

Abstract Submitted
for the MAR08 Meeting of
The American Physical Society

A New Diffusion NMR Experimental Model System for Studies of Bidisperse Colloids¹ ANAND YETHIRAJ, SWOMITRA PALIT, Department of Physics and Physical Oceanography, Memorial University of Newfoundland — A method to prepare monodisperse colloidal particles that are simultaneously NMR-visible and fluorescent is described. A systematic approach to obtain spectrally resolved diffusion coefficients for every component (colloid and solvent) in a monodisperse colloidal suspension is presented. We also prepared bidisperse colloidal suspensions where each colloid component has a distinct NMR spectral signature, and obtained the diffusion coefficient of both colloid species and solvent simultaneously, in concentrated colloidal suspensions with volume fractions between 20 and 50 %. This colloidal model system enables the study of bidisperse colloids at different size ratios and number ratios.

¹This work is supported by NSERC (Canada).

Anand Yethiraj
Department of Physics and Physical Oceanography,
Memorial University of Newfoundland

Date submitted: 29 Nov 2007

Electronic form version 1.4