Supporting Information

A General Route to Optically Transparent Highly Filled Polymer Nanocomposites.

Sascha Ehlert,[†] Corinna Stegelmeier,[†] Daniela Pirner,[†] Stephan Förster*[†]

[†] Physical Chemistry I, University of Bayreuth, Germany

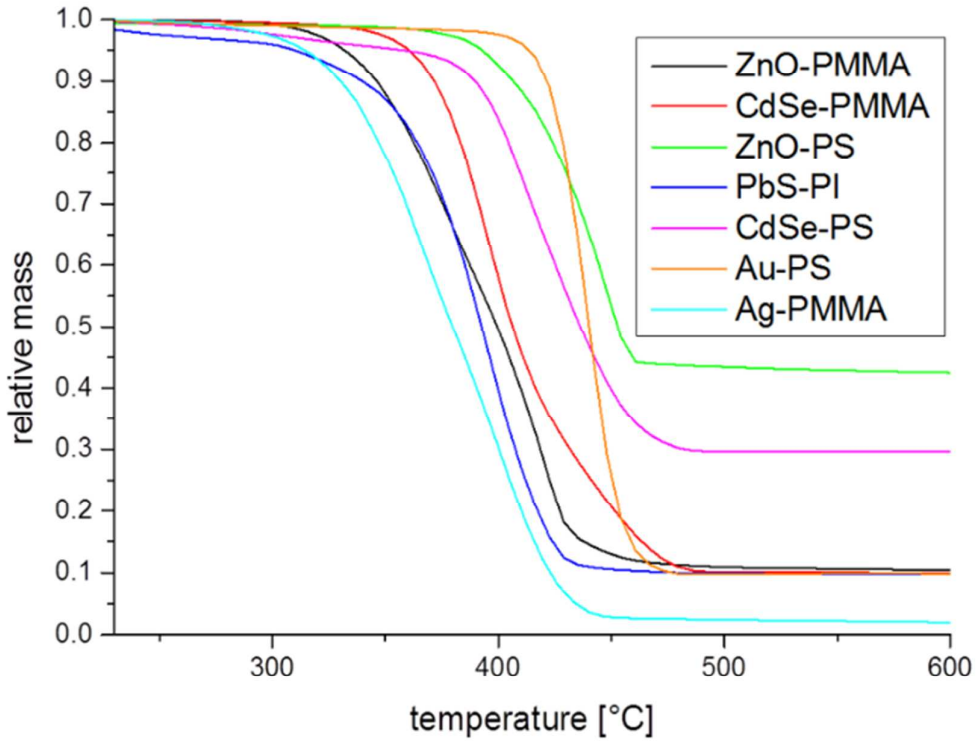

Figure S1. TGA measurements of all investigated nanocomposites.

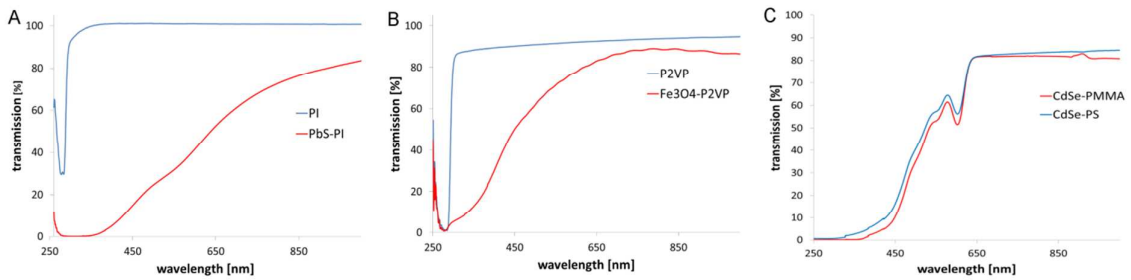

Figure S2. UV-vis spectra of PbS-PI (A), iron oxide Fe_2O_3-P2VP (B), and CdSe-PMMA (C) nanocomposites with high transmission.

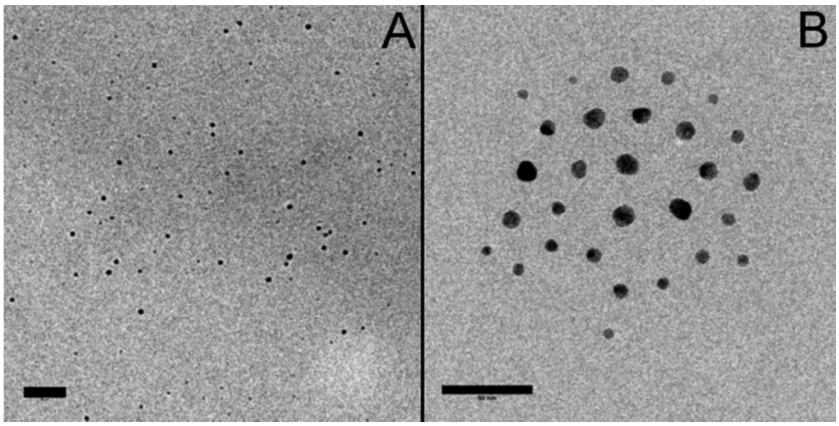

Figure S3. TEM-images of solvent cast Ag-PMMA (A, 15nm, 2%) and Au-PI (B, 15nm, 10%) nanocomposites (scale bars are 50 nm).

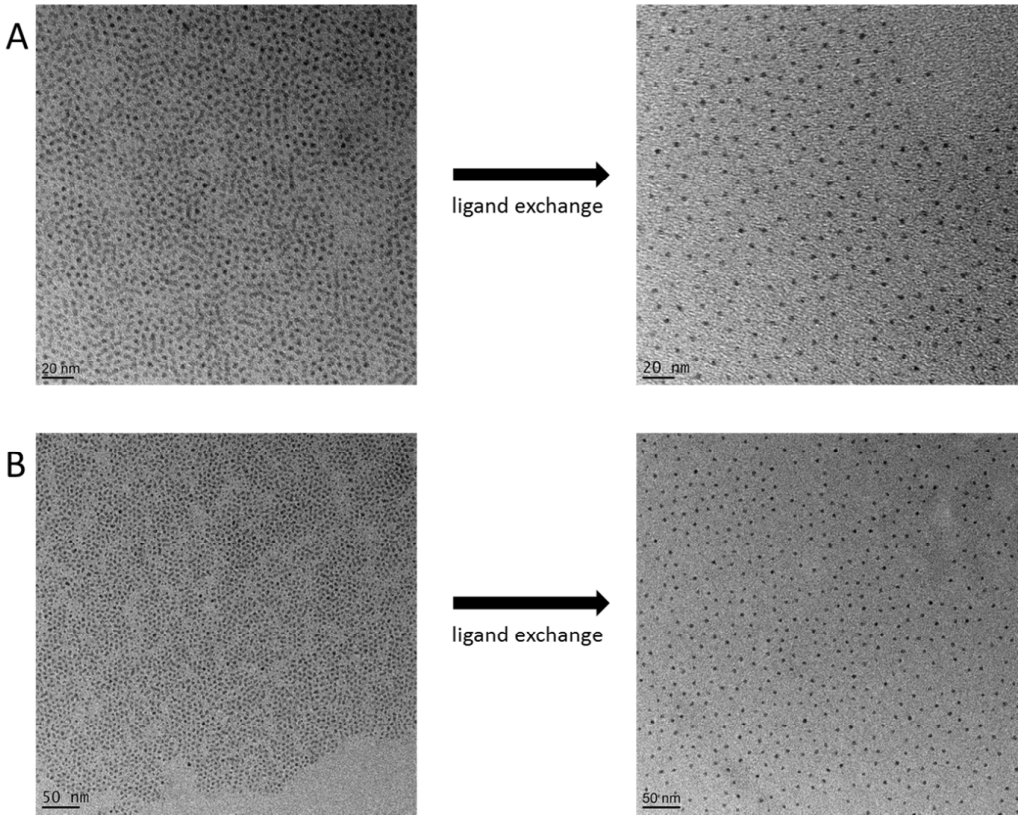

Figure S4. TEM-images of CdSe-nanoparticles (A) and PbS-nanoparticles (B) before (left) and after the ligand exchange (right) with polystyrene (A) and polyisoprene (B).

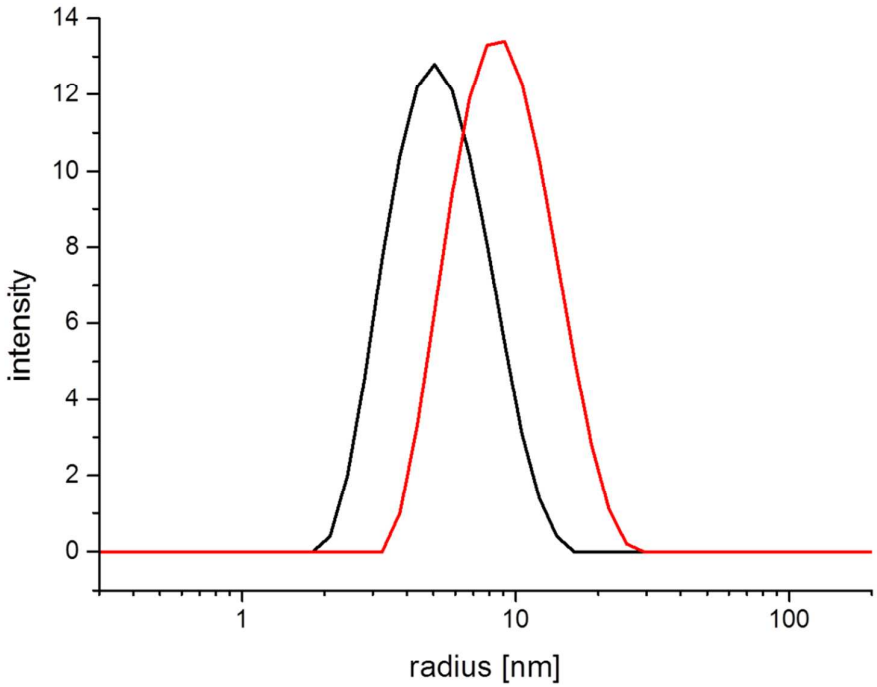

Figure S5. Size distribution of CdSe-nanoparticles (black) and CdSe-nanoparticles coated with a PS-polymer brush (red) as measured by dynamic light scattering (DLS).

Figure S6. Photo of a 10 wt% ZnO/PS-nanocomposite thin film where the ZnO nanoparticles were coated with oleic acid instead of a polystyrene brush layer. The incompatibility and aggregation of the nanoparticles in the PS (8600 g/ml) matrix are causing pronounced turbidity.