# Novel Nano and Molecular Electronics

**Description:**

The technology allows users to obtain electrical measurements of small devices and minute amounts of materials. These devices could include magnetoelectronic/spintronic devices and high-impedance devices, for instance a metallic single-walled carbon-nanotube (mSWNT), a SWNT transistor, a minimum-size deep-submicron metal-oxide semiconductor (MOS) field-effect-transistor (FET), a sub-micron MOS FET that is operating in sub-threshold region, and a molecular device. Other materials of measurement interest may include on-chip biofluids, chemicals, and thin films.

**Applications**

- Micro/Nano electronics characterization
- Biosensing applications
- Diagnostic devices

**Benefits**

- Increased measurement precision capability
- Potential earlier detection
- Less material needed for measurement

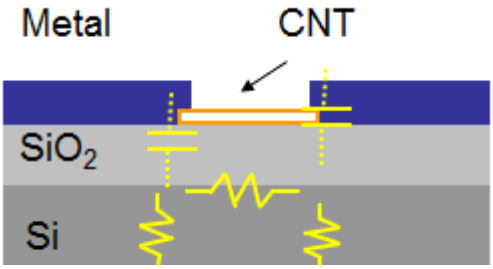


**Figure 1: Cross section of cNT microwave characterization set-up.**

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**Licensing Status:** Available for licensing
**Additional Terms:** Micro-electronics, Nano-electronics, Biosensing, Diagnostic, Carbon nanotubes
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