

# **Characterization of Functionalized Nanoparticles for Nanocomposite Applications**

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Realization of the potential attributes of nanocomposites has been limited by the inherent difficulty of dispersion. This has led to significant work in functionalizing the surface of the nanoparticles to improve interaction with the surrounding polymer. Characterization of the nanoparticles for size distribution is already challenging. Variations in surface functionality add another dimension to these challenges. We present examples of the use of chromatographic separations and light scattering to address these needs. Light scattering includes examples of intensity and dynamic light scattering, depolarized dynamic light scattering and zeta potential. Examples of nanoparticles include functionalized silica, TiO<sub>2</sub>, and exfoliated clays such as sepiolite.