

NOVEMBER 21st – 23rd
PHU QUOC, VIETNAM

THE 6th INTERNATIONAL SYMPOSIUM ON
FRONTIERS IN MATERIALS SCIENCE

FMS
2022



ABSTRACT BOOK

www.fms.uet.vnu.edu.vn



EE-P23 (Poster)

Preparation and characteristics of CuO nanowires by Joule heating effect

Minh Phuong Le¹, Van Thanh Pham¹, Thi Ha Tran², Van Tan Tran¹, Viet Tuyen Nguyen^{1,*}

¹ Faculty of Physics, VNU-University of Science, Thanh Xuan, Hanoi, Vietnam,

² Hanoi University of Mining and Geology, Duc Thang, Tu Liem, Hanoi

* Corresponding author's e-mail: nguyenviettuyen@hus.edu.vn

Nanomaterials have been well known for their enhanced properties compared with their bulk counterparts. Among widely studied nanomaterials, copper oxide (CuO) nanowires has attracted much interest thanks to its diversity applications in various fields. In this research, CuO nanowires were prepared by thermal oxidation via a self heating process. The effect of heating current, annealing time on morphology and structures of the products were investigated. The study contributes a novel method for fast and convenient synthesis of CuO nanowires, which can be easily scale up for mass production.

Keywords: CuO nanowires; Joule heating; current; thermal oxidation.