

Highly efficient electrocatalytic carboxylation of 1-phenylethyl chloride at Cu foam cathode

La-Xia Wu^{1#}, Qi-Long Sun^{2#}, Man-Ping Yang², Ying-Guo Zhao¹, Ye-Bin Guan^{1*}, Huan Wang^{2*}, Jia-Xing Lu^{2*}

1. Data of constant potential electrolysis

Table S1 Constant potential electrolysis on different cathode a

Entry	Cathode	Potential / V	Q / C	t / s	Yield b %
1	Cu flake	-1.18	70	14622	32
2	Cu foam	-1.18	70	11948	36

^a Electrolysis were carried out in undivided cell, Mg rod counter electrode, Ag/AgI/0.1 mol L⁻¹ TBAI reference electrode, electrolyte solution: MeCN(10 mL)-TEAI(0.1 M)-substrate(0.05 M). ^b Mass yield based on **1a**, determined by HPLC.

2. Cyclic voltammograms curves versus the oxidation of ferrocene

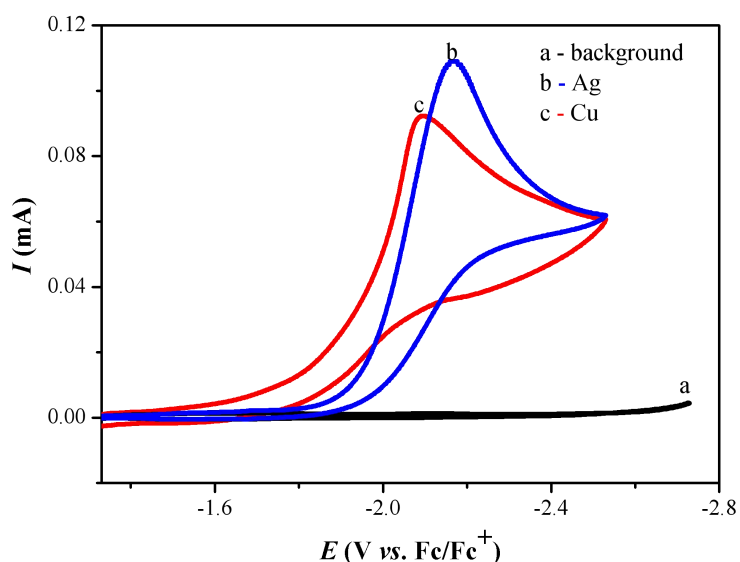


Figure S1 Cyclic voltammograms of 4 mM 1-phenylethyl chloride recorded at different cathodes in 0.1 M TEABF₄-MeCN solution at a sweep rate of 0.1 V s⁻¹ at 18 °C saturated with N₂ (a) background; (b) Ag disk; (c) Cu disk.