**Supporting information**

**Vertical copper oxide nanowire arrays attached three-dimensional macroporous framework as a self-supported sensor for sensitive hydrogen peroxide detection**

D.M. Nguyena#, H.N. Bichb#, P.D. Hai Anhc,d, P. H. Ai-Lee, Q. B. Buif\*

aInstitute of Research and Development, Duy Tan University, Da Nang 550000, Viet Nam

bCenter of Excellence for Green Energy and Environmental Nanomaterials, Nguyen Tat Thanh University, Ho Chi Minh City, Viet Nam

cAutomotive Engineering and Technology, Sao Do University, Hai Duong, Viet Nam

dSYMME, Université Savoie Mont Blanc, FR-74000, Annecy, France

eFaculty of Chemical Engineering- Industrial University of Ho Chi Minh City, Ho Chi Minh City, Viet Nam

fSustainable Developments in Civil Engineering Research Group, Faculty of Civil Engineering, Ton Duc Thang University, Ho Chi Minh City, Viet Nam

#These authors have equal contribution.

\*Corresponding author. Tel.: +84 909-358-935. Fax: +84 2837-755-055.

E-mail address: [buiquocbao@tdtu.edu.vn](mailto:buiquocbao@tdtu.edu.vn) (Q. B. Bui)



**Figure S1.** Effect of applied potential for amperometry sensing application of the CuO NWs/3D-Cu foam with the injection of 400 µM H2O2.



**Figure S2.** Effect of pH on amperometric sensing application of the CuO NWs/3D-Cu foam with the injection of 400 µM H2O2.



**Figure S3.** (A) Amperometric measurement of the CuOH NWs/3D-Cu foam in 0.1 M PBS solution upon successive injection of different H2O2 concentrations; (B) The fitting curve based on amperometric current response *vs*. H2O2 concentration.