

**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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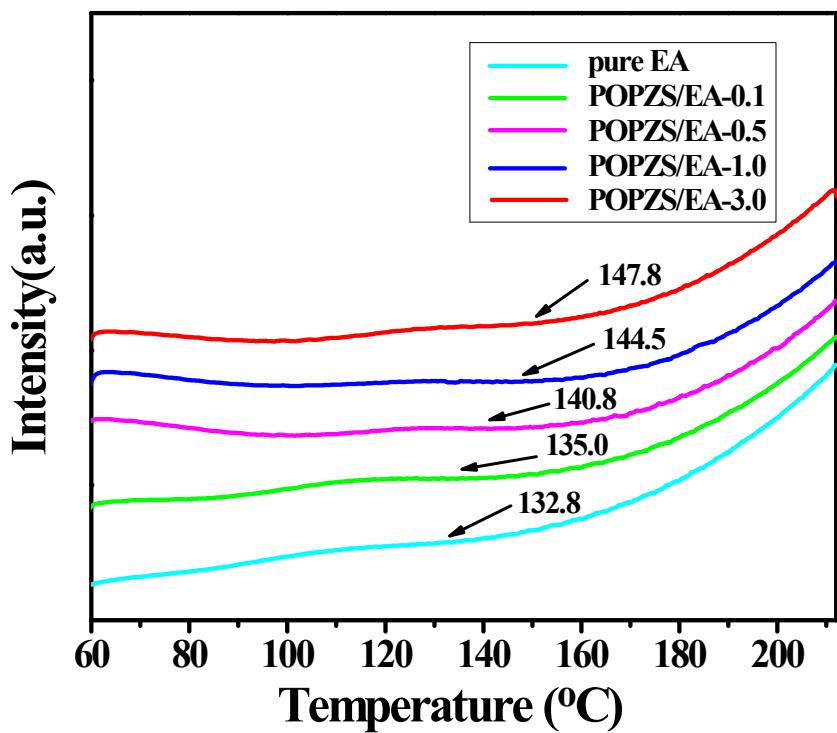
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### ***Thermal properties of EA and POPZS/EA nanocomposites***

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.