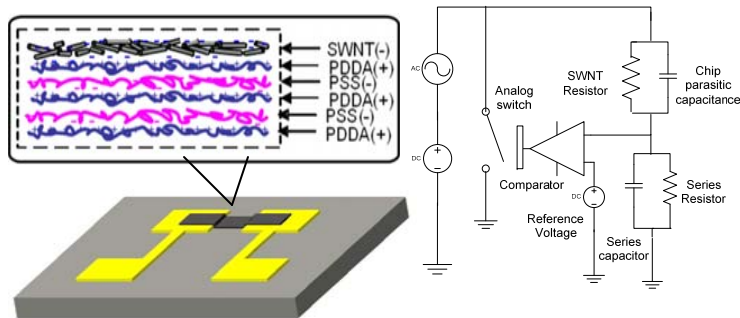


Suspending SWNT Membrane as a New NEMS Material

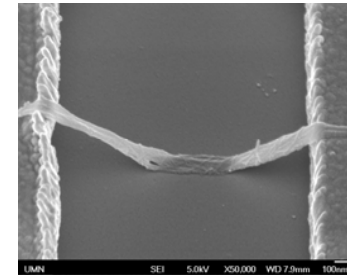
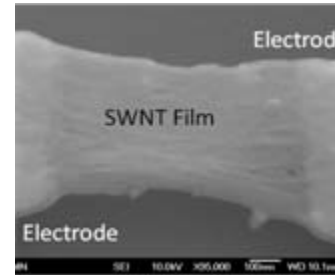
Miao Lu ¹, MinWoo Jang ², Steven Campbell (PI) ² and Tianhong Cui (PI) ¹

¹Mechanical Engineering, ²Electrical and Computer Engineering, University of Minnesota

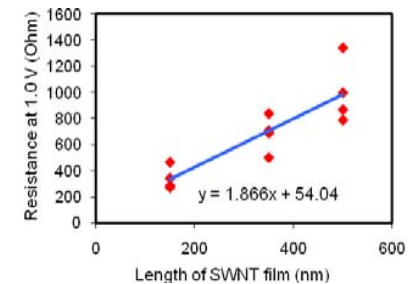
- SWNT membrane was Layer-by-layer self assembled with controlled dielectrophoretic process
- Suspending SWNT membrane was realized by SWNT oriented deposition



- The above SWNT membrane was patterned by Focus Ion Beam or lithography and oxygen dry etching to be submicron beams



- The resistivity of the SWNT film was measured to be 7.68 mΩ·cm, and the contact resistance in unit area was 0.459Ω / μm²



- The SWNT membrane has potential applications to NEMS, nanoelectronics and biosensors

