

## **Facile Synthesis of Sintering-resistant Zeolite Confined Ni Catalyst for Efficient CO<sub>x</sub>-free Hydrogen Generation from Ammonia Decomposition**

Zhijian Wan<sup>a</sup>, Youkun Tao<sup>a,b,\*</sup>, Hengzhi You<sup>a</sup>, Jing Shao<sup>c</sup>

<sup>a</sup> School of Science, Harbin Institute of Technology, Shenzhen 518055, P.R. China

<sup>b</sup> Department of Mechanical and Energy Engineering, Academy for Advanced Interdisciplinary Studies, Southern University of Science and Technology, Shenzhen 518055, China

<sup>c</sup> College of Chemistry and Environmental Engineering, Shenzhen University, Shenzhen 518060, P.R. China

\* Corresponding author (Email: [taoyoukun@hit.edu.cn](mailto:taoyoukun@hit.edu.cn))

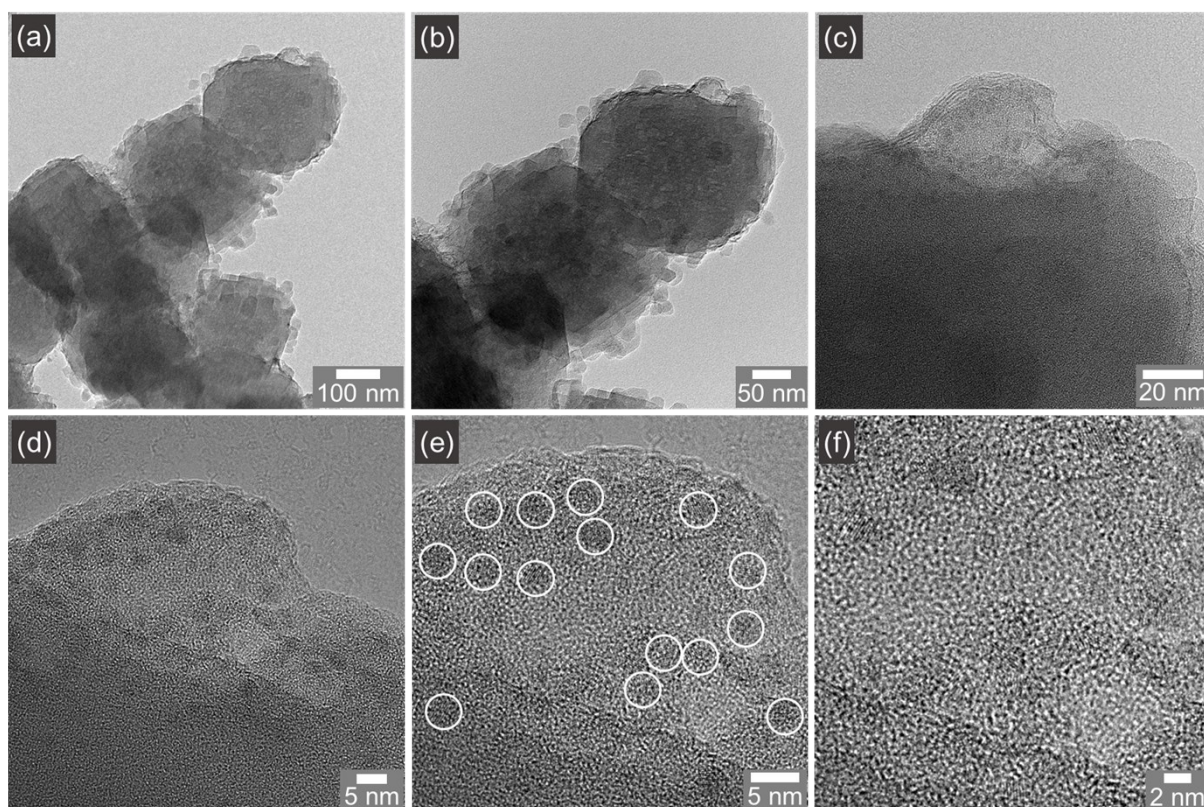


Figure S1. TEM images of 5%Ni@ZSM-5 at different magnifications (a-f). Owing to the encapsulation of Ni particles within the zeolite crystals, the Ni particles were hardly observed. Only those at the edges of the crystals could be sparingly seen as highlighted in the white circle (e).