

양극산화법으로 제작된 나노 다공성 주석 산화물 박막

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Nano Porous Tin Oxide Film Fabricated by Anodization

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Abstract : SnO_2 has a high potential for electric and electronic applications. We have anodized pure tin metal and nano porous tin oxide film was obtained on pure Sn. Nano porous tin oxide were grown by anodization in nonaqueous-base electrolytes at different potentials between 5 V and 100 V. Pore size of ~100 nm was observed by FE-SEM. Pore sizes as a function of applied voltage and anodizing time were characterized. We obtained nano porous tin oxide film having an uniform pore size at low temperature. High specific surface area of SnO_2 will be very useful for gas sensor, lithium battery, and dye sensitized solar cell.

Key Words : SnO_2 , Nano porous, Anodization, Oxalic acid

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