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Controlling the Random Telegraph Signal in Carbon Nanotube FETs KENNETH EVANS, JACK CHAN, KEITH WILLIAMS, University of Virginia — Random Telegraph Signal (RTS) is quite readily observed in nanotube-channel field effect transistors (NTFETs), even at temperatures approaching 300 K. RTS arises from the population and depopulation of energy levels associated with charge traps along the channel. In this poster presentation, we will discuss the interpretation of RTS spectra as a 'molecular barcode' of states associated with specific surface dopants (adsorbates), and we will describe our work to chemically modify the channel in order to control the surface scattering.

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