Supporting Information
for

Low temperature sintering process of copper fine particles under nitrogen gas flow with Cu^{2+}-alkanolamine metallacycle compounds for electrically conductive layer formation

Tetsu Yonezawa,* Hiroki Tsukamoto, Yingqiong Yong, Mai Thanh Nguyen, and Masaki Matsubara

Division of Materials Science and Engineering, Faculty of Engineering, Hokkaido University,

Kita 13 Nishi 8, Kita-ku, Sapporo, Hokkaido 060-8628, Japan

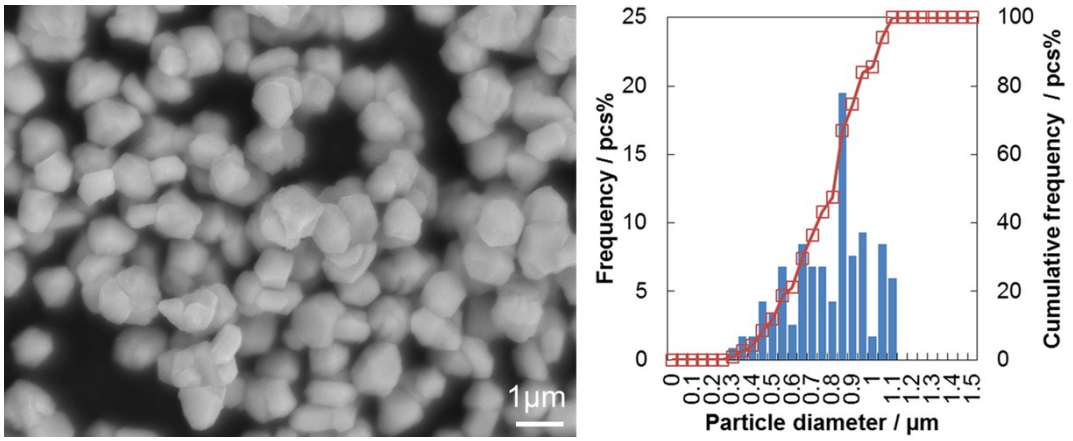

Figure S1. SEM image and particle distribution of copper particle added to the ink with median sizes of 0.8 μm.

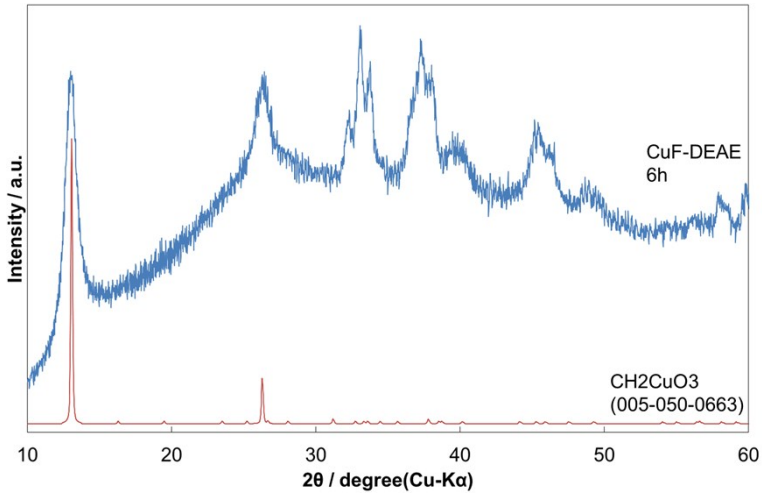

Figure S2. X-ray diffraction patterns of crystallized compound generated from CuF-DEAE complexes and copper formate hydroxide (JCPDS 005-050-0663).

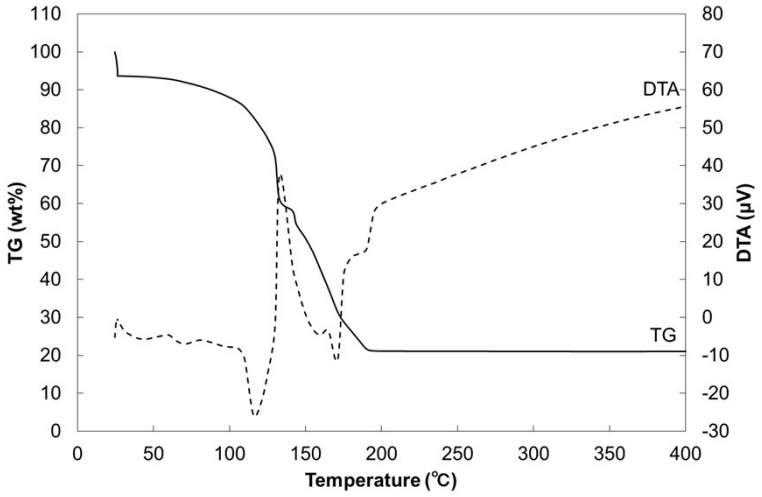

Figure S3. DTA-TGA results of CuF-IPA complex prepared using CuF and IPA with the molar ratios of 1:1 (mol/mol) under N_2 flow of 100 cm^3 min^{-1}. The heating rate was fixed to 5 °C min^{-1}.

The decomposition processes of CuF-IPA complex prepared using molar ratios of 1:1 CuF to IPA were studied using TGA-DTA. The complex began to decompose at lower than 100 °C. The exothermic peak at 133-134 °C corresponded to the release of CO_2 in the first step decomposition of the CuF.