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Helium Nanodroplets: spectroscopy and density-functional calculations ROMAN SCHMIED, KEVIN K. LEHMANN, Dept. of Chemistry, University of Virginia — Helium nanodroplet spectroscopy has shown to be an excellent tool for studying superfluid helium in nano-scale geometries. Experimental signatures of superfluidity are the free rotation of many molecules in helium nanodroplets, and the droplet phonon spectra observed in electronic transitions of molecular dopants. We present new results and interpretations from a study of helium nanodroplets using time- dependent density-functional theory and its normal-mode analysis.

> Kevin K. Lehmann Dept. of Chemistry, University of Virginia

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