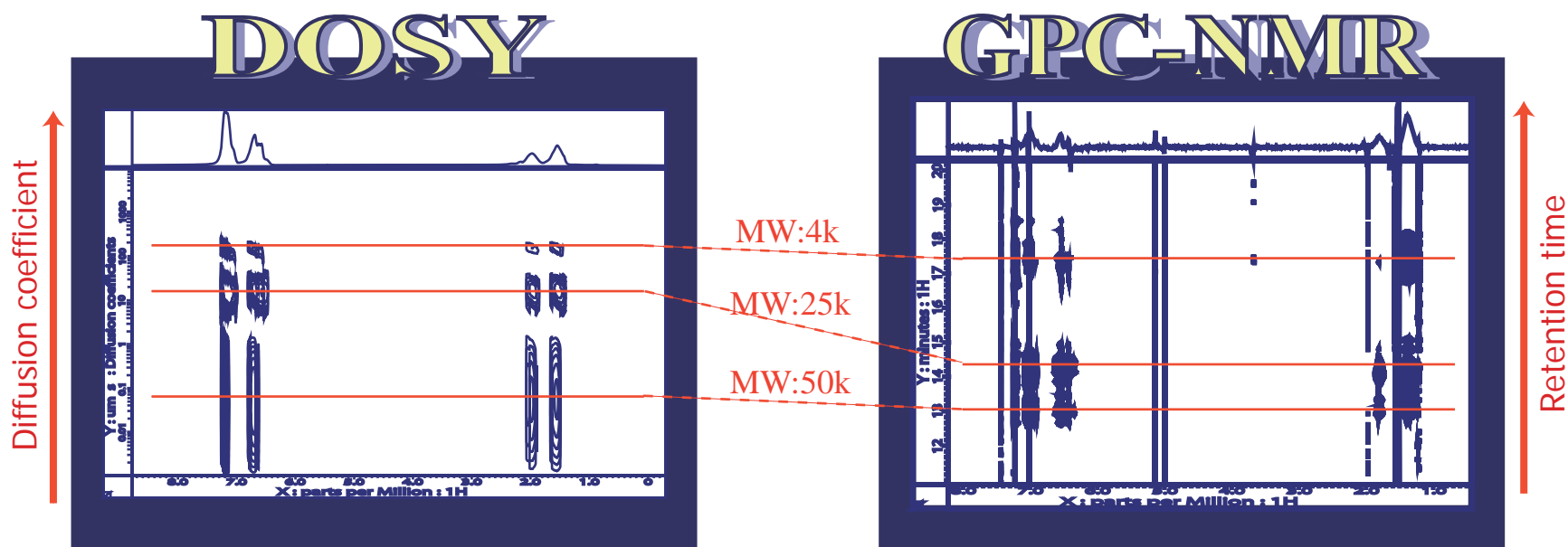


NMR Analysis of Mixture Samples: DOSY and LC-NMR

LC-NMR (or GPC-NMR) and DOSY are NMR techniques for analyzing mixture samples. The former technique separates components of mixture samples using chromatography and directly observes NMR signals of the individual components. The latter utilizes the difference of diffusion coefficients of molecular species and separates them in the NMR spectrum.

Spectra observed with these techniques are shown below: A mixture sample of polystyrene having three different molecular weights gives similar spectra by LC-NMR and DOSY, separately yielding three components. In this way, LC-NMR and DOSY enable analysis of mixture samples.



Sample: Mixture sample of polystyrene having MW of 4k, 25k, and 50k.