

Supporting information

In-situ microwave heating fabrication of copper nanoparticles inside cotton fiber using pressurization in immiscible liquids with raw material solutions

Masato Miyakawa, Chizuru Shigaraki, Takashi Nakamura
and Masateru Nishioka *

*National Institute of Advanced Industrial Science and Technology, AIST,
4-2-1, Nigatake, Miyagino-ku, Sendai, 983-8551, Japan*

E-mail: m-nishioka@aist.go.jp

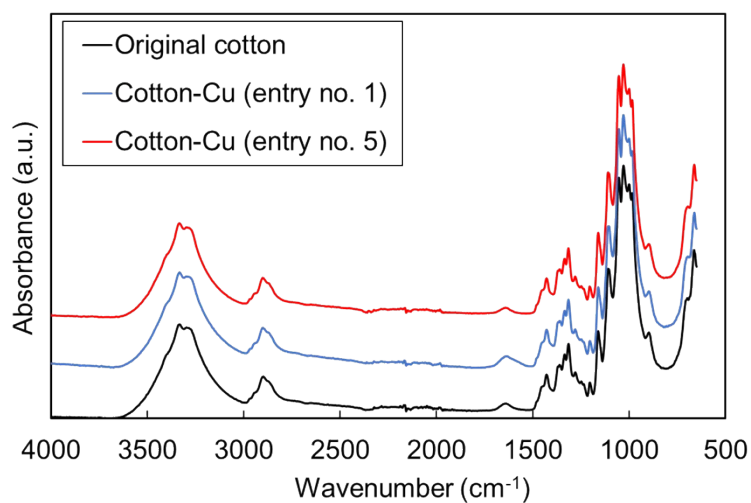


Figure S1. ATR-FTIR spectra of the fabricated cotton fibers.

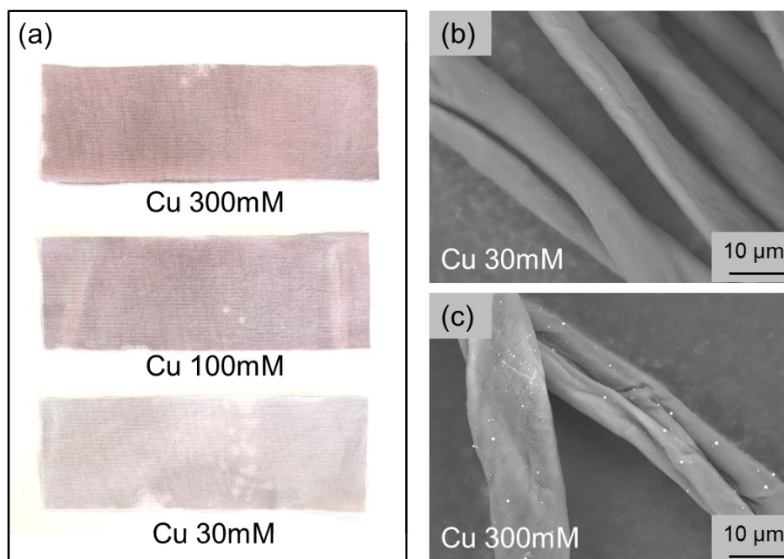


Figure S2. (a) Appearance photograph and (b, c) SEM images of the cotton fibers fabricated using $\text{Cu}(\text{C}_5\text{H}_{11}\text{COO})_2$ hydrophobic solutions with different copper concentrations (entry nos. 6–8).

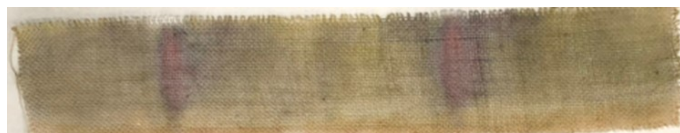


Figure S3. Appearance photograph of the cotton fiber fabricated using $\text{Cu}(\text{CH}_3\text{COO})_2$ hydrophilic solution. Fabricated temperature by MW was $200\text{ }^\circ\text{C}$ (entry no. 9).

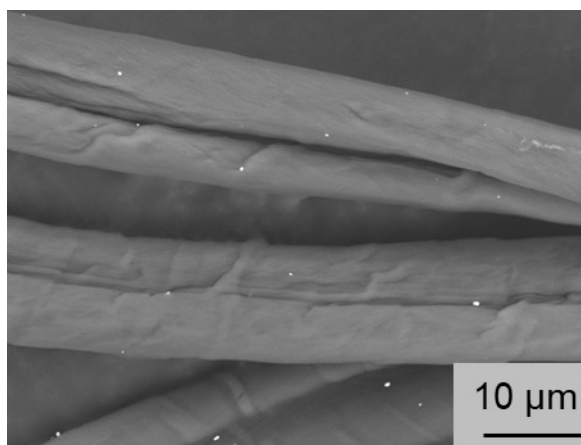


Figure S4. SEM image of the fabricated cotton fiber after 240 min washing test (entry no. 5).