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Lipid membrane rigidity from fluctuation measurement in nm scale SUNG CHUL BAE, BO WANG, CHANG-KI MIN, STEVE GRANICK, Department of Materials Science and Engineering, University of Illinois — Thermal fluctuation of giant unilamellar phospholipids vesicles(GUVs) was observed by a forward laser beam scattering of a laser beam from the vesicle edge. This technique, owing to the refractive index mismatch, offers nanometer spatial and microsecond temporal resolution of membrane position. When nanoparticles adsorb on the membrane, this membrane fluctuation changes. We will discuss the changes of membrane rigidity caused by nanoparticles, based on membrane fluctuation data.

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