

Supplementary Information for

Enhancement of Seawater Corrosion Resistance in Copper Using Acetone-Derived Graphene Coating

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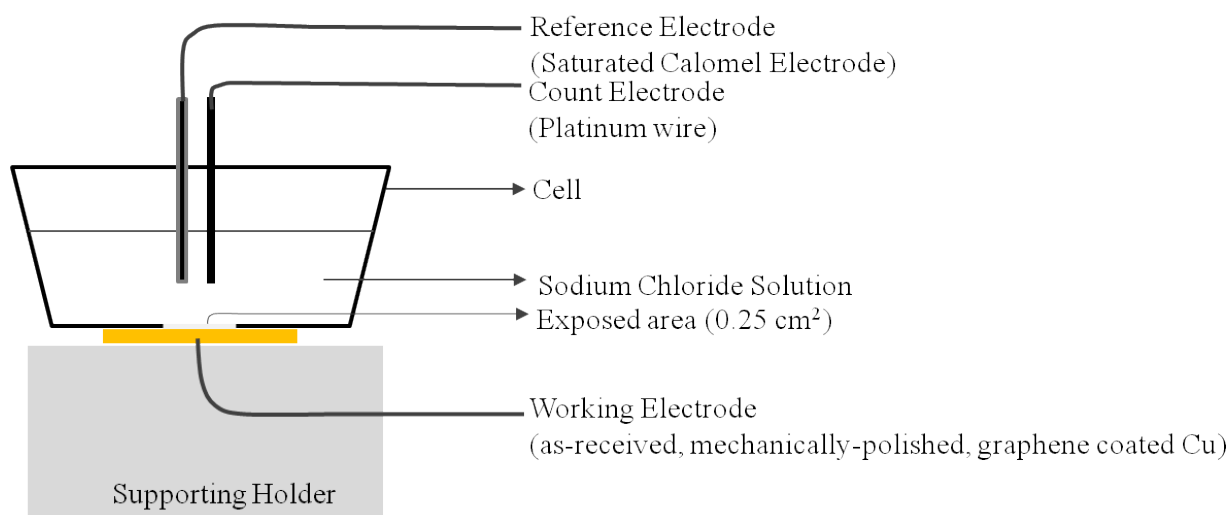


Figure S1: Three-electrode cell configuration for electrochemical corrosion test of as-received, mechanically-polished, and graphene-coated Cu.

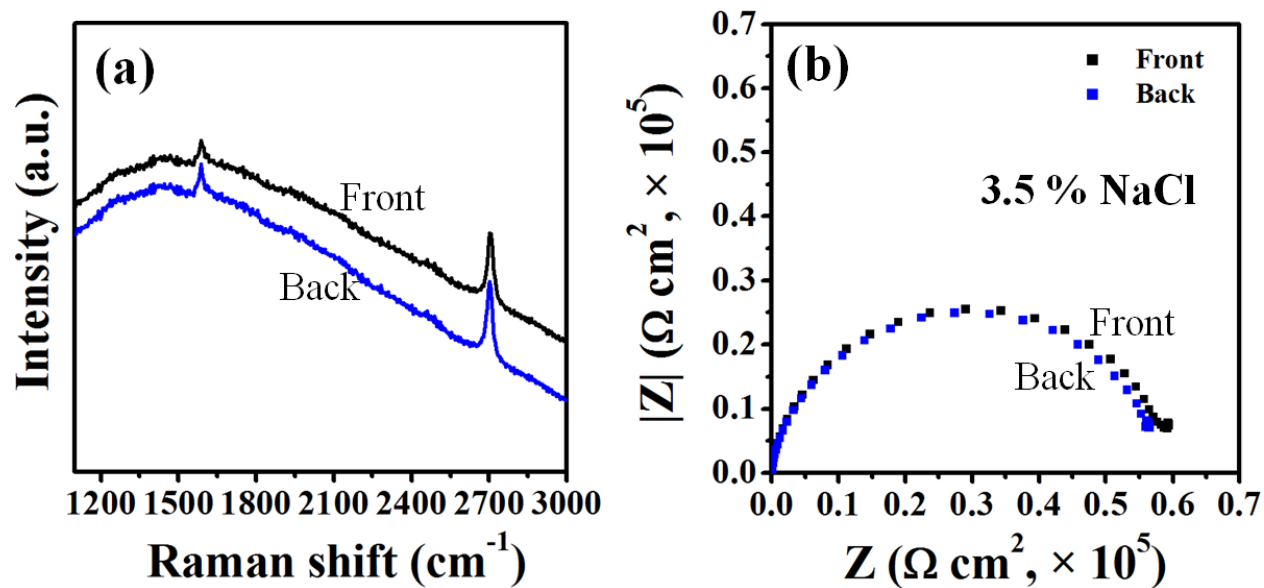


Figure S2: (a) Raman spectra of graphene films grown on front and back sides of Cu foil after growth at 1,000 °C for 3 min. (b) Impedance behavior of front and back sides of graphene-coated Cu in seawater condition.

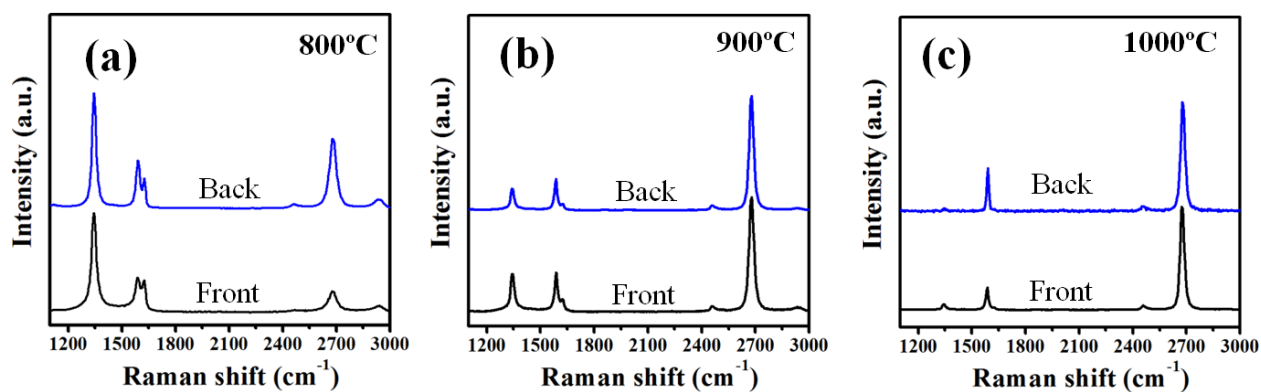


Figure S3: Raman spectra of graphene films transferred onto SiO₂(300 nm)/Si substrates after growth at (a) 800 °C, (b) 900 °C, and (c) 1,000 °C for 3 min. Note that graphene grew on both the front and back side of the Cu foil.

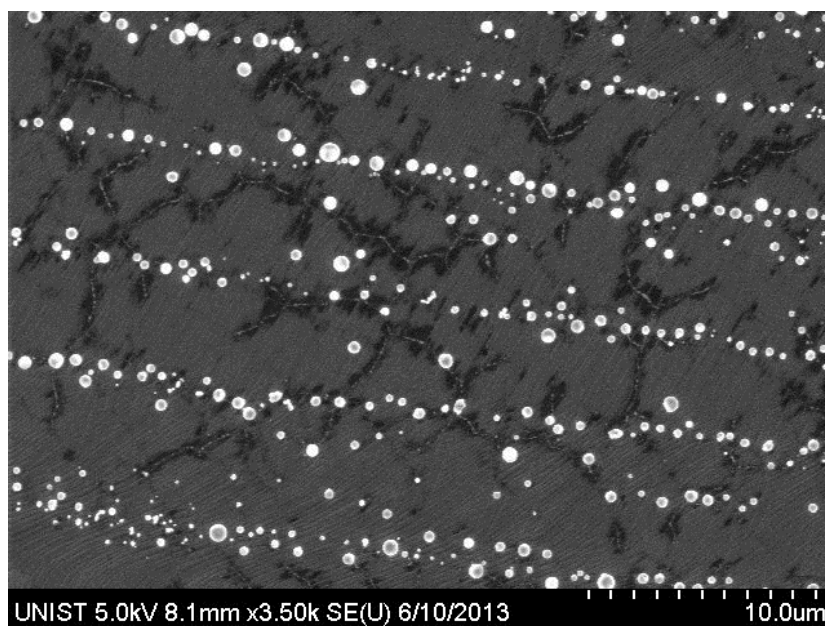


Figure S4: SEM image of corrosion diffusion traces through grain boundary of monolayer graphene-coated Cu after EIS test in 3.0 % NaCl solution.