

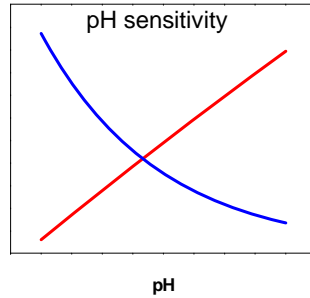
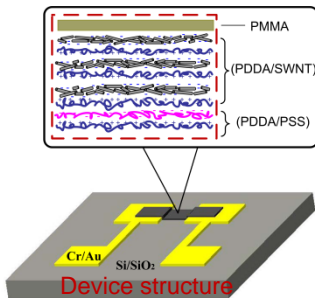
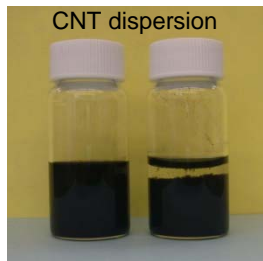
Self-Assembled Nanomaterials Biosensors

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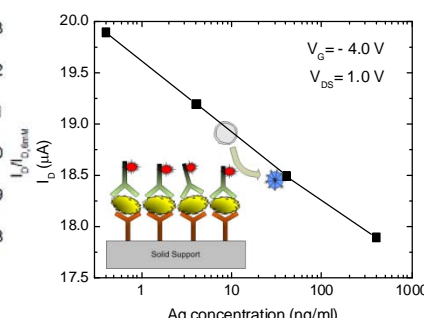
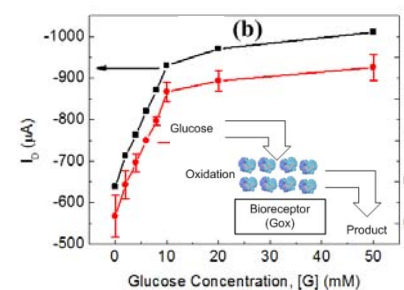
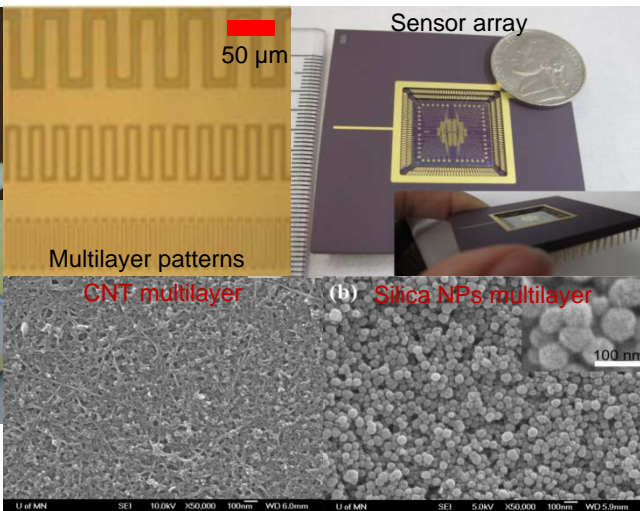
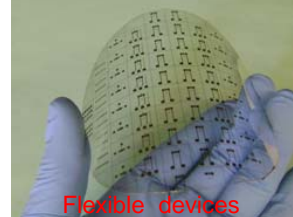
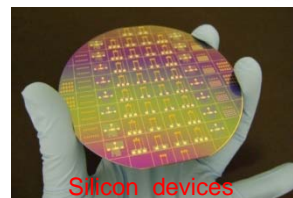
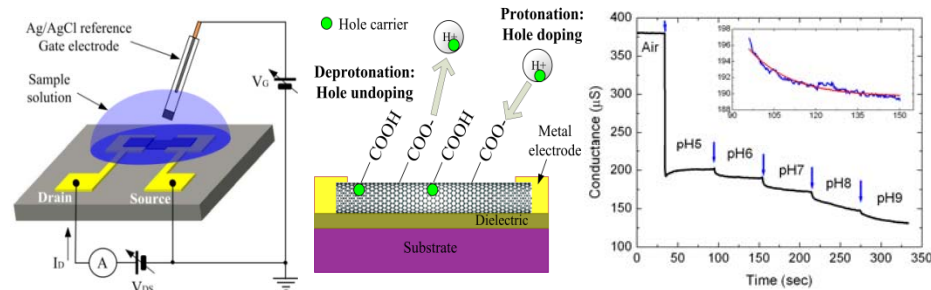
DESCRIPTION OF WORK

- ◆ Top-down microfabrication + bottom-up layer-by-layer self-assembly
- ◆ Low power consumption
- ◆ Miniaturization
- ◆ Nanomaterial transducers: electrochemical properties of nanomaterials



MAJOR OBSERVATIONS

- ◆ The nanomaterial thin-film has excellent electrochemical properties to detect analyte concentration
- ◆ pH, glucose, and immunosensing applications are demonstrated



Publications

- ◆ D. Lee, T. Cui, J. Vac. Sci. Technol. B. 27, pp. 842-848, 2009.
- ◆ D. Lee, T. Cui, IEEE Sensors J. 9, pp 449-456, 2009
- ◆ D. Lee, T. Cui, Biosens. Bioelectron., *inpress* (doi:10.1016/j.bios.2010.03.003)
- ◆ D. Lee, J. Ondrake, S. M. Goyal, T. Cui, "An Ion-Sensitive Conductometric Semiconducting Nanoparticles Enzymatic Biosensor Array," manuscript in preparation.