

Abstract Submitted
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Photoconductivity measurements of single-walled carbon nanotube field effect transistors¹ T. MURAI, S. YASUKOCHI, S. MORITSUBO, T. SHIMADA, S. CHIASHI, Y. MURAKAMI², S. MARUYAMA, Y.K. KATO, The University of Tokyo — Photoconductivity measurements are performed on carbon nanotube field effect transistors. Carbon nanotubes are grown on SiO₂/Si substrate by patterned chemical vapor deposition using ethanol as carbon source. Next, electron beam lithography, metal deposition, and liftoff processes are performed to form source and drain electrodes. The Si substrate is used as a back-gate in these devices. Wavelength tunable Ti:sapphire laser is focused onto the sample with an objective lens, and the laser spot is scanned with a steering mirror. A lock-in amplifier is used to detect the photoconductivity signal of carbon nanotube field effect transistors.

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