

FREE-STANDING ELECTROSTATICALLY-DOPED CARBON NANOTUBE DEVICE AND METHOD FOR MAKING SAME

ABSTRACT

A method and associated structure for forming a free-standing electrostatically-doped carbon nanotube device is described. The method includes providing a carbon nanotube on a substrate in such a way as to have a free-standing portion. One way of forming a free-standing portion of the carbon nanotube is to remove a portion of the substrate. Another described way of forming a free-standing portion of the carbon nanotube is to dispose a pair of metal electrodes on a first substrate portion, removing portions of the first substrate portion adjacent to the metal electrodes, and conformally disposing a second substrate portion on the first substrate portion to form a trench.

Fig. 1