

Abstract Submitted  
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**Tuning the Kondo effect with a mechanically controllable break junction** J. J. PARKS, A. R. CHAMPAGNE<sup>1</sup>, G. R. HUTCHISON, S. FLORES-TORRES, H. D. ABRUNA, D. C. RALPH, Cornell University — We study electron transport through C<sub>60</sub> molecules in the Kondo regime using a mechanically controllable break junction. By varying the electrode spacing, we are able to change both the width and height of the Kondo resonance, indicating modification of the Kondo temperature and the relative strength of coupling to the two electrodes. The normalized linear conductance as a function of  $T/T_K$  agrees with the scaling function expected for the spin-1/2 Kondo problem. The same devices can also exhibit finite-bias inelastic Kondo features at an energy that corresponds to the  $H_g(1)$  intracage vibrational mode of C<sub>60</sub>. Changes in electrode spacing can tune the energy and amplitude of these signals.

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