

Aqua-phase synthesis of Pd/AuPt nanoparticles in mild condition and their FAO catalytic reaction

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Pd/AuPt was synthesized at room temperature and has high uniformity. The AuPt shell was placed on the Pd core using the homogeneous properties of the Pd cube and the high FAO catalytic properties of Pt and the stability of Au. Due to the uniform Pd cube Au and Pt also loaded uniformly. The Pd/AuPt particles on the corner[111] with disordered alloy showed higher FAO catalytic performance as Au and Pt decreased, fixed as ratio of Au and Pt 2:1. When Pd/AuPt current value for FAO has a value of 7mA/cm² at 5:2.5% and has a value of 15mA/cm² at 2:1%, When the relative ratio was fixed at 2:1 and the amount was further reduced to 1:0.5%, the performance was as high as 24 mA/cm². In a result of our experiments FAO catalytic performance of 1:0.5% is four times better than 5:2.5%.