Carbon coking behaviour over anodes subjected to different conditions

Supplementary Figure. 5 Optical images of fuel cell anodes after exposure to various gas mixtures for selected periods of time at ~ 600 °C (cell temperature), (A) Ru+CeO₂ catalyst layer coated anode after pre-treated at ~580 °C for more than 200 h under a gas composition of 40 ml.min⁻¹ C₃H₈+90 ml.min⁻¹ O₂+360 ml.min⁻¹ He (all at STP), (B) Ni+SDC anode after exposed to the same gas mixture at ~600 °C for 24 h, (C) Ni+SDC anode after exposure to pure propane for several minutes at 600 °C. The oxygen in the gas mixture together with the Ru+CeO₂ successfully suppressed carbon coking on the Ru+CeO₂ treated anode.