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## **Effect of Anisotropic Nanoparticles Addition on Morphology and Phase Diagram of Polymer Blends.**

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Blending polymers with anisotropic inorganic particles has been widely used to produce materials with enhanced properties. Recently, inorganic fillers such as clay with nanometric size have attracted much interest due to their high surface area and high aspect ratio. The obtained nanocomposites consisting of polymer matrices and layered silicates have shown a wide spectrum of improved properties as compared to the unmodified polymers.

In this presentation we will discuss the effect of such nanoparticles on the morphology and the phase diagram of polymer blends. Various blends immiscible and phase segregating blends will be considered. The results will be discussed in terms of thermodynamics, kinetics and morphology evolution both under quiescent and flow conditions.