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Slow Modes in Dynamic Light Scattering of Hydroxypropylcellulose—Comparison to Fluorescence Photobleaching Recovery. DEREK DORMAN, PAUL RUSSO, YOUNG-WOOK CHOI, Louisiana State University — Less is understood of semidilute solutions than dilute solutions of macromolecules. As concentration increases, multiple decay rates are observed. This multimodal phenomena of 1 MDa hydroxypropylcellulose was investigated using dynamic light scattering and fluorescent photobleaching recovery. The resulting decays were fitted using two exponential fits and CONTIN. Several gammas and amplitudes were obtained with each CONTIN fit but the two with the highest amplitude were determined to be the gammas of interest—a fast and slow mode. FPR data, using a two exponential fit, also exhibited a fast and slow mode. The two experimental techniques were compared to elucidate the dynamic behavior of semidilute hydroxypropylcellulose.

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