

Electronic Supplementary Information for:

Edge-functionalized graphene-like platelets as a co-curing agent and a nanoscale additive to epoxy resin

*Kyung-Su Kim, In-Yup Jeon, Soo-Na Ahn, Young-Do Kwon and Jong-Beom Baek**

Interdisciplinary School of Green Energy/Institute of Advanced Materials and Devices, Ulsan National Institute of Science and Technology (UNIST), 100 Banyeon, Ulsan, 689-798, South Korea

* Corresponding author. Tel: +82-52-217-2510. Fax: + 82-52-217-2019. E-mail address: jbbaek@unist.ac.kr (J.-B. Baek)

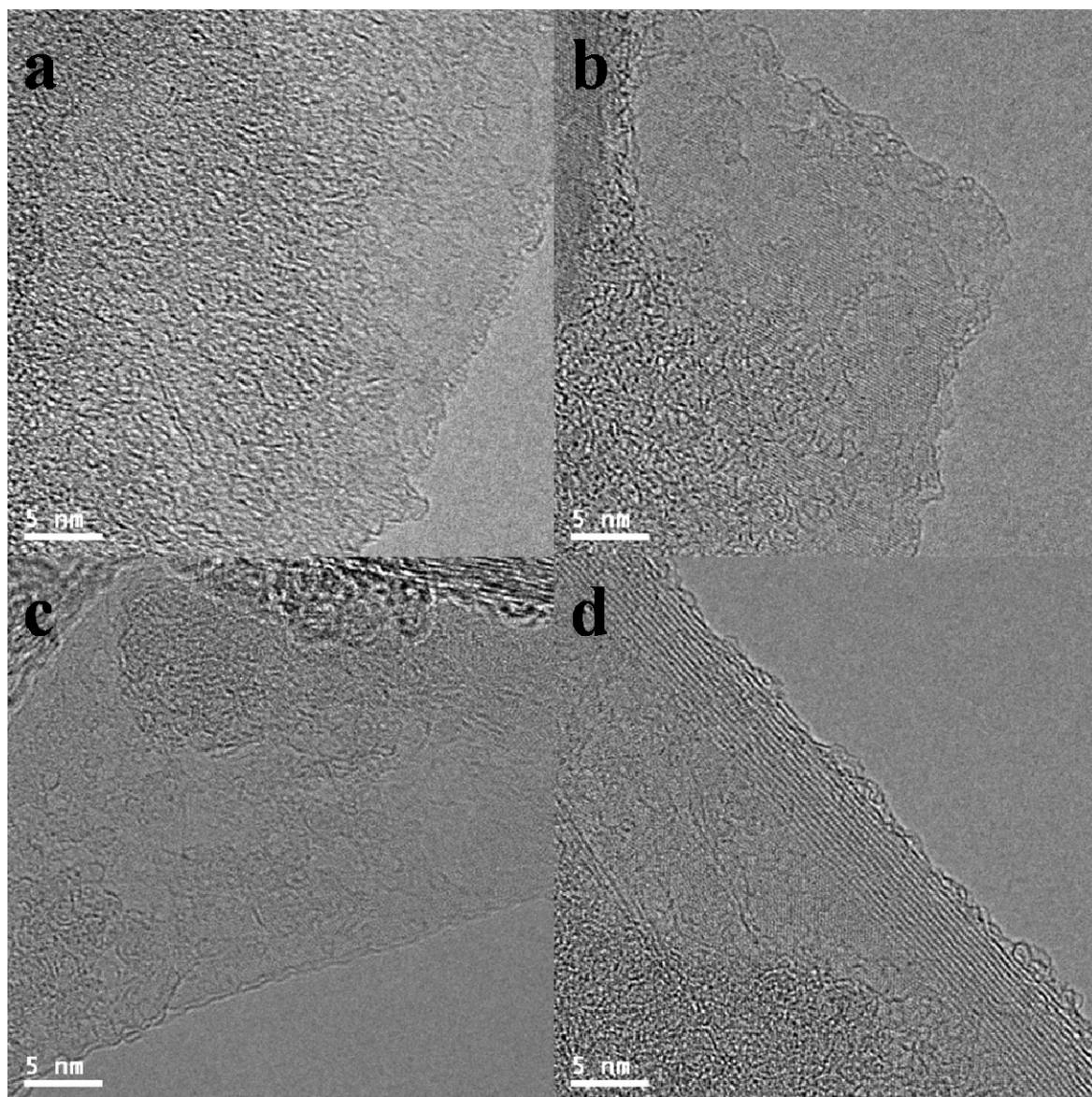


Fig. S1 TEM images of AB-graphite: (a) single layer; (b) single layer; (c) bilayer; (d) fifteen layers.

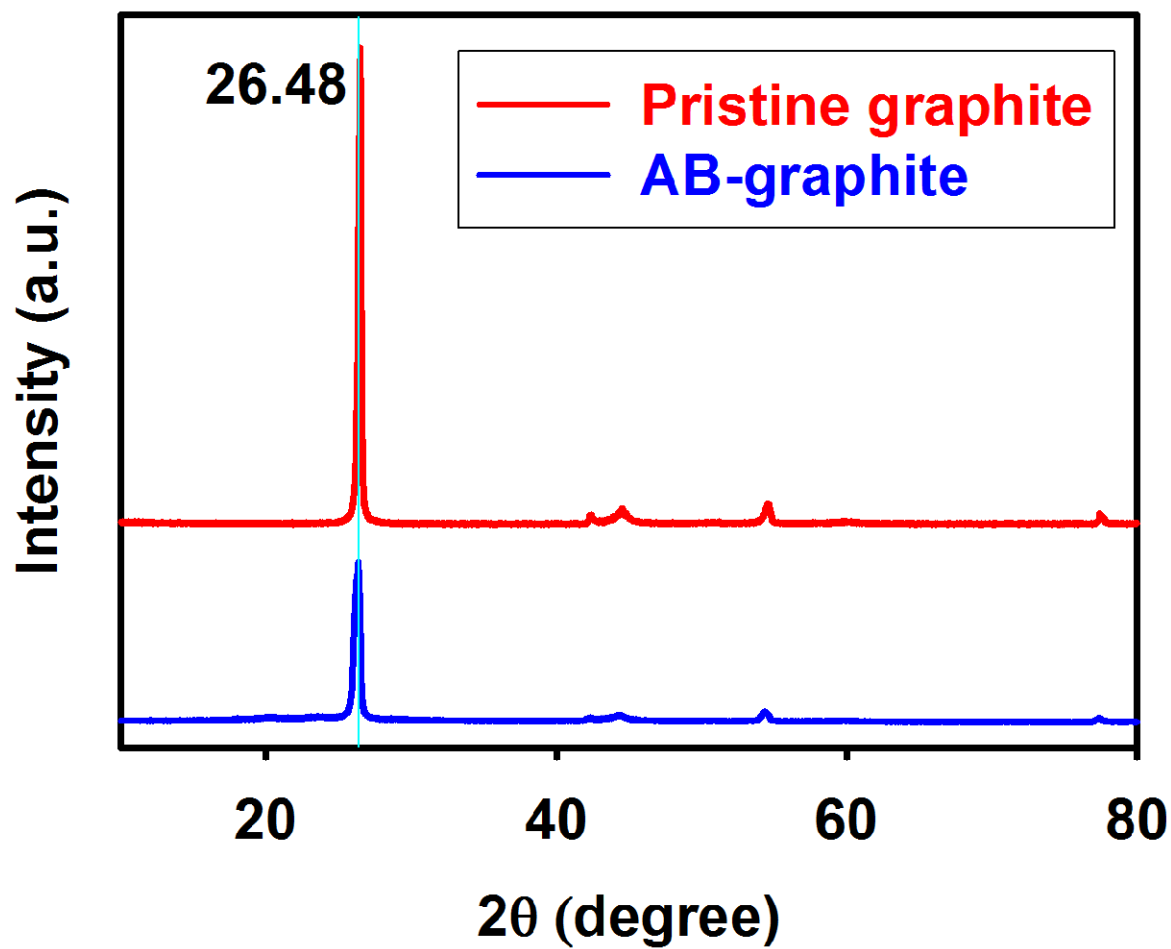


Fig. S2 Wide-angle x-ray diffraction patterns of “pristine” graphite and AB-graphite.

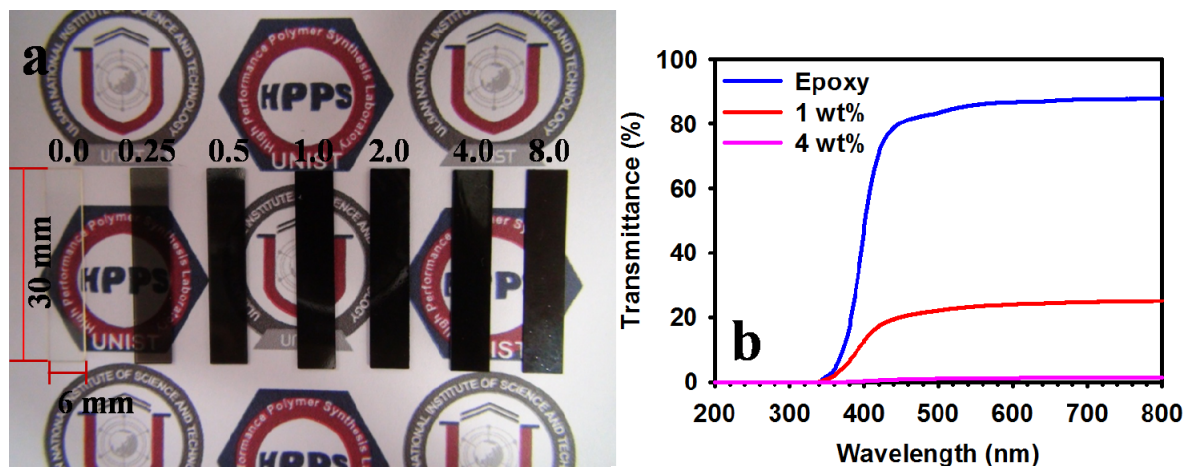


Fig. S3 (a) Photograph of dynamic mechanical analysis (DMA) specimens; (b) optical transmittances of specimens with respect to AB-graphite loads.

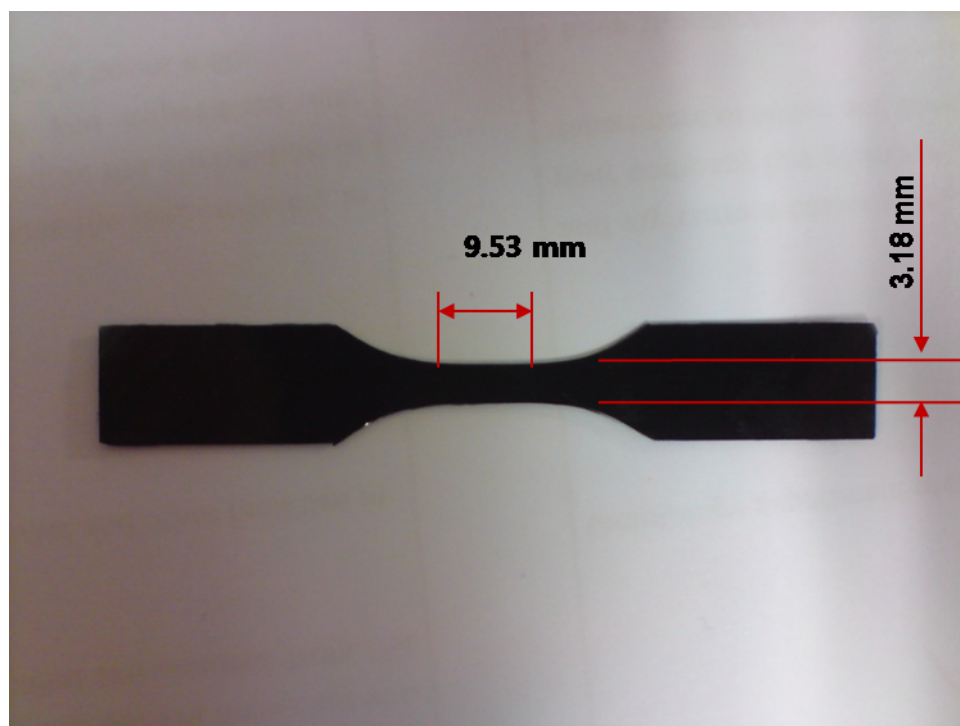


Fig. S4 Photograph of dogbone-type specimen for tensile test. The dimension of working zone as recommended by ASTM D638 (Type V) is 9.53 mm in length, 3.18 mm in width and ~0.5 mm in thickness.

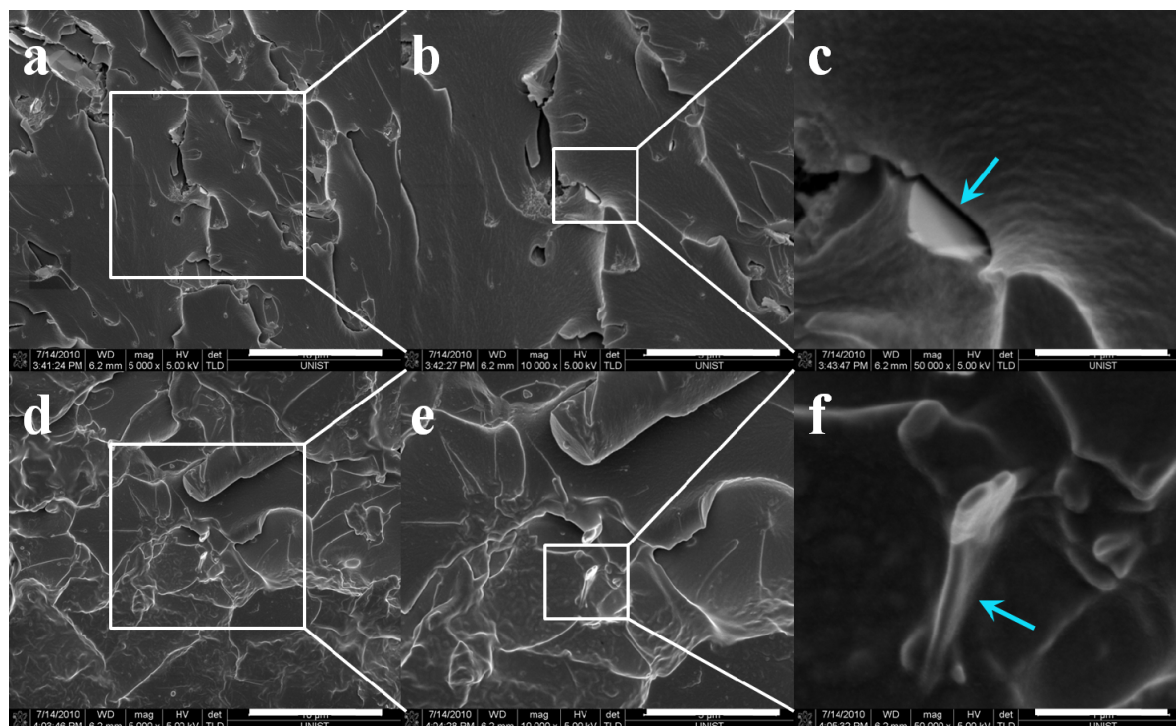


Fig. S5 SEM images obtained from the fractured surfaces: (a-c) epoxy/pristine graphite (2 wt%) at different magnification. The arrow indicates debonded interface. Scale bars are 10, 5, 1 μm from the left; (d-f) epoxy/AB-graphite (2 wt%) at different magnification. The arrow indicates bonded-well interface. Scale bars are 10, 5, 1 μm from the left.