

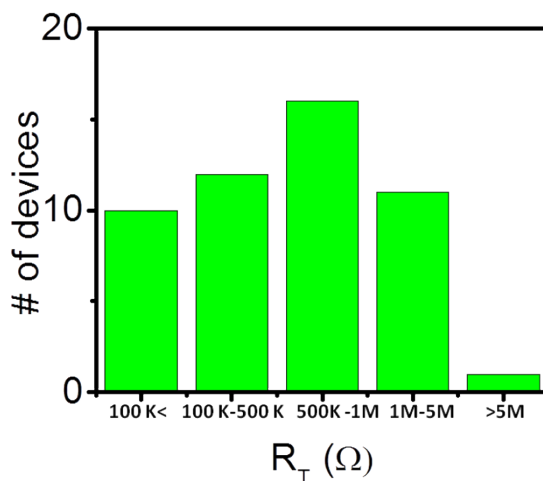
Towards parallel fabrication single electron transistors using carbon nanotubes

Muhammad R. Islam^{a,b}, Daeha Joung^{a,b} and Saiful I. Khondaker^{a,b,c*}

^aNanoscience Technology Center, ^bDepartment of Physics, ^cSchool of Electrical Engineering and Computer Science, University of Central Florida, Orlando, Florida 32826, USA.

*To whom correspondence should be addressed. E-mail: saiful@ucf.edu

Supplementary figure S1: Figure S1 demonstrates the variation of room temperature resistance of 50 SET devices.



S1. Variation of room temperature resistance of the 100 nm metal-SWNT devices

Supplementary table 1: A summary of the charging energy of the top contact devices as a function of R_T . From the electron transport measurements of 50 top contact devices we found that most ($\sim 90\%$) of the devices with $100 \text{ k}\Omega < R_T < 1 \text{ M}\Omega$ shows single QD behavior with consistent charging energy ($\sim 15 \pm 5 \text{ meV}$). Multiple QD behavior with high charging energy (between 15-200 meV) is observed for the devices with $R_T > 1 \text{ M}\Omega$.

Table 1. Summary of the SET devices

R_T	# of Devices measured	SET observed
$R_T < 100 \text{ k}\Omega$	10	1
$100 \text{ k}\Omega < R_T < 1 \text{ M}\Omega$	28	25
$R_T > 1 \text{ M}\Omega$	12	12