

Abstract Submitted
for the MAR13 Meeting of
The American Physical Society

How water content determines small-molecule mobility in hydrogels SUNG CHUL BAE, AH-YOUNG JEE, STEVE GRANICK, University of Illinois at Urbana-Champaign — Surprisingly little is known from quantitative physical study about dynamics within hydrogels, in spite of the fundamental importance of solvent concentration in the theory and application of nonpolar polymer gels. We have prepared model hydrogels of different kinds and studied the diffusion within them of fluorescently-labeled solutes. Comparison of translational and rotational diffusion shows remarkable dependence, on water content, of translation-rotation correlations.

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Date submitted: 07 Nov 2012

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