



Polymers under Multiple Constraints

Kolloquium

Thursday,

10th July 2014

at: 5.15 pm

Gustav-Mie-
Hörsaal,
Theodor-Lieser-
Str. 9, 06120
Halle

*Coffee will be
served from
4.45 pm!*

Prof. Dr. Tanja Schilling

*Theory of Soft Condensed Matter,
Universite du Luxembourg*

Crystal Nucleation in Alkanes

Although the crystallization process in alkanes has been studied intensively for decades, molecular details of crystal nucleation events have not been accessible until very recently.

We present a computer simulation study of crystallization from sheared as well as quiescent undercooled melts of C20 and C150 and analyse the crystal nucleation process. We find, in particular, that the chains do not need to straighten in order to initiate orientational ordering. The fact that they have a certain persistence length already suffices to induce an ordering transition similar to the isotropic nematic transition, which is then followed by straightening and crystallization.

