

## Highly Enhanced SWNT-FET Device Performance by fabricating nanoscale gold dot pattern within channel

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Single-walled carbon nanotubes(SWNTs) are nowadays one of the most investigated materials, research progress of SWNTs has been made in understanding their electronic structure and its influence on their electronic transport properties. Orientation and control of SWNT bundles for application in sensing devices is thought to have excellent intrinsic electric property, reproducibility and detecting stability. To succeed this research, nanopatterning technology and electrophoresis method of SWNTs are required. First of all, Making the gold dot patterned Si/SiO<sub>2</sub> substrate is needed. And then, deposit the gold electrodes on each sides of this substrate. After that, by using electrophoresis method, SWNTs can be aligned between gold dots.

We will be able to apply other nano materials as well as carbon nanotube and give a chance to improve the performance of sensing device.