STRUCTURE AND DYNAMICS OF AOT-BASED MICROEMULSIONS: INTRODUCTION. ***M. Gawryla****, M. Gates, and A. Langner**, *Department of Chemistry*, *N. Guggemos and M. Kotlarchyk**, *Department of Physics*, *mdg7977@rit.edu*

Microemulsions are homogeneous, thermodynamically stable dispersions of oil and water. The dispersion is stabilized through the addition of a surfactant and a cosurfactant, generally a midrange alcohol. In our study, we focused on elucidating the structure and dynamics of water-in-decane microemulsions stabilized by bis(2-ethylhexyl)sulfosuccinate [AOT] with 2-methyl-2-propanol added as a cosurfactant. In this introductory presentation I will give an overview of the project, define the relevant terms and variables, and describe the techniques that were employed to study this interesting system.