

Supplementary Information

Co₂P₂O₇ Microplate/Bacterial Cellulose–Derived Carbon Nanofiber Composites with Enhanced Electrochemical Performance

Likkhasit Wannasen ¹, Wiyada Mongkolthanaruk ², Ekaphan Swatsitang ¹, Prasert Pavasant ³ and Supree Pinitsoontorn ^{1,*}

¹ Institute of Nanomaterials Research and Innovation for Energy (IN-RIE), Department of Physics, Faculty of Science, Khon Kaen University, Khon Kaen 40002, Thailand; likkhasit123@hotmail.co.th (L.W.); ekaphan@kku.ac.th (E.S.)

² Department of Microbiology, Faculty of Science, Khon Kaen University, Khon Kaen 40002, Thailand; wiymon@kku.ac.th

³ Thai Roong Ruang Sugar Group, Bangkok 10120, Thailand; supersert@gmail.com

* Correspondence: psupree@kku.ac.th; Tel.: +66-43-203-166; Fax: +66-43-202-374

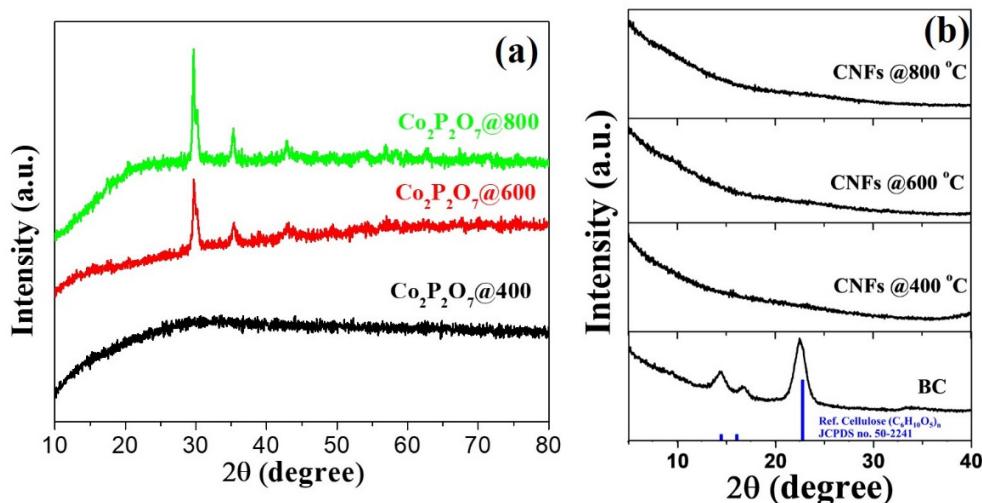


Figure S1 XRD patterns of (a) $\text{Co}_2\text{P}_2\text{O}_7@400$, $\text{Co}_2\text{P}_2\text{O}_7@600$ and $\text{Co}_2\text{P}_2\text{O}_7@800$ and (b) BC, CNFs@400, CNFs@600 and CNFs@800 with compared to the references for cellulose.

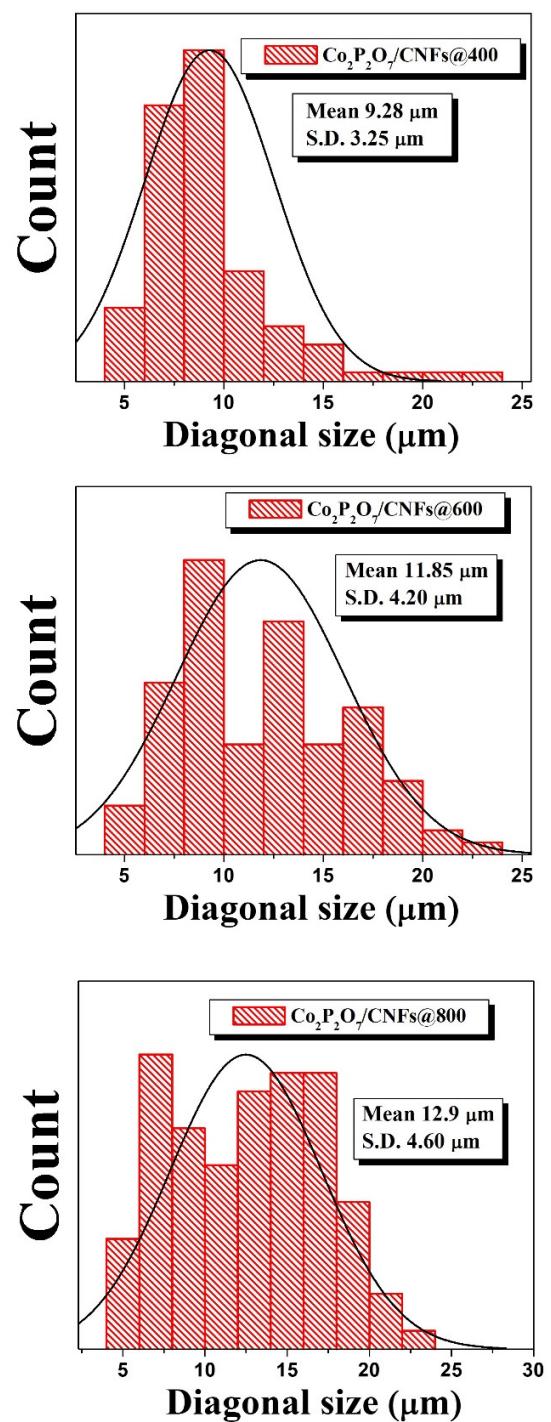
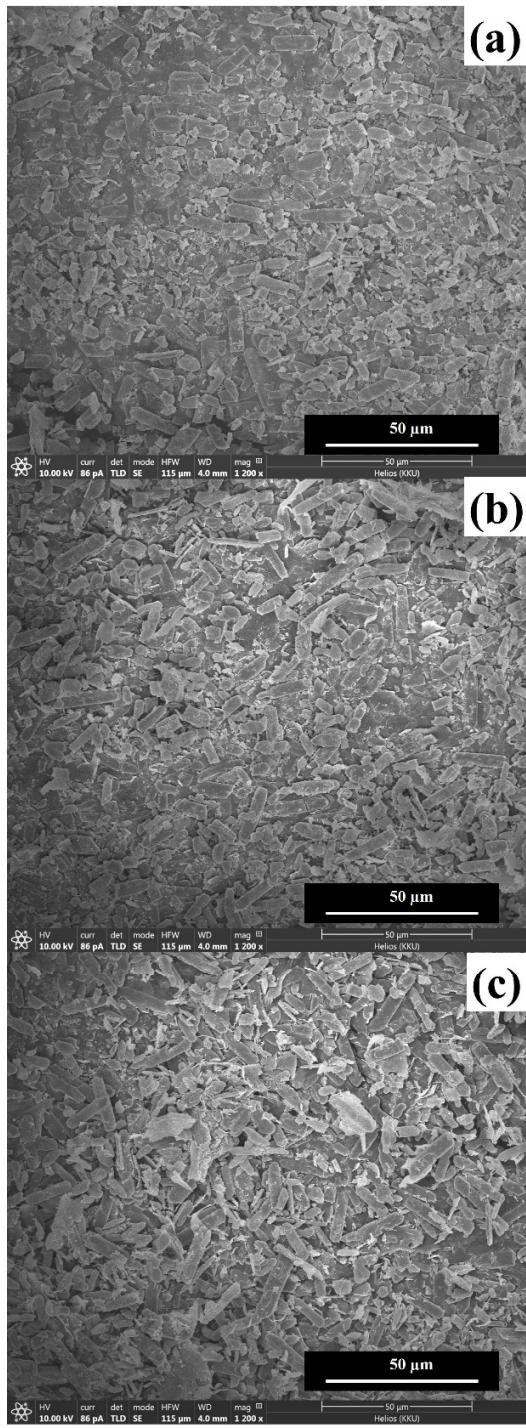


Figure S2 FE-SEM images with histograms of diagonal size distribution of **(a)** $\text{Co}_2\text{P}_2\text{O}_7/\text{CNFs}@400$, **(b)** $\text{Co}_2\text{P}_2\text{O}_7/\text{CNFs}@600$ and **(c)** $\text{Co}_2\text{P}_2\text{O}_7/\text{CNFs}@800$.

Table S1 Values of fitting parameters obtained from the EIS analysis.

Parameters	Co ₂ P ₂ O ₇ /CNFs@400	Co ₂ P ₂ O ₇ /CNFs@600	Co ₂ P ₂ O ₇ /CNFs@800
R_s (Ω)	1.6378±0.67%	1.4536± 0.69%	1.274±0.56%
CPE1-T	0.064873±2.38%	0.16174±1.28%	0.18619±0.90%
CPE1-P	0.67669±0.85%	0.52697±0.85%	0.61347±0.53%
R_{ct} (Ω)	7.5071±3.96%	6.6023±4.27%	4.3573±1.98%
Wo1-R	15.174±1.83%	14.184±2.38%	13.986±1.60%
Wo1-T	2.7811±4.10%	2.6875±6.75%	2.5714±1.41%
Wo1-P	0.45138±1.20%	0.55703±1.23%	0.56201±0.67%