

Recent progresses in solar cells: Insight into hollow micro/nano–structures

Abstract

The performance of third-generation solar cells is primarily a function of greater light harvesting, fast and facile charge transport, and limited charge recombination. Hollow micro/nano–structures have attracted considerable attention from the scientific community in recent decades due to their excellent multi–reflection and efficient scattering of incident sunlight, easy accessibility of inner spaces to electrolytes through meso/micro–channels in shells, and fast re–generation of reduced/oxidized species at the interface of sensitizer/electrolyte and electrolyte/counter electrode. This review aims to elaborate the application of hollow materials in photovoltaic cells.