

MAR17-2016-001051

Abstract for an Invited Paper
for the MAR17 Meeting of
the American Physical Society

Applications of Polymer Nanocomposites

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Polymer nanocomposites have been developed for application in several areas. This talk will provide three vignettes of applications that have been explored. Nanoporous ceramics are free standing ceramic objects that can be used for filtration. The pore size distribution is in the proper target range for filtering viruses from medicines in solution. Filled polyimides are useful for improving the ultimate electrical properties of insulating films during corona exposure. The advantages and pitfalls of this approach will be detailed. Exfoliated laponite dispersed into ethylene copolymers reduces creep while maintaining transparency, which is applicable to packaging.