

Abstract Submitted
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Diffusion of polyelectrolytes in polyelectrolyte gels ANAND RAHALKAR, MURUGAPPAN MUTHUKUMAR, University of Massachusetts — Using dynamic light scattering, we have investigated the diffusion coefficient of sodium poly(styrene sulfonate) in a matrix of poly(acrylamide-co-acrylate) gels. The diffusion coefficient of the probe polyelectrolyte exhibits a crossover behavior from a particle-diffusion to entropic-barrier dominated diffusion, as the molecular weight is increased. The effect of electrostatics, by varying the charge density of the matrix, on probe diffusion constant will be presented.

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