

Abstract Submitted
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Time evolution of the structure of fluorinated alkanes near solid surfaces¹ MESFIN TSIGE, Southern Illinois University at Carbondale — The study of thin films of physisorbed molecules has attracted much experimental and theoretical interest in the past few decades. This is mainly due to numerous reports of anomalous behavior in the structural and dynamical properties of polymer thin films at interfaces and the expected consequences in their wide range of practical applications. Although great advances have been made in our understanding of the physics and chemistry of polymer melt/solid and polymer melt/vapor interfaces, there remain a number of fundamental as well as practical issues that need to be addressed regarding the influence of interfaces on a polymer film. One of the issues, which I think no systematic study has been yet conducted on, is the stability or time-evolution of the molecular layering in a film next to a solid surface. The main focus of my presentation will be on our recent computer simulation study result that shows that the extent of layering in an alkane film next to a solid substrate may oscillate in time with an amplitude and period that strongly depends on temperature.

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