

**AimSizer/LNO.0059**

**Study on Preparation of SnO<sub>2</sub>-SiO<sub>2</sub> Nano-particles and Its Anti-static Property**

**Abstract:** The nano-meter SnO<sub>2</sub> core-shell particles were synthesized by hydrolysis method, using (C<sub>2</sub>H<sub>5</sub>)<sub>4</sub>SiO<sub>4</sub> and SnCl<sub>4</sub> • 5H<sub>2</sub>O as raw materials. The surface texture of nano-meter SnO<sub>2</sub>-SiO<sub>2</sub> particles was observed by SEM, and its structure was characterized with IR and XPS. The influence of different molar rate of SnO<sub>2</sub> and SiO<sub>2</sub> on electric conduction rate of the film was studied. The results indicated that the gelatin film mixed by the SnO<sub>2</sub>-SiO<sub>2</sub> nano-meter core-shell particles had good anti-static property. The electric conduction rate and optical density of the film both increased along with the mass fraction of the core-shell nano-particles.

**Key words:** nano-meter particles; core-shell structure; gelatin film; anti-static property; laser particle size analyzer; particle size analyzer; aimsizer; as-2011 micron laser particle size analyzer; as-2012 submicron laser particle size analyzer

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