SUPPORTING INFORMATION

Alumina-Coated Graphene Sheet Hybrids for Electrically Insulating Polymer Composites with High Thermal Conductivity

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SUPPLEMENT

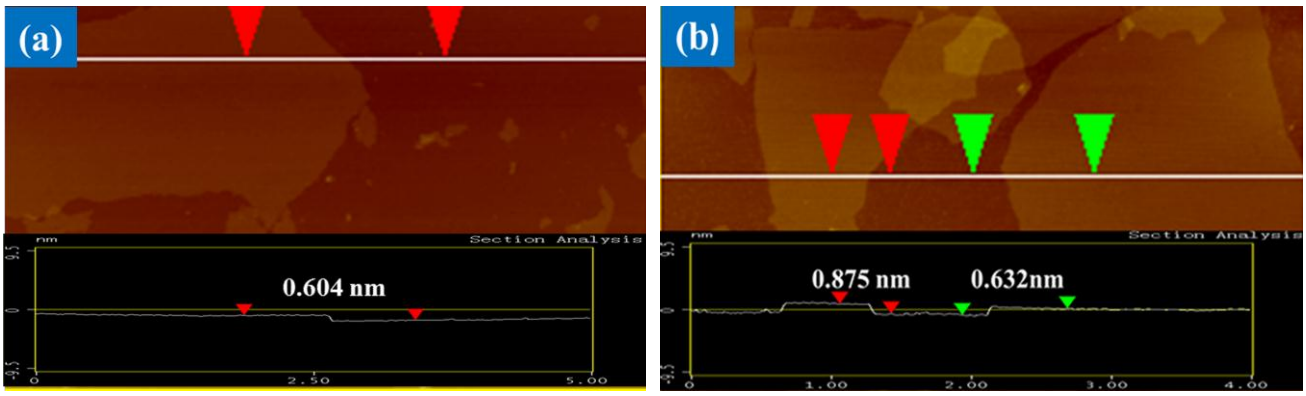

Figure S1. AFM images of: (a) GS and (b) GO.

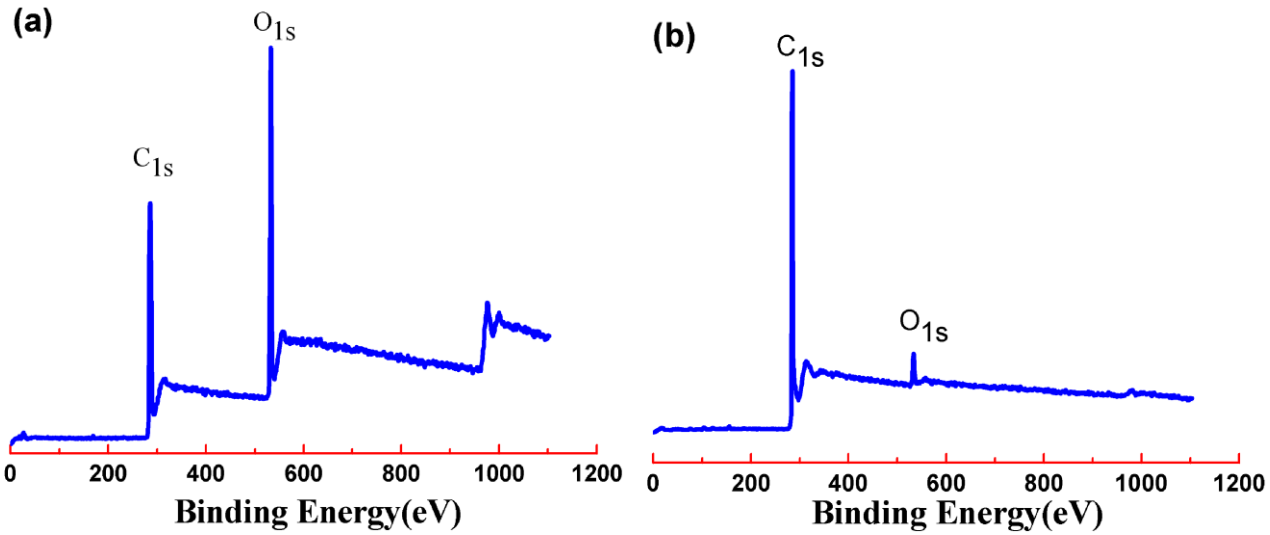

Figure S2 XPS survey spectra of (a) GO and (b) GS**.**

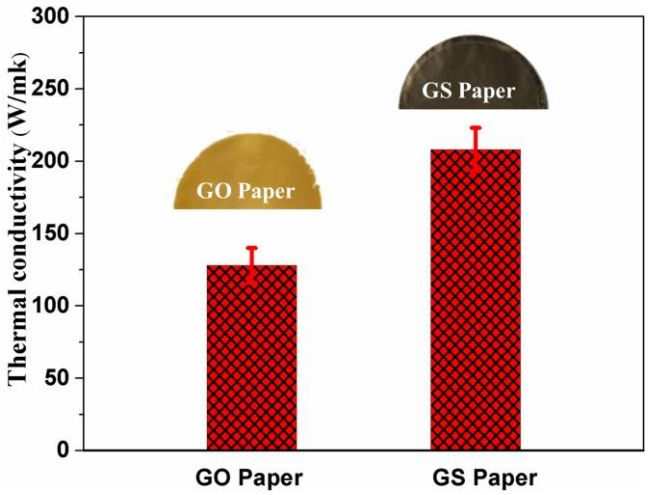

Figure S3. thermal conductivities of GO paper and GS paper.

Table S1. thermal conductivities of the composites by previous researchers.

Group	Journal(year)	Filler	Matrix	Thermal conductivity
J. Kim et al.	J. Nanopart. Res. (2012)	$Al(OH)_3$-coated GO (10 wt%) and Al_2O_3 (80 wt%)	Epoxy	3.2 W/m•K
C.C. M. Ma et al.	Nanoscale (2013)	TRGO-silica (1 wt%)	Epoxy	0.322 W/m•K
J.H. Yu et al.	Polym. Chem. (2011)	Al_2O_3 (20 wt%)	Epoxy	0.399 W/m•K
J.H.Yu et al.	IEEE Trans. Dielectric. Electr. Insul. (2011)	Graphene (10 wt%)	PVDF	0.56 W/m•K
This paper		Al_2O_3-coated GS (40 wt%)	PVDF	0.586 W/m•K