

Electronic Supplementary Material (ESI) for RSC Advances.

POSS-Functionalized Polyphosphazene Nanotube: Preparation and

Effective Reinforcement on UV-Curable Epoxy Acrylate

Nanocomposite Coatings

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Thermal properties of EA and POPZS/EA nanocomposites

DSC was used to investigate the thermal property of POPZS/EA nanocomposites. Glass transition temperature (T_g) is determined from DSC curves, as shown in Fig. S1. It is observed that the T_g s of EA nanocomposites are 135.0°C, 140.8°C, 144.5°C, 147.8°C with increasing the loading of POPZS nanotubes from 0.1wt% to 3.0%, which is consistent with the DMA results. Compared to the pure EA, the maximal improvement in T_g is approximately 15.0 °C. Since the POPZS is covalently introduced into the EA matrix strengthening their interfacial interactions and has high stiffness reducing the flexibility of materials, the T_g values are remarkably enhanced.

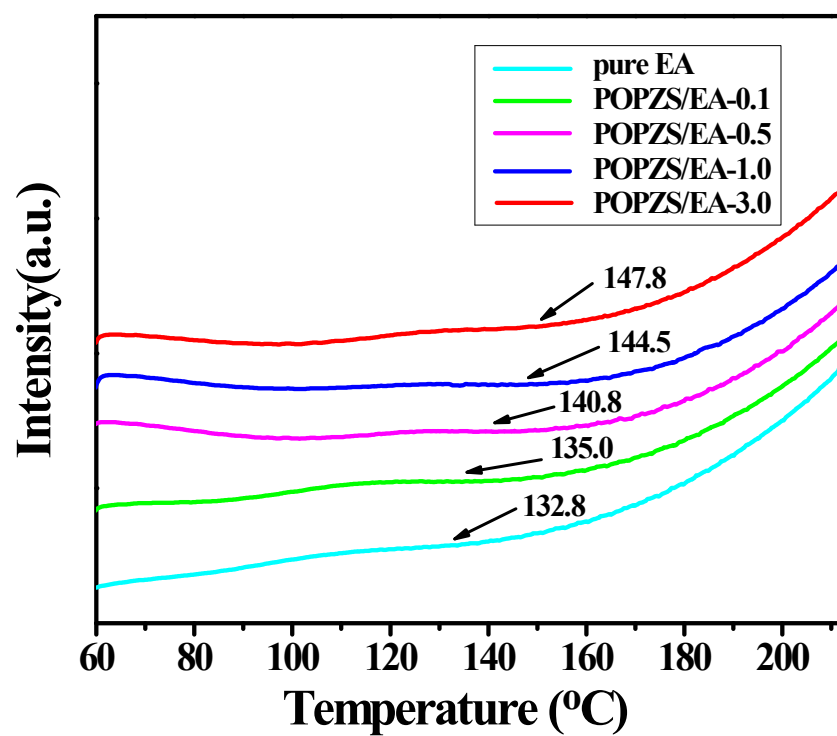


Figure S1. DSC curves of EA and POPZS/EA nanocomposites.