

Single-phase nickel-doped ceria cathode with *in-situ* grown nickel nanocatalyst for direct high-temperature carbon dioxide electrolysis

Wentao Qi^a, Kui Xie^{a, b *}, Min Liu^a, Guojian Wu^a, Yan Wang^a, Yong Zhang^a, Yucheng Wu^{a, b *}

^aKey Laboratory of Advanced Functional Materials and Devices of Anhui Province & School of Materials Science and Engineering, Hefei University of Technology, No.193 Tunxi Road, Hefei, Anhui 230009, China. Email: xiekui@hfut.edu.cn.

^bHefei National Laboratory for Physical Sciences at the Microscale & Department of Chemistry, University of Science and Technology of China, No.96 Jinzhai Road, Hefei, Anhui 230026, China

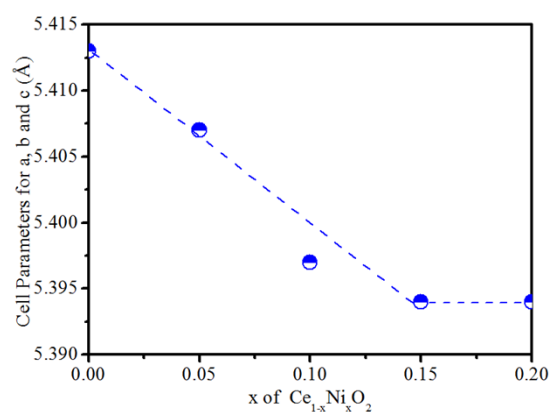


Fig. S1: The cell parameters of the oxidized Ce_{1-x}Ni_xO₂ powder samples with x=0, 0.05, 0.10, 0.15 and 0.20.

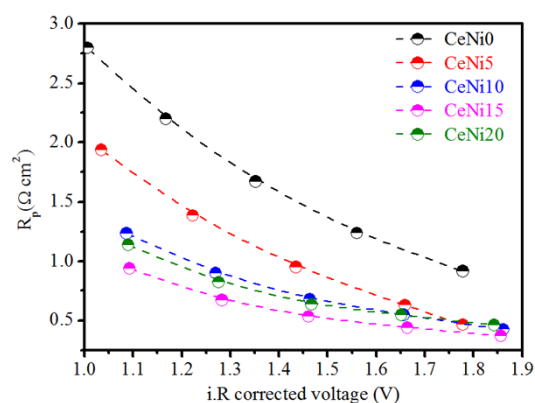


Fig. S2: R_p versus i.R corrected voltage of the electrolyzers tested in pure carbon dioxide at 800 °C.