

Abstract Submitted
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Single-molecule conductance studies of photo-active and photochromic molecules E. S. TAM, J. J. PARKS, Cornell University, M. B. SANTIAGO-BERRIOS, Universidad de Puerto Rico, Y.-W. ZHONG, Institute of Chemistry, Chinese Academy of Sciences, H. D. ABRUNA, D. C. RALPH, Cornell University — We perform statistical measurements of single molecule conductance in repeatedly-formed metal-molecule-metal junctions at room temperature. Our results on diaminoalkanes are consistent with those reported by the Venkataraman group. We focus on photo-active and photochromic molecules, including a series of transition-metal complexes with different metal centers and endgroups. We compare the trend in conductance across the family of complexes with that expected from electrochemical measurements. We will also report initial results on the voltage dependence of single-molecule conductances and the effects of optical excitations.

Eugenia Tam
Cornell University

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