전기방사법에 의한 TiO_2 제조 및 전기화학적 특성

조중상, 강윤찬†
고려대학교
(yckang@korea.ac.kr†)

Nanostructured titanium dioxide (TiO_2) materials have been widely studied for various applications, such as photocatalysis, sensors, solar cells, and energy storage.[1-2] TiO_2 materials have also been studied as anode materials for lithium-ion batteries (LIBs) because of their low density, high abundance, nontoxicity, and structural integrity during repeated cycling. Recently, fiber-in-tube and tube-in-tube materials prepared by the electrospinning process have been studied as electrode materials for energy storage. In this study, phase-pure anatase TiO_2 nanofibers with a fiber-in-tube structure were prepared using a general electrospinning process. Furthermore, the electrochemical properties of the anatase TiO_2 nanofibers with a fiber in tube were investigated.