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Dynamics and shape fluctuations of nanosized water pools in reverse micelles JANAMEJAYA CHOWDHARY, BRANKA LADANYI, Department of Chemistry, Colorado State University — Reverse micelles are surfactant assemblies containing nanosized water reservoirs which can serve as confined media for studying chemical reactions as well as for nanoparticle synthesis. Molecular dynamics simulations are performed for reverse micelles formed by the surfactant CTAB (Cetyl Trimethyl Ammonium Bromide) in cyclohexane with the cosurfactant pentanol. We present results for the dynamics of confined water and for shape fluctuations of the reverse micelles which can be probed experimentally using terahertz time-domain spectroscopy.

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