

## CNT를 이용한 Supercapacitor의 충·방전 특성

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### The Effect of CNT Electrode on the Charging and Discharging Characteristics of Supercapacitor

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**Abstract :** Two sorts of electrode composed of Sulphur/CNT/PVDF and Silver/CNT/PVDF were prepared by in situ chemical method and their electrochemical performance were evaluated by using cyclic voltammetry, impedance measurement and constant-current charge/discharge cycling technique. Also, composite electrodes were characterized by FE-SEM and BET. Raw materials such as CNT/Silver and CNT/Sulfur were mixed in ethanol, dried. These mixed materials were heated at 900 and 320oC for 2hr, respectively in order to enhance contact among CNT electrodes. Electric double layer capacitor cells were fabricated using these mixed powder with polymer of PVDF. For the charging and discharging characteristics measured at scan rate of 1 mA/s, Supercapacitor of Sulphur-CNT-PVDF electrode showed a better performance than that of Ag-CNT-PVDF, which seems to be related with lower contact resistance of Sulphur-CNT-PVDF electrode.

**Key Words :** CNT, Supercapacitor, Charging, Discharging