

Program in Polymer Science and Technology

POLYMER SEMINAR

PROF. ANA VERA MACHADO INSTITUTE FOR POLYMERS AND COMPOSITES UNIVERSITY OF MINHO (PORTUGAL)

"Reactive Extrusion: an Overview"



<u>Summary</u>

In recent years several strategies have been developed to prepare well defined and predictable polymer structures. The great issue here is that the desired properties and functions are arrived not by manipulation of the structure at atomic or molecular level, but by designing larger, nanoscopic building blocks, made of complex fluids (i.e., block copolymers, ioncontaining polymers, polymer networks) and often of controlled shape (i.e., micellae, dendrimers, stars, combs, disks). The research for such materials will add a new dimension to the available range of properties and functions in polymers and other materials.

An alternative method to produce new polymeric materials with controlled structure is by reactive extrusion. Using this method it is possible to take the advantage of the knowledge on reactive systems (polymerization, modification and blending) that have been conducted during processing. Thus, this presentation will show the potential of this technique to prepare several polymeric based systems.



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