

Fig. S1: Graphite based anode single-serpentine flow-field plate. Dimensions - 80 mm x 80 mm x 8 mm.

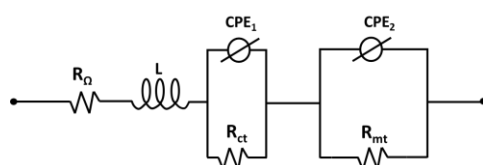


Fig. S2: Equivalent circuit used for the EIS measurements of the PEFC.  $L$  – the pseudo inductance,  $R_{\Omega}$  – Ohmic resistance (HFR),  $R_{ct}$  – charge transfer resistance,  $R_{mt}$  – mass transfer resistance,  $CPE_1$  – constant phase element 1 and  $CPE_2$  – constant phase element 2.

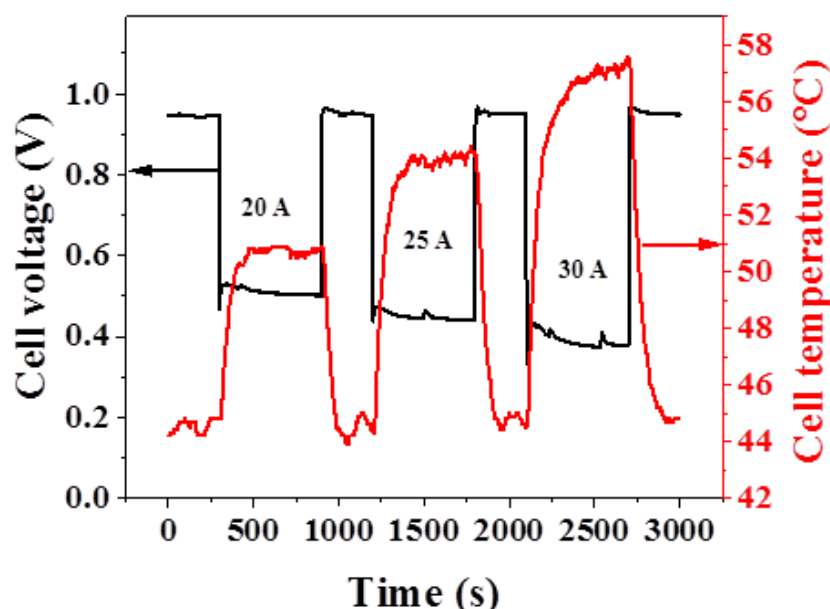


Figure S31: Cell temperatures measured during galvanostatic tests at 20 A ( $0.8 \text{ A cm}^{-2}$ ), 25 A ( $1 \text{ A cm}^{-2}$ ), and 30 A ( $1.2 \text{ A cm}^{-2}$ ).