

Abstract Submitted
for the MAR06 Meeting of
The American Physical Society

Arm Retraction of Star and Dangling Polymers in the Absence of Dynamic Dilution DANIEL A. VEGA, Department of Physics. Universidad Nacional del Sur. CONICET. Argentina — The dynamic response of model polymer networks containing low contents of star shaped and linear dangling polymers was studied through stress relaxation experiments. As compared with their melts, the behavior of star and dangling polymers leads to a dynamic response with unprecedented large relaxation times. By comparing data of star melts with those corresponding to stars and dangling chains residing in polymer networks, the effects of dynamic dilution were clearly identified. Since in polymer networks the dynamic dilution effect is suppressed, we were able to experimentally test the validity of the potential for arm retraction proposed by Pearson and Helfand.

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Date submitted: 09 Dec 2005

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