

INVITED LECTURE – MUSA KAMAL



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Micro and Nano Structure Development in Polymer Processing

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Recently, there has been growing interest in producing materials and products that have dimensions at the micro or nano scale and in the transcription of micro patterns, as in micro injection molding and micro injection-compression molding, respectively. Other materials, such as nanocomposites, require the control of the nanostructure of the product. In fact, it is gradually becoming evident that control of performance of polymeric products, even at the macro scale, requires the micro or nano structuring of the material. The above is especially true for products based on semi-crystalline polymers, polymer blends and polymeric composites. This goes significantly beyond the characterization or observation of the micro or nano structure, and requires the ability to predict, manipulate and control these characteristics. We shall discuss some of the requirements posed by micro and nano structuring and the issues that they raise in the field of polymer processing.
