

Turning refuse PET into CNT forests

오유진, 이재근, 이건홍*
포항공과대학교
(ce20047@postech.ac.kr*)

We report a novel method for the synthesis of vertically aligned carbon nanotubes (CNTs) using waste polyethylene terephthalate (PET) bottles, a type of refuse plastic, by microwave plasma enhanced chemical vapor deposition. We achieved that refuse PET bottles were converted to CNTs, a high value product, via the proposed method. The growth rate of CNT forests was approximately 2.5 μm per minute. Transmission electron microscopy images indicated that the diameters of the CNTs were 20–30 nm on average. Wall graphitization of the CNTs was slightly higher than that of commercially available CNTs.