Université Libre de Bruxelles
Faculté des Sciences
Séminaires du **Laboratoire de Dynamique des Polymères et de la Matière Molle**

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Towards an understanding of glass transitions in thin films

For the past 20 years, there has been significant experimental, computational, and theoretical work on anomalous dynamics in thin films of glass forming polymers. Even considering only the single material, polystyrene(PS), the number of experiments, and the wide range of conclusions that have been reached from these experiments, is striking. In this talk, I will discuss dilatometric measurements of the glass transition temperature in thin PS films and measures of enhanced surface mobility in glassy PS. I will introduce a simple physical model for glassy dynamics, based on string-like cooperative motion, that provides derivations for the Vogel-Fulcher relation and the Adam-Gibbs ansatz. This simple model can be used to provide a description of glass transition behaviour in thin films, as well as the properties of glassy polymer surfaces. The success of the model in describing both bulk and thin film properties suggests that molecular crowding and cooperative motion alone can be used to describe many aspects of glassy dynamics.

le jeudi 02 mars 2017 à 15h00
Campus Plaine, Bat. NO, Salle des Professeurs (P2 NO.906)

Pour plus d'informations veuillez contacter le Prof. Simone Napolitano (57 41)