Preparation of palladium hollow nano-sphere by using cobalt nanoparticle as a template

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Great attention has been paid for the preparation of nanostructured materials due to remarkable physico-chemical properties and versatile application fields of these materials. Nano-materials have been applied to various fields of science and engineering such as catalysis, adsorption and electrochemistry, in which the surface of material plays important role in the performance of corresponding material.
In this work, palladium hollow nano-sphere was prepared by using cobalt nanoparticle as a template. Prepared Pd hollow nano-sphere was characterized by XRD, TEM and Cyclic voltammetry. Compared to Pd nanoparticle, Pd hollow nano-sphere showed higher specific surface area, resulting in better performance in the electro-oxidation of formic acid.