안티몬 주석 산화물 (ATO) 나노입자의 제조 및 전도성 평가

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Indium tin oxide (ITO) is high conductive and transparent to visible light. However, It was involving a high cost. Instead of ITO material, metal(Zn, Ti, Cd)-incorporated ATO conductor with lower cost were introduced in recent. On the other hand, conductive material thin films have been fabricated by various methods. Compared with other techniques, in particular, the sol-gel method presents some advantages such as possibility of depositing on complex shaped substrates, easier control of the doping level, rather inexpensive starting materials and simple equipment. But it has also some disadvantages such as necessity of annealing treatment at high temperature, unstable attachment on substrate, and non-uniformed particle size distribution. Therefore, to overcome commended upon problems in sol-gel method, we have firstly introduced a new preparation method be called solvothermal method to attain ATO nano-sized particle in this study.
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