# Photovoltaic Properties of ZnO Nanostructured Electrode for Effective Dye Sensitized Solar Cells

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Nanostructured ZnO-based dye-sensitized solar cells (DSSCs) have attracted considerable attentions in the recent years due to the similarity of the energy band gap and the electron-injection process of ZnO to that of TiO2. In addition, the electron mobility and the electron transfer process from the excited dyes are similar and the electron injection efficiency of ZnO is almost equivalent to that of TiO2. Recent studies on ZnO-based DSSCs have mostly focused on the improvement of electron transport and reducing the recombination rate by either a series of hopping events between trap states on neighboring particles or diffusive transport within extended states slowed down by trapping/detrapping events. Therefore, one way of achieving higher photovoltaic performance is to use one-dimension nanostructures. In this paper, we prepare the DSSCs with the ZnO electrode using the chemical bath deposition (CBD) method under low temperature condition (＜100℃). For achieving low temperature growth of the ZnO nanostructures on the substrate, a simple two-step method is developed and optimized in the present work.