Abstract Submitted for the MAR08 Meeting of The American Physical Society

Inelastic electron spectroscopy of single alkanedithiol molecules NICOLAS AGRAIT, CARLOS R. ARROYO, Univ. Autonoma Madrid — We measure charge charge transport through single molecules between gold electrodes at low temperature using STM. The derivative of the conductance vs voltage (IES spectrum) shows clear peaks corresponding to the vibrational modes of the molecule. The frequency dependence on stretching and comparison with other vibrational spectroscopy studies makes possible to assign these peaks to the longitudinal modes of the molecule.

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Date submitted: 02 Dec 2007 Electronic form version 1.4