

Supporting Information:

**Functionalizing Carbon Nanotubes by Plasma Modification for the Preparation
of Covalent-Integrated Epoxy Composites**

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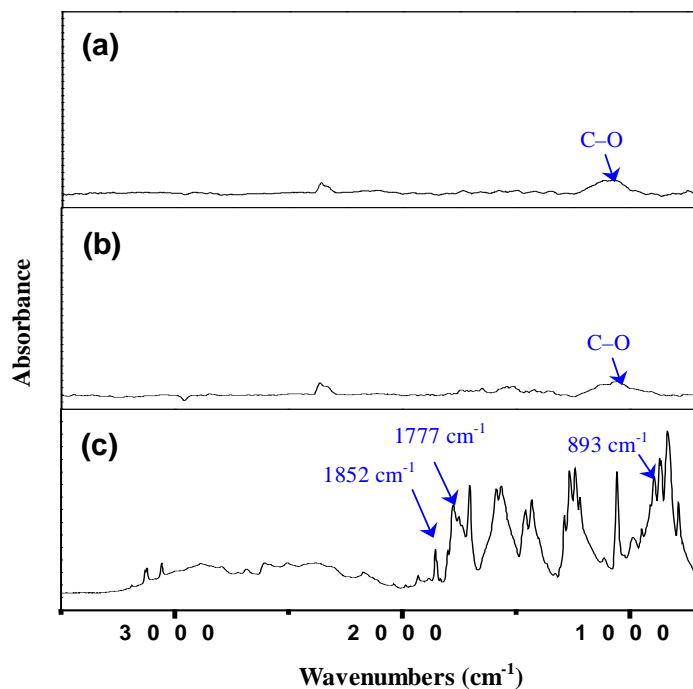


Figure S1. FT-IR spectra of (a) u-CNTs, (b) MWNTs after the plasma treatment and (c) CNTs-MA. IR spectra show that after the grafting of the maleic anhydride, the peaks at 1777 and 1852 cm^{-1} clearly can be ascribed to the unsaturated asymmetric and unsaturated symmetric C=O of cyclic anhydride respectively and peaks at 1059, 1239, 1266, 1289 cm^{-1} (C-C), and 893 cm^{-1} (C-O) of the anhydride were also observed. Moreover, the double bond peak (C=C) of the anhydride around 1650 cm^{-1} is not presented, manifesting the fact that the maleic anhydride monomer has been grafted onto the MWNTs.

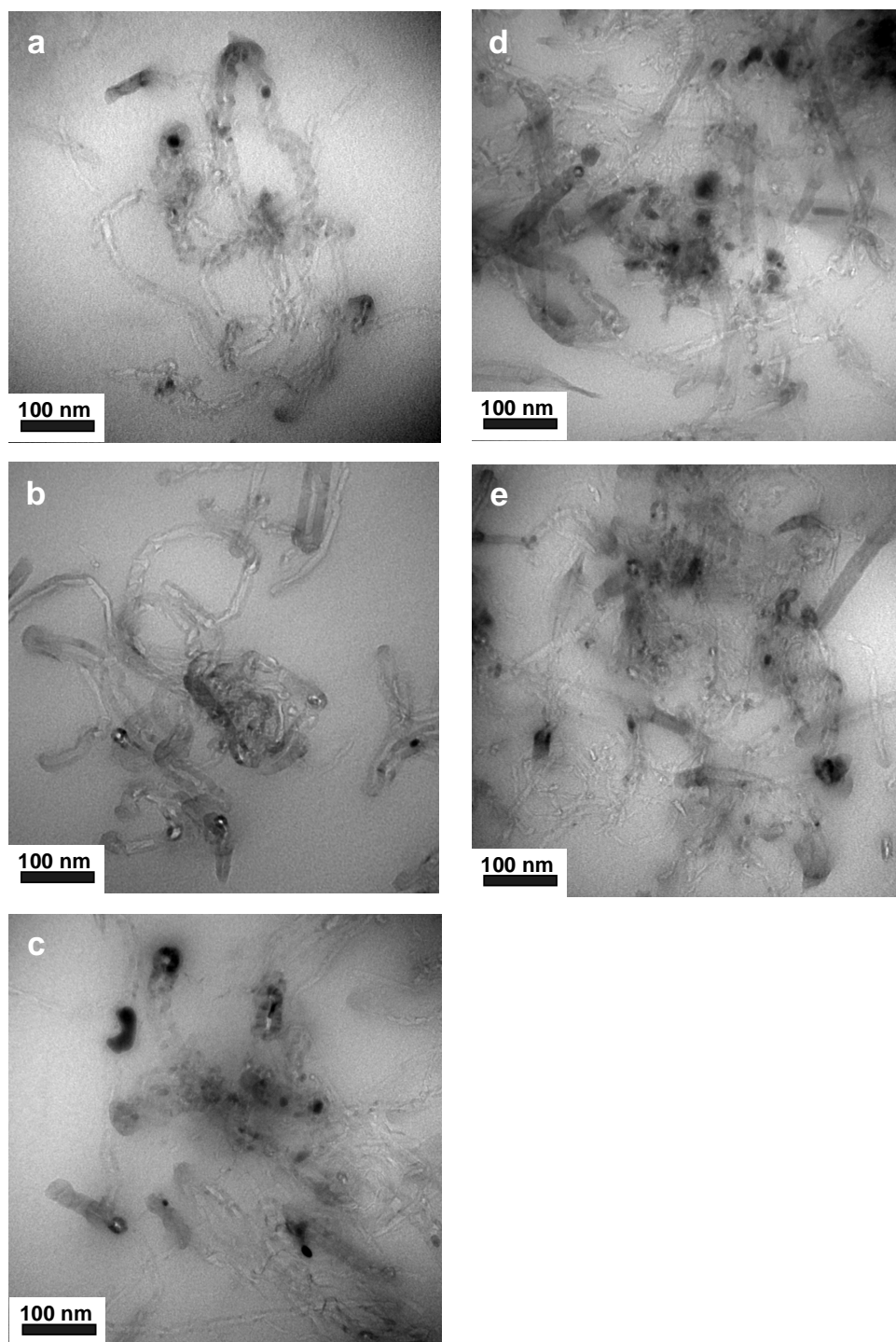


Figure S2. TEM images of the u-CNTs/epoxy nanocomposites loaded with different CNT content: (a) 0.1 wt%, (b) 0.3 wt%, (c) 0.5 wt%, (d) 0.7 wt%, and (e) 1.0 wt%.

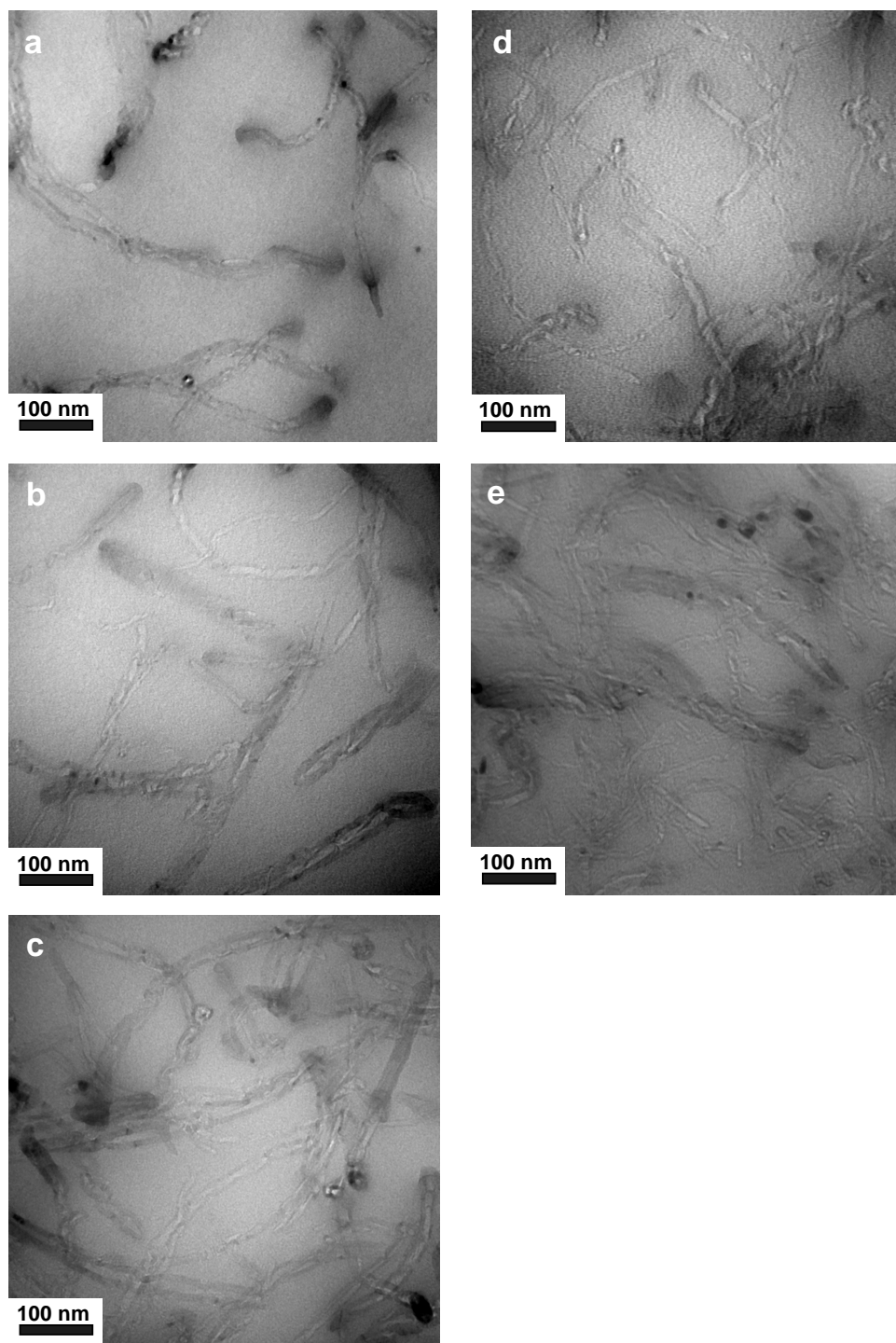


Figure S3. TEM images of the CNTs-MA/epoxy nanocomposites loaded with different CNT content: (a) 0.1 wt%, (b) 0.3 wt%, (c) 0.5 wt%, (d) 0.7 wt%, and (e) 1.0 wt%