Abstract Submitted
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Effect of Amphiphilic Geometry on Phase Separation and Micellization: A Gibbs-ensemble Monte Carlo Study[1] GEUORGUI BOUROV, ANIKET BHATTACHARYA, University of Central Florida — We are using an off-lattice Gibbs ensemble Monte Carlo method to explore the phase diagram of amphiphiles with different head-tail ratios, as well as for different sizes of the hydrophilic head. While phase diagram for lattice amphiphiles[†]has been studied, there is hardly any simulations where geometric effects on the phase diagram has been investigated in a systematical way. We will compare our simulation results with those obtained using lattice models and with the available experimental data. Our studies are relevant to obtain controlled nanostructures using amphiphiles as templates. [†]A. Z. Panagiotopoulos, M. A. Floriano, S. K. Kumar, Langmuir 2002, 18, 2940.

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