Abstract Submitted
for the MAR05 Meeting of
The American Physical Society

Comments on Electrostatic Persistence Length[1] ANDREY DOBRYNIN, Institute of Materials Science, University of Connecticut, Storrs, CT 06269-3136 — I have shown that the quadratic dependence of the electrostatic persistence length on the Debye screening length obtained in the classical Odijk-Skolnick-Fixman (OSF) theory is a result of incorrect assumption made about the energetic penalty for chain deformation. By including chain elasticity the linear dependence of the electrostatic persistence length on the Debye screening length is obtained. This result is derived by applying simple scaling analysis of the angle fluctuations and Gaussian variational principle to the system of strongly and weakly charged polymer chains.

[1]This research was supported by NSF (DMR-0305203).

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Date submitted: 04 Dec 2004 Electronic form version 1.4