

Supplementary Information

Impact of nanoparticle surface modification on the mechanical properties of polystyrene-based nanocomposites

A. Kockmann,^a J. C. Porsiel,^a R. Saadat^a and G. Garnweitner^{*ab}

^a Technische Universität Braunschweig, Institute for Particle Technology, Volkmaroder Straße 5, 38104 Braunschweig, Germany

^b Technische Universität Braunschweig, Laboratory for Emerging Nanometrology, 38106 Braunschweig, Germany

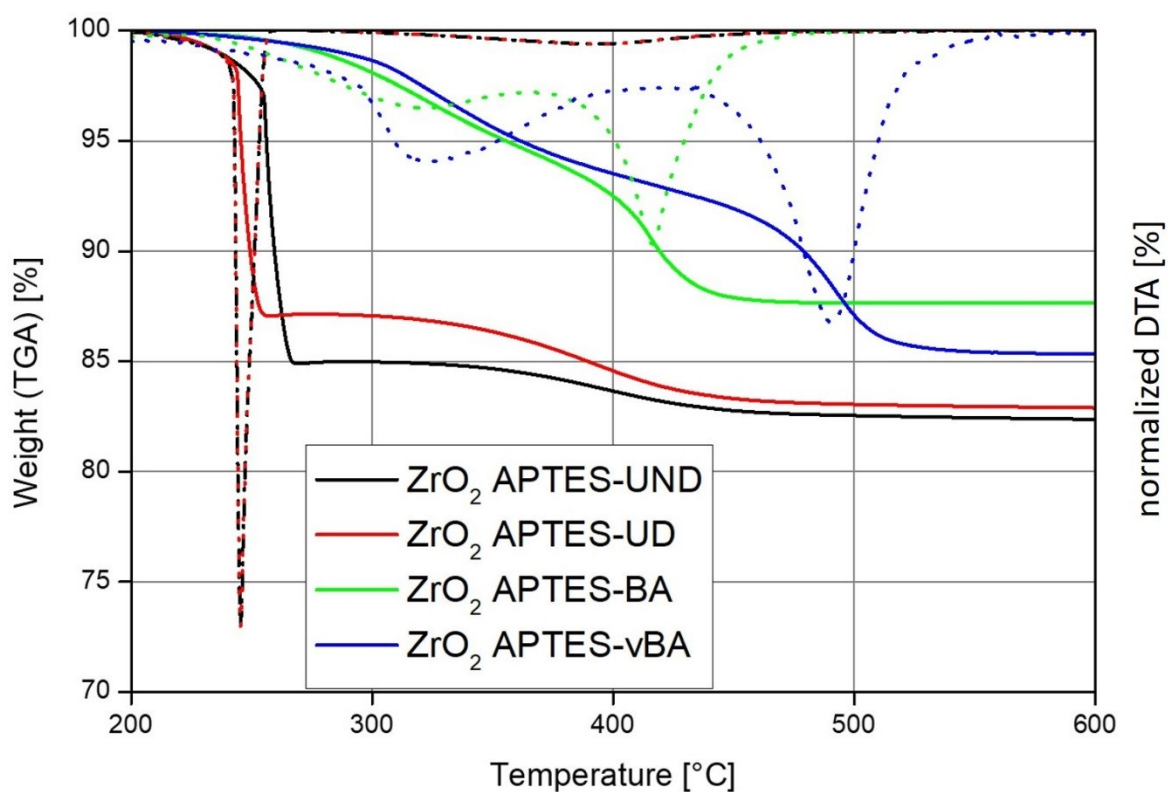


Figure S1. TGA and DTA curves of ZrO₂ nanoparticles modified with APTES and different carboxylic acids (supplement to Figure 7 in the main article).

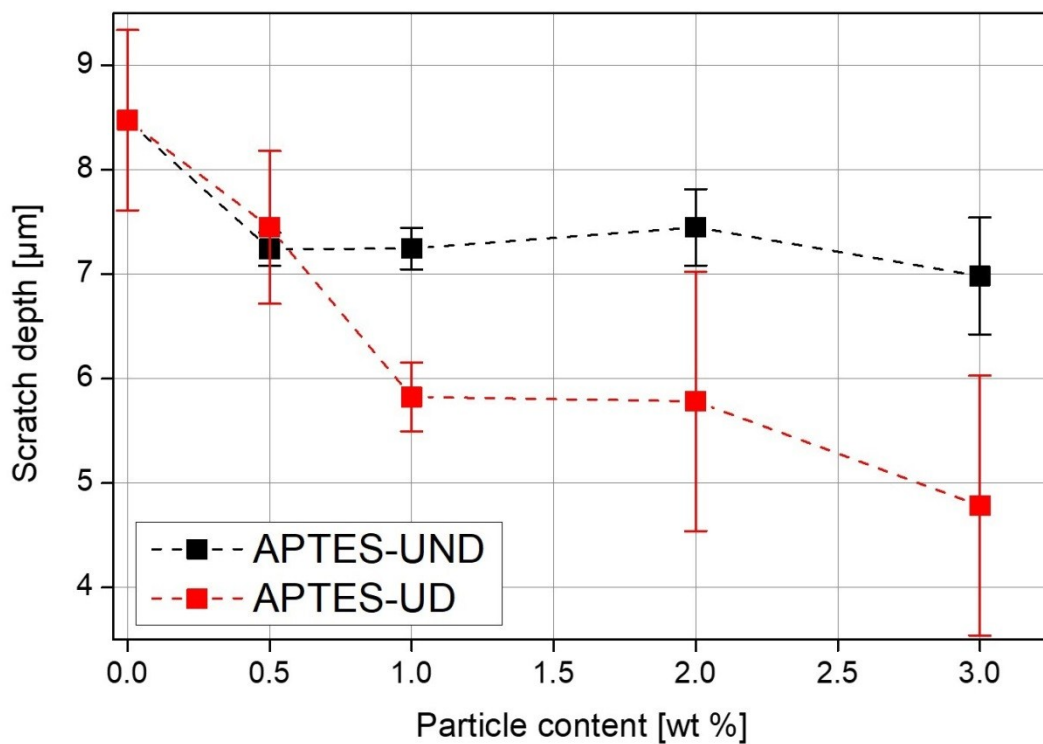


Figure S2. Scratch depth of NCs filled with different amounts of modified nanoparticles as indicated (supplement to Figure 12 in the main article).

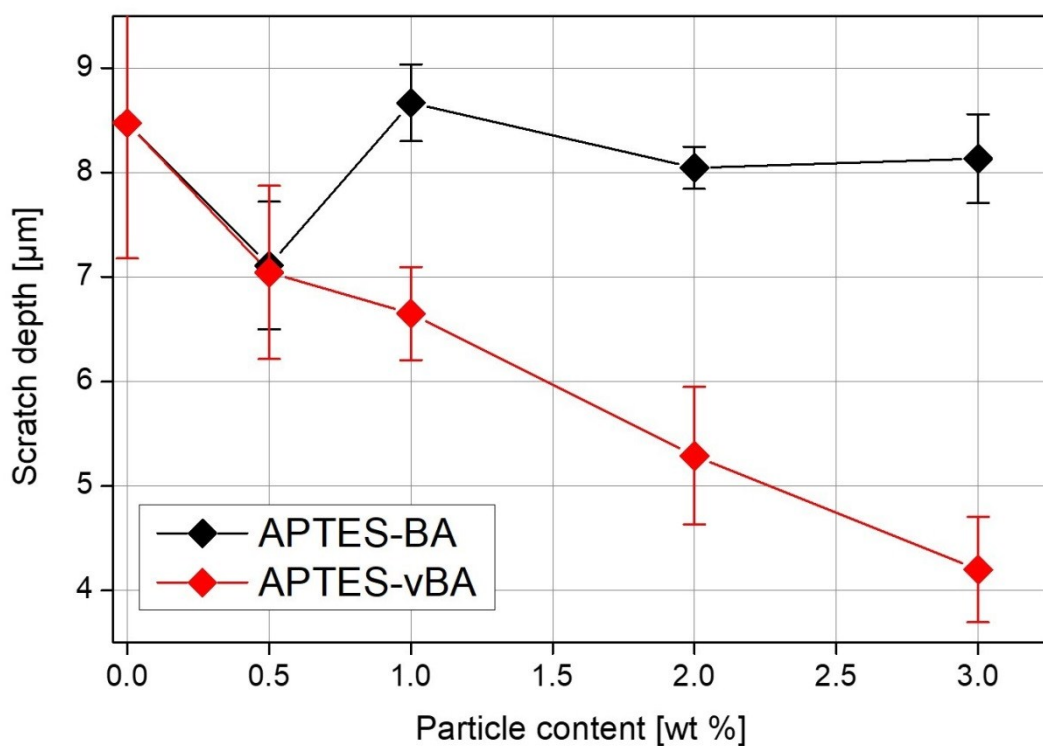


Figure S3. Scratch depth of NCs filled with different amounts of modified nanoparticles as indicated (supplement to Figure 12 in the main article).

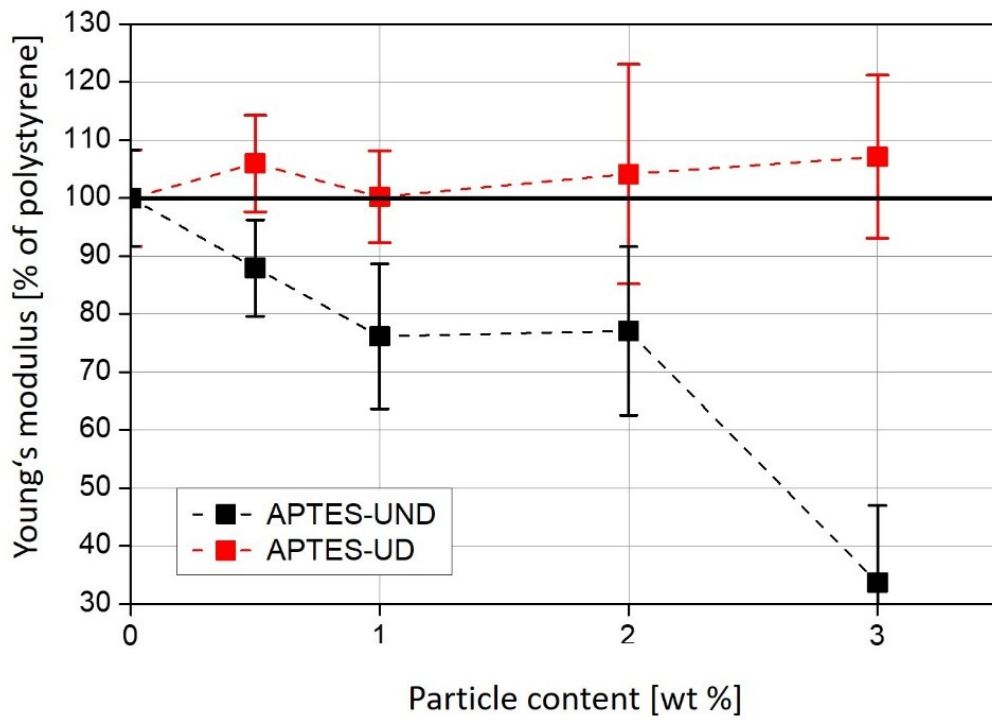


Figure S4. Young's modulus of NCs featuring the differently modified particles related to the measured modulus of pure PS (supplement to Figure 14 in the main article).

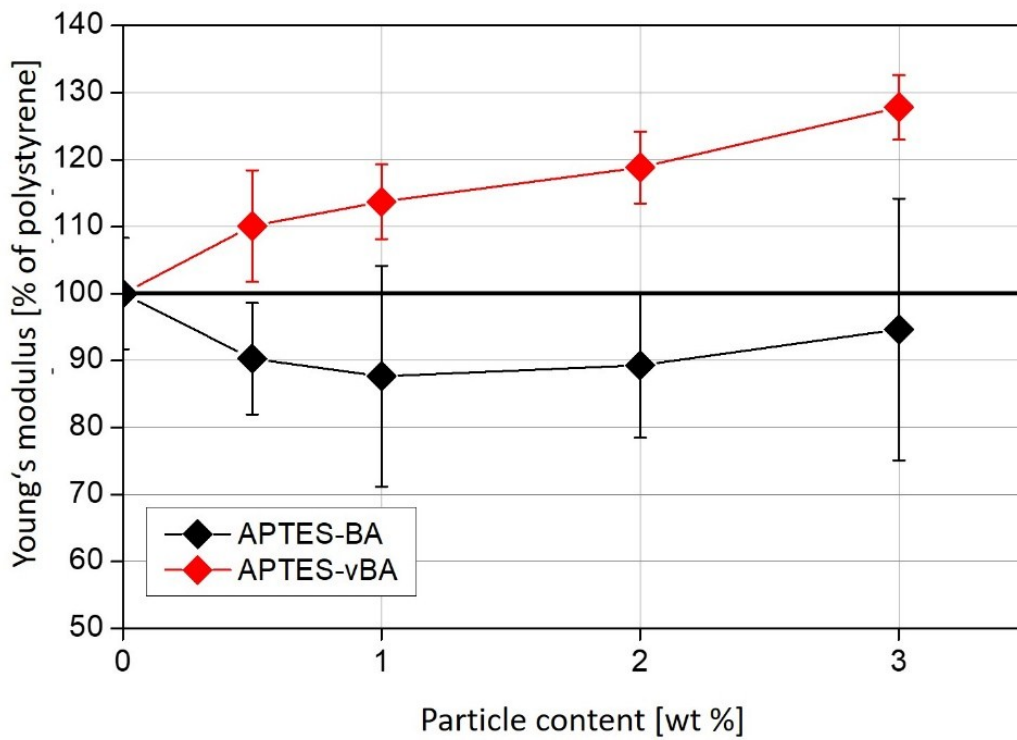


Figure S5. Young's modulus of NCs featuring the differently modified particles related to the measured modulus of pure PS (supplement to Figure 14 in the main article).