Incorporation of Pd catalyst at fuel electrode of thin-film-based solid oxide cell by multi-layer deposition and its impact on low-temperature co-electrolysis

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Fig. S1. Schematic of Co-EC testing system.40 (Reprinted by permission from J. Power Sources, 280, 630. Copyright (2015) Elsevier).
**Fig. S2.** I-V-P curves at 600 ºC in fuel cell mode of TF-SOCs with C3 and C4 FEFL configurations

**Fig. S3.** (a) A SAED pattern and (b) HR-TEM image showing the lattice images of the Pd-Ni alloy
Fig. S4. Nyquist plots of 2 cells measured during LT-Co-EC testing at OCV at (a) 600 °C, (b) 550 °C and (c) 500 °C
Fig. S5. Morphology of (a) Pd-cell and (b) Ref-cell in fuel electrode functional layer (FEFL).\textsuperscript{49} (Fig. S5. (b) is reproduced from permission of Electrochem. Solid-State Lett, 14, B26. Copyright (2010) The Electrochemical Society.)