

Abstract Submitted
for the MAR14 Meeting of
The American Physical Society

Self-Assembly of Pluronic Block Copolymers in Solutions: Simulation and Neutron Scattering¹ ZHE ZHANG, KUNLUN HONG, CHANG-WOO DO, Oak Ridge National Lab, BIOLOGY AND SOFT-MATTER DIVISION, OAK RIDGE NATIONAL LABORATORY TEAM, CHEMICAL SCIENCE DIVISION, OAK RIDGE NATIONAL LABORATORY TEAM — Poly(ethylene oxide)-poly(propylene oxide)-poly(ethylene oxide) (PEO-PPO-PEO) triblock copolymers in water solution display various phase behaviors such as micellar, lamellar, and hexagonal phases and have been of great interest to researchers for their wide range of applications including templates of various nanostructures in solar cell and transportation of nanoparticles in drug delivery. In this study, we combined density functional theory-based mesoscale simulation and small-angle neutron scattering (SANS) experiments to investigate equilibrium structures of L62/water systems at different concentrations. Various simulation parameters found in the literature have been revisited with the experimental findings. Scattering experiments were found to be an excellent.

¹This research is supported by the U.S. Department of Energy, Basic Energy Sciences, Materials Sciences and Energy Division.

Zhe Zhang
Oak Ridge National Lab

Date submitted: 15 Nov 2013

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