



## Supplementary Materials: Electrodeposition of Ni-W/CNT Composite Plating and Its Potential as Coating for PEMFC Bipolar Plate

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**Figure S1.** Photographs and scanning electron microscopy (SEM) images for Ni-W/carbon nanotube (CNT) 1 and 5 g/L composite plating.



	R <sub>p</sub>	R <sub>ct</sub>	$\frac{R_{total}}{(R_p + R_{ct})}$
Ni	-	698.7	698.7
Ni-W	208.5	492.3	700.8
Ni-W/CNT 10 g/L	241	1016	1257

**Figure S2.** Electrochemical impedance measurement results for Ni, Ni-W and Ni-W/CNT 10 g/L composite plating: (**a**) Nyquist plots with equivalent circuits used for data fitting; (**b**) fitted resistance values. (Scan range: 10 kHz to 10 mHz, amplitude: AC 10 mV, test solution: 0.5M H<sub>2</sub>SO<sub>4</sub> and data fitting: Bio-Logic EC-LAB software was used).



**Figure S3.** Potentiodynamic polarization measurement results for Ni-W/CNT composite platings prepared at various CNT concentration in plating bath: (**a**) polarization curves; (**b**) summarized  $E_{corr}$  and  $I_{corr}$  as CNT concentration in bath.

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