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Title: Template-free synthesis of hierarchical TiO₂ hollow microspheres as scattering layer for dye-sensitized solar cells

Author: Yichuan Rui Linlin Wang Jiachang Zhao Hongzhi Wang Yaogang Li Qinghong Zhang Jingli Xu



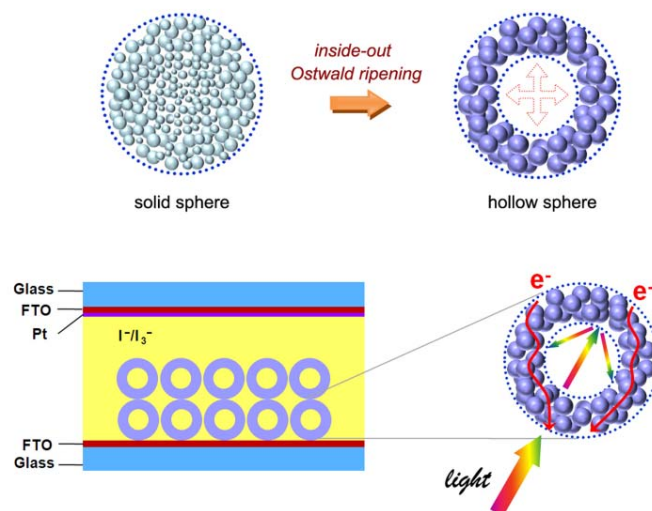
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Well-crystallized and hierarchical TiO_2 hollow microspheres derived from a template-free and green synthetic route were introduced to DSSCs, leading to a high efficiency of 7.84%.

Highlights

- Hierarchical TiO_2 hollow microspheres were synthesized via a template-free route.
- The formation mechanism of inside-out Ostwald ripening was verified by using SEM/TEM.
- An efficiency of 7.84 % was achieved by using the hollow spheres as scattering layer.
- Improved efficiency was attributed to the enhanced dye-loading and light scattering.

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