Effects of Nano-second Laser Annealing on Carbon Dioxide Reduction Reaction Performances of $Cu_{core}@NiPd_{alloy\text{-}shell}$ Nanoparticles

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Abstract

Carbon nanotubes (CNTs) supported ternary metallic nanocatalyst (NC) is synthesized by using a wet chemical reduction method with the configuration of Cu-core and Pd-shell mixing with different proportion Ni. To uniform the catalyst surface and decrease the surface energy, we used the laser annealing technology to reduce the defects on the surface. In this experiment, we would like to find out an optimized parameter for laser annealing to compare the difference between as-prepared samples and after laser annealing.