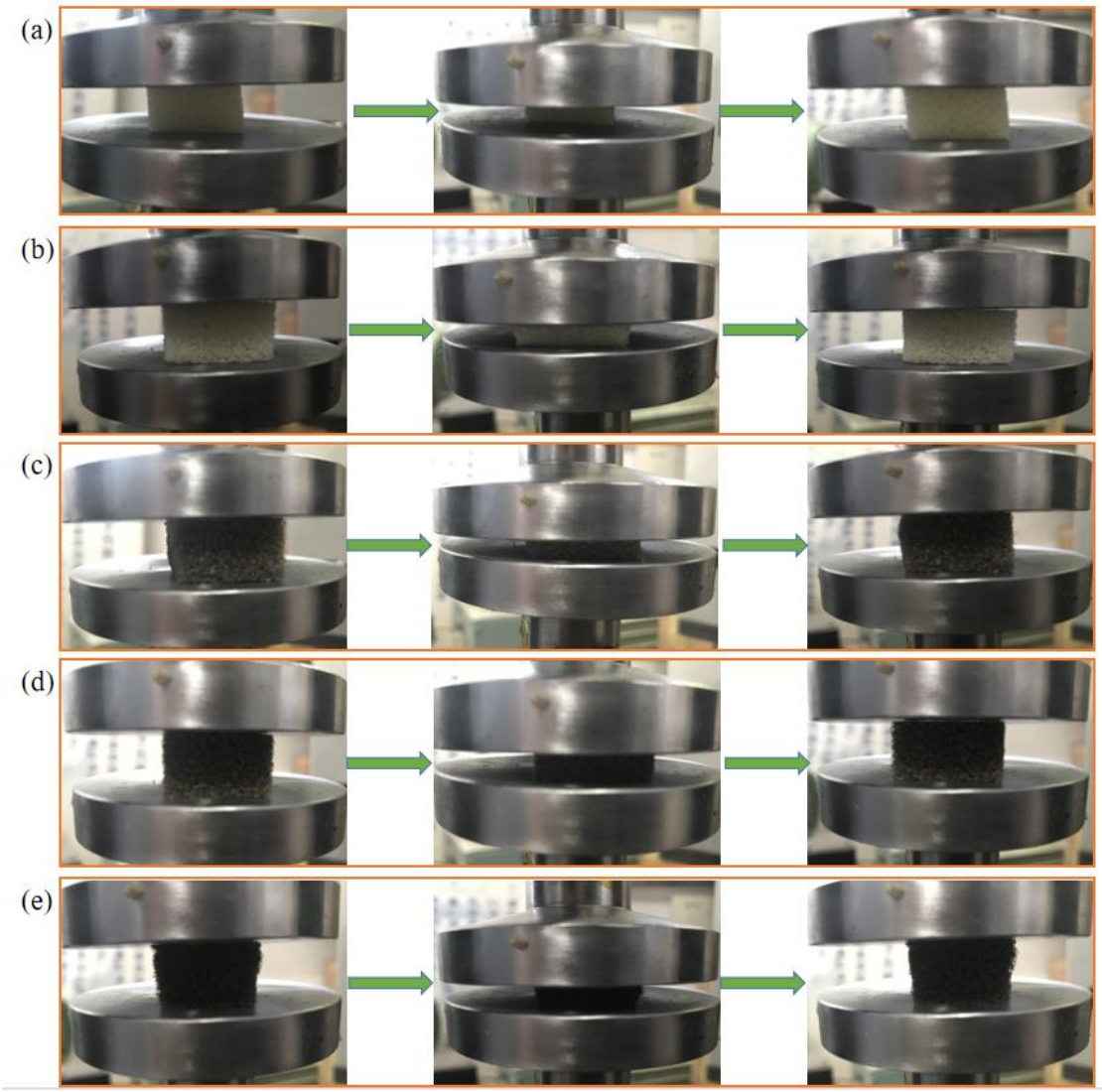


**Fig.** S2**.** The photographs of the (a) PU, (b)PU@SiR, (c) PU@SiR-GO 0.25%, (d) PU@SiR-GO 0.50% and (e) PU@SiR-GO 1.00% foam during the compressing and releasing process at a compression rate of 80%.

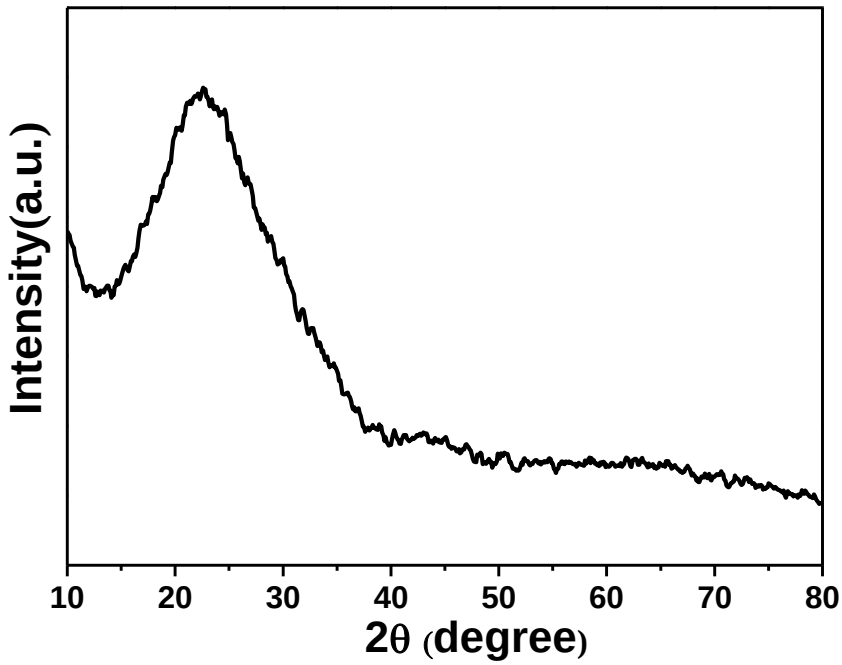


Fig. S3. XRD of white powders at outside zone of PU@SiR-GO 1.00% after combustion test.

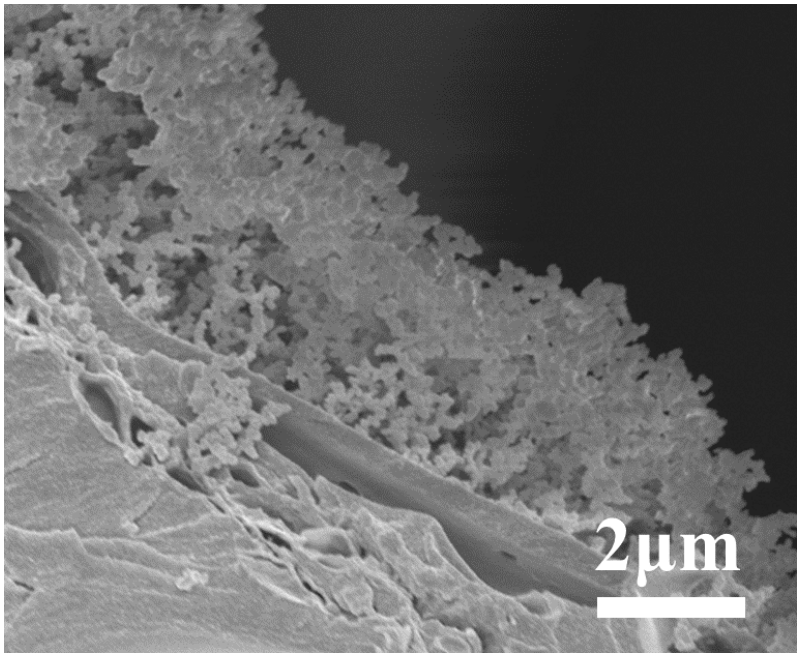


Fig. S4. Sectional SEM image at outside zone of PU@SiR-GO 1.00% after combustion test.