Electronic Supplementary Information (ESI)

Porosity effect on ZrO_2 hollow shell and hydrothermal stability for catalytic steam reforming of methane

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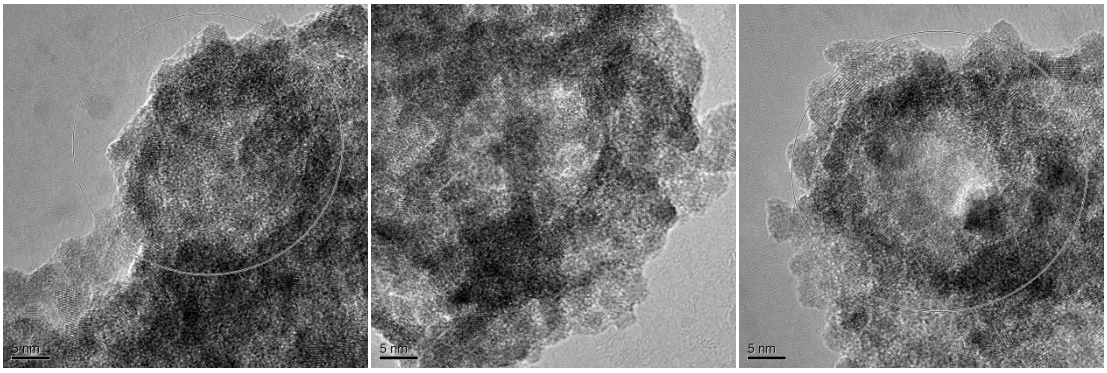
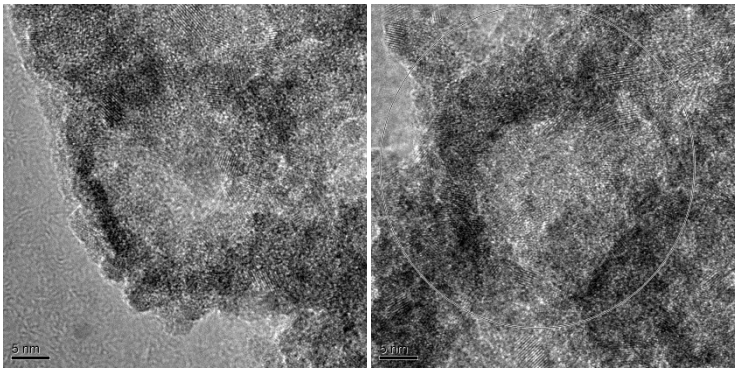


(a) (b) (c)



(d) (e)

Fig. S1 HRTEM images of BrNi-0.0 (a), BrNi-1.6 (b), BrNi-2.4 (c), BrNi-3.2 (d), and BrNi-4.8 (e) before steam reforming test.

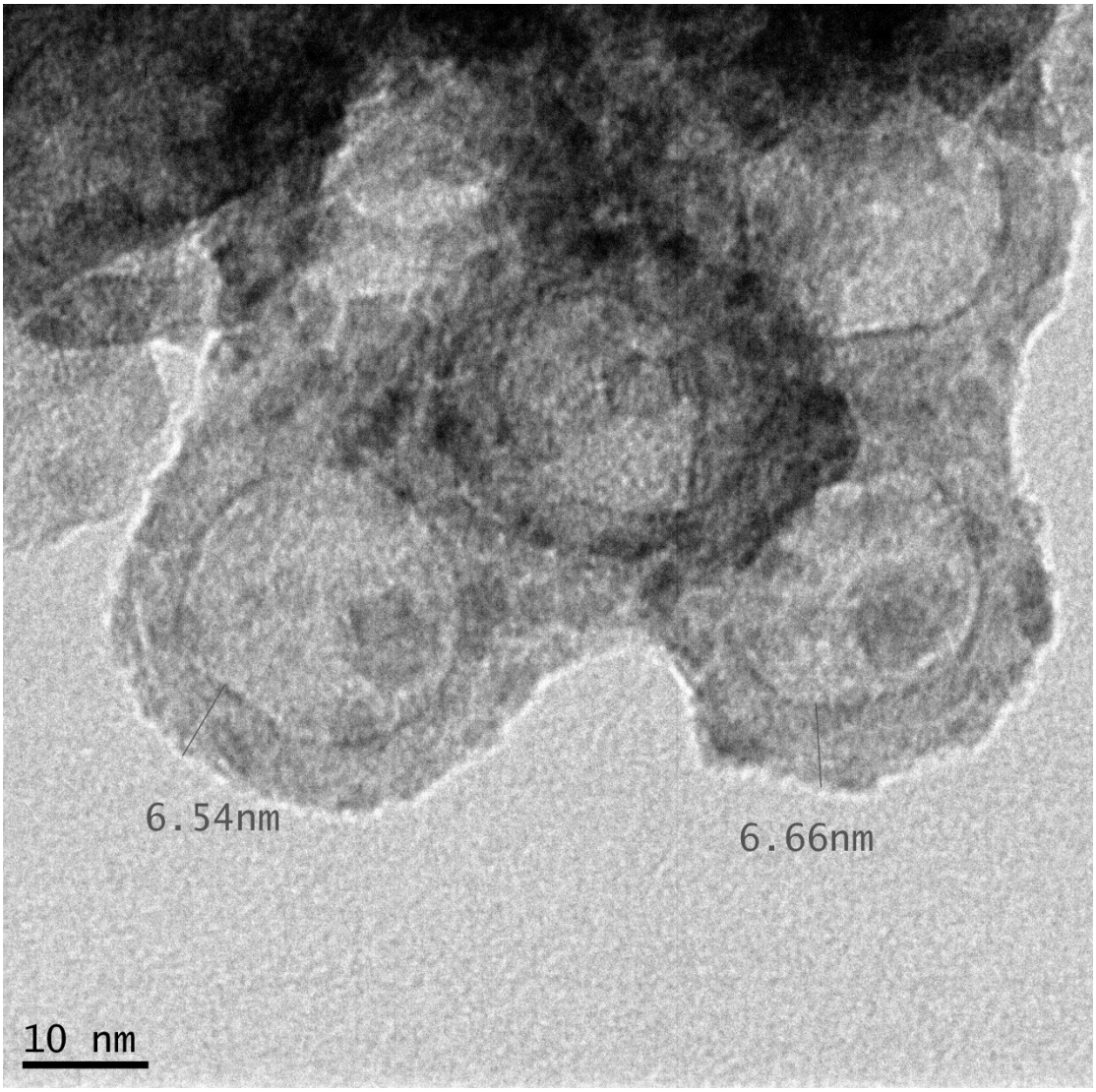


Fig. S2 TEM micrograph of $Ni@SiO_2@ZrO_2$ after 750^oC calcinations and to display the thickness of zirconia hollow shell.