Supporting Information

Mechanistic Effects of Blending Formic Acid with Ethanol on Pd activity Towards Formic Acid Oxidation in Acidic Media

Taher Al Najjar, Nashaat Ahmed, Ehab N. ElSawy*

Department of Chemistry, School of Science and Engineering, The American University in Cairo, Cairo, Egypt 11835

*Corresponding author: Dr. Ehab N El Sawy (ehab.elsawy@aucegypt.edu)

Figure S1: CV curves for FA-0.5 fuel blends with different ethanol concentrations
Figure S2: CV curves for FA-1 fuel blends with different ethanol concentrations

Figure S3: CV curves for FA-2 fuel blends with different ethanol concentrations
Fig S4: (a) Curve deconvolution of 4M formic acid CV, (b) 1st derivative for the deconvoluted peaks and the cumulative curve fit
Figure S5: A comparison between the 1st and the 100th CV curves for Pd/C catalyst in 0.1 M H₂SO₄ using (a) 0.39, (b) 0.05, and (c) -0.3 V vs. MSE as the upper potential.
Figure S6: Chronopotentiometry curves of Pd/C (a) at 50 A/g_{Pd} measured in 0.1 M H_{2}SO_{4} + 4 M FA in presence and absence of different concentrations of EtOH.