

Supplementary Information

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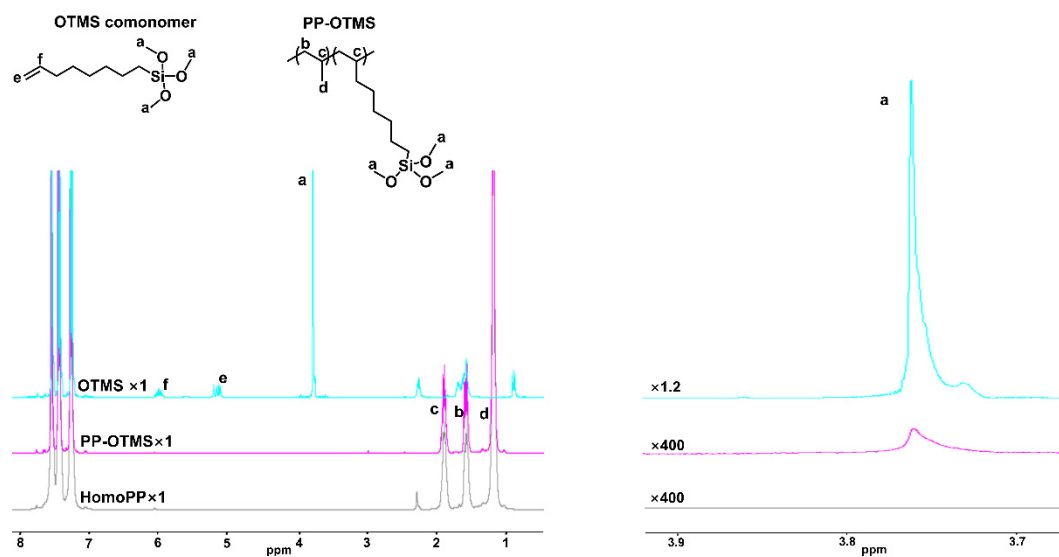


Figure S1. ^1H NMR spectra of HomoPP and PP-OTMS. The right figure enlarges the methoxy region.

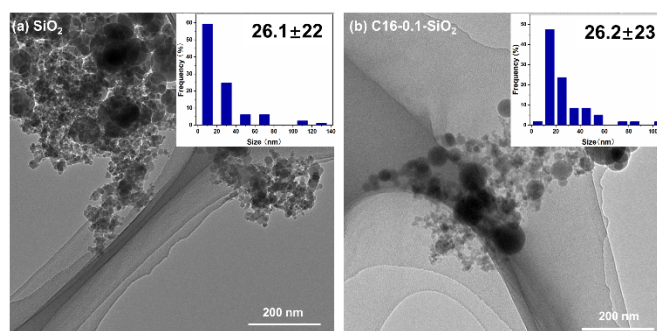


Figure S2. TEM images of neat and surface modified SiO_2 nanoparticles.

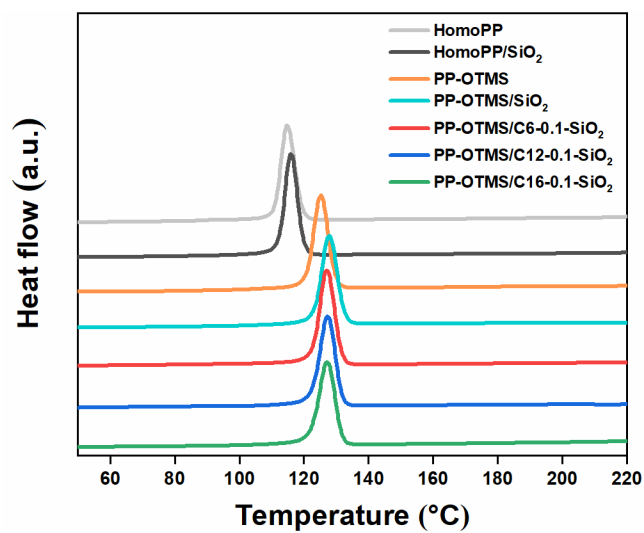


Figure S5. DSC profiles during cooling. Profiles are vertically shifted for visual clarity.

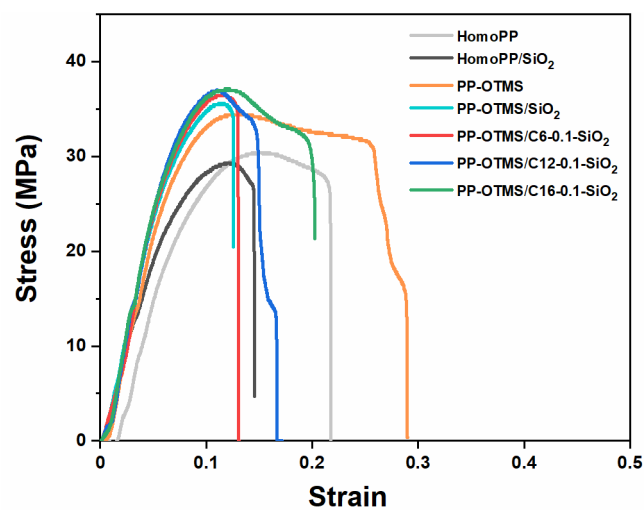


Figure S6. Stress-strain curves.

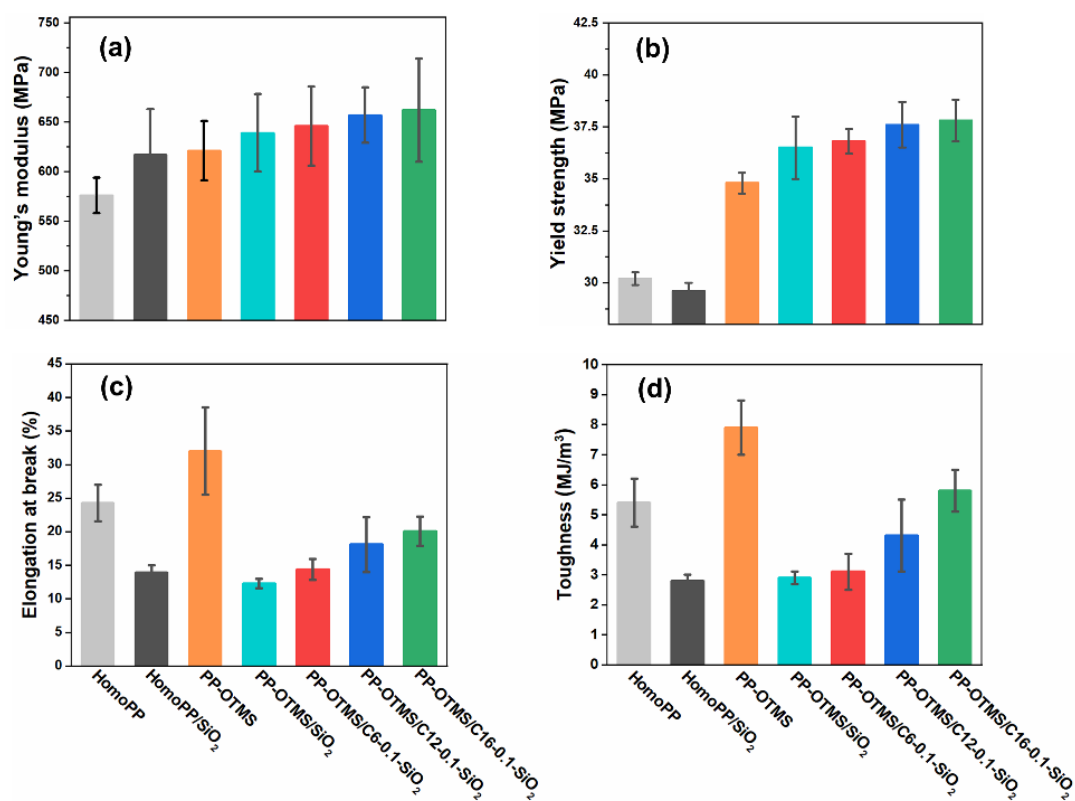


Figure S7. Tensile properties: (a) Young's modulus, (b) yield strength, (c) elongation at break, and (d) toughness of nanocomposites.