



**Figure S1:** Average size distribution: Ni-nR CeO<sub>2</sub> oxide width (a), Ni-nR CeO<sub>2</sub> oxide length (b), Ni-nR Ni oxide particles (c), oxide width of CeO<sub>2</sub> in the Ni-nC (d), Ni oxide particles in the Ni-nC (e).