Synthesis and characterization of ZnO sea urchin by oxidation of Zn hollow microspheres

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ZnO nanostructures are the promising materials due to characteristics of their unique properties in various applications such as light emitting diodes, chemical sensors, biosensors and others. In particularly, hollow nanostructures have attracted much interest due to higher surface area, different structural and optical properties. In this work, we have successfully synthesized ZnO sea urchin nanostructures using two-step thermal evaporation method. In addition, structural, compositional, and optical properties of the synthesized nanostructures were investigated. The ZnO sea urchin nanostructures will be envisioned to have broad applications such as high performance catalysts and nanodevices.