

Abstract Submitted
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Vibrational energy at interfaces DANA DLOTT, University of Illinois

— New advances in ultrafast vibrational spectroscopy now permit the real-time observation of vibrational energy at interfaces. Using a liquid suspension of reverse micelles, consisting of a nanodroplet of water separated from an organic solvent by a monolayer of surfactant, we pumped vibrational energy into either the water or surfactant layer using an ultrashort IR laser pulse. Incoherent anti-Stokes Raman probe techniques were used to watch the vibrational energy move across this surfactant monolayer. The results were quite different that what would be expected if we were watching heat flow. The specific pathways of vibrational energy are invoked to explain these results.

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