Electronic Supplementary Material (ESI) for New Journal of Chemistry. This journal is © The Royal Society of Chemistry and the Centre National de la Recherche Scientifique 2020

Electronic Supplementary Information

Deep Eutectic Solvent Stabilised Co-P film for Electrocatalytic Oxidation of 5-hydroxymethylfurfural into 2,5-furandicarboxylic Acid

Myung Jong Kang,^a Hye Jin Yu,^{a,b} Hyun Sung Kim^{b,*} and Hyun Gil Cha^{a,*}

^a Center for Bio-based chemistry, Korea Research Institute of Chemical Technology (KRICT), Ulsan 44429, Republic of Korea

^b Department of Chemistry, Pukyong National University, Busan 48513, Republic of Korea

hgcha@krict.re.kr



Fig. S1. Cyclic voltammetry (CV) curves during preparation of (a) Co-P_DES and (b) Co-P_H₂O electrodes



Fig. S2. LSVs of Cu foam, Co metal and Co-P deposited on Cu foam with various concentration of P precursor in 0.5 M NaHCO₃ electrolyte (solid line: without HMF, dash line: with 5 mM of HMF)



Fig. S3. LSV curves of Co-P_DES within different cycles during potentiodynamic deposition in 0.5 M NaHCO₃ electrolyte (solid line: without HMF, dash line: with 5 mM of HMF)



Fig. S4. J-t curves during electrochemical HMF oxidation reaction by (a) Co-P_H₂O and (b) Co-P_DES electrodes.



Fig. S5. ¹H proton NMR spectrum of purified FDCA.