

Non-covalent Sidewall Functionalization of SWNTs for Biosensor

신선힘라, 백연경, 정희태*

KAIST

(heetae@kaist.ac.kr*)

In recent years, there has been an uprising development activities related to the detection of various chemical and biological species. In particular, single-walled carbon nanotubes (SWNTs) attract great attention in this field because they have many advantages such as biocompatibility, size compatibility and sensitivity. The fact that all atoms are located at the surface makes SWNTs easy to modify the surface chemistry.

In this study, we have developed non-covalent sidewall functionalization of SWNTs in order to immobilize DNA molecules for biosensor. By introducing linker molecules, we can offer various functional groups on SWNTs surface. To confirm immobilization of biomolecules, fluorescence detection method is performed.