

CoZn-ZIFs derived Co-NC hollow-sphere as an electrocatalyst for ORR activity

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ZIF is a sub-class of metal-organic frameworks (MOFs) and it have drawn attention due to its promising applications. To maximize its performance on various areas, hollow structure has notable advantage for the mass transfer. Conventionally, ZIF hollow-spheres are synthesized from core-shell etching, which requires multiple steps in small-scale production. In this work, Co-NC hollow-spheres were prepared in a facile and scalable method. Co/ZnO hollow-spheres were prepared first by ultrasonic spray pyrolysis, having big advantage of mass production. Then Co/ZnO spheres were converted into CoZn- ZIFs hollow-sphere in 2-methylimidazole solution, followed by carbonization to Co-NC. The product Co-NC electrocatalyst was tested for ORR activity.