

Supporting Information

Synthesis of mint leaf extract and mint leaf based NiO nanoparticles, coating of extract's layers without and with NiO nanoparticles on copper through drop casting, and their analysis for the corrosion prevention in saline water

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Supporting Information

Figure SI1. Schematic illustration for the preparation of the NiO NPs using water extract of mint leaves (AEML).

Figure SI2. (a) Cyclic Voltammograms for bare Cu, 1 L CEML coated Cu and 2L CEML coated Cu, and (b) zoom view.

Figure SI3. OCP curves for Cu coated with different layer of (a) CEML+NiO NP_{5mg} and (b) CEML+NiO NP_{5mg} in 0.5 M NaCl.

Figure SI4. Tafel polarization curves for Cu coated with different layer of (a) CEML+NiO NP_{5mg} and (b) CEML+NiO NP_{15mg} in 0.5 M NaCl.

Figure SI5. Nyquist and Bode phase angle curves for Cu coated with different layer of (a, c) CEML+NiO NP_{5mg} and (b, d) CEML+NiO NP_{15mg} in 0.5 M NaCl.

Figure SI6. FESEM images of and corroded (a) Cu, (b) CEML coated Cu, and (c) 1 L (CEML+ NiONPs_{15 mg}) coated Cu at 10 k magnification.

Table SI1. Efficiencies with standard deviation based on I_{corr} and R_{ct} obtained in 0.5 M NaCl for Cu+ 2L, CEML Cu+ 2L (CEML+ NiO_{5mg}), and Cu+ 1L (CEML+ NiO_{15mg}).

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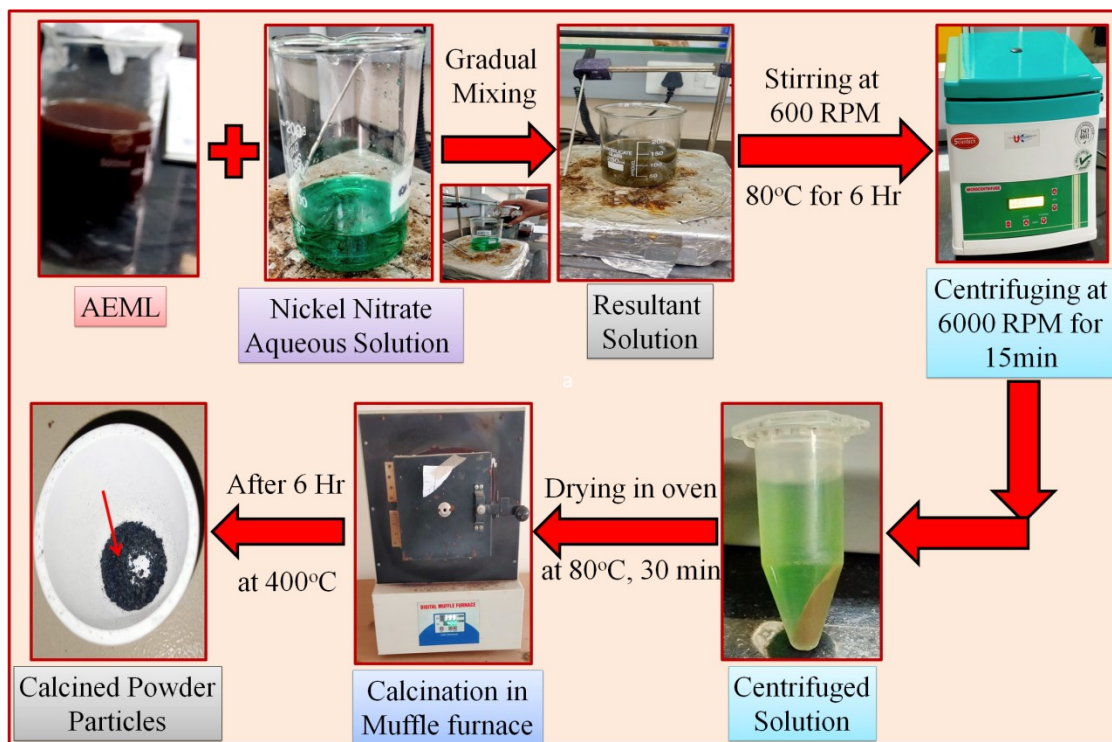


Figure SI1

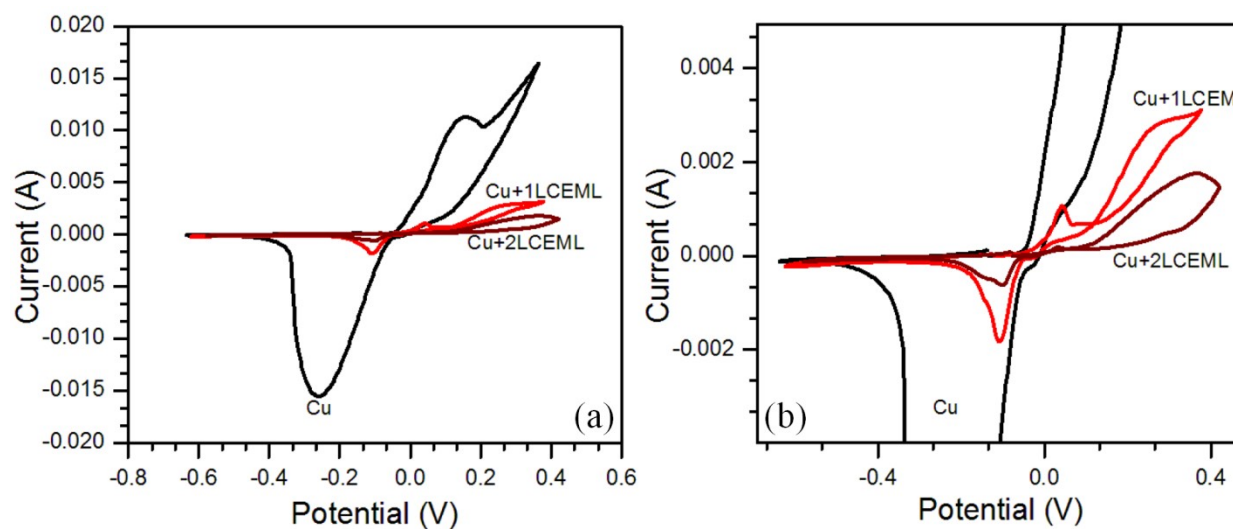


Figure SI2

Supporting Information

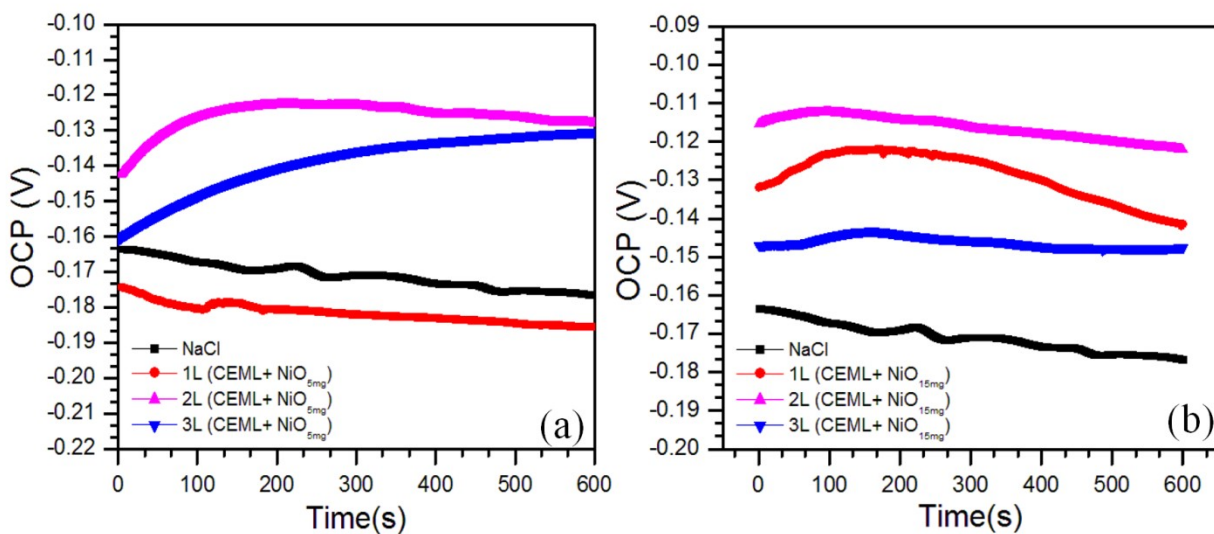


Figure SI3

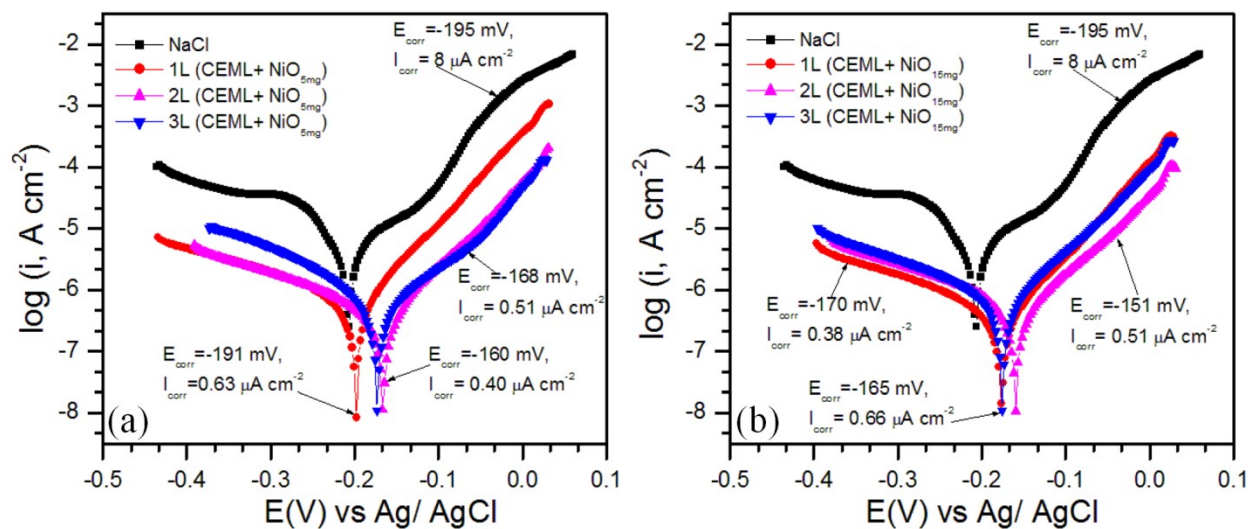


Figure SI4

Supporting Information

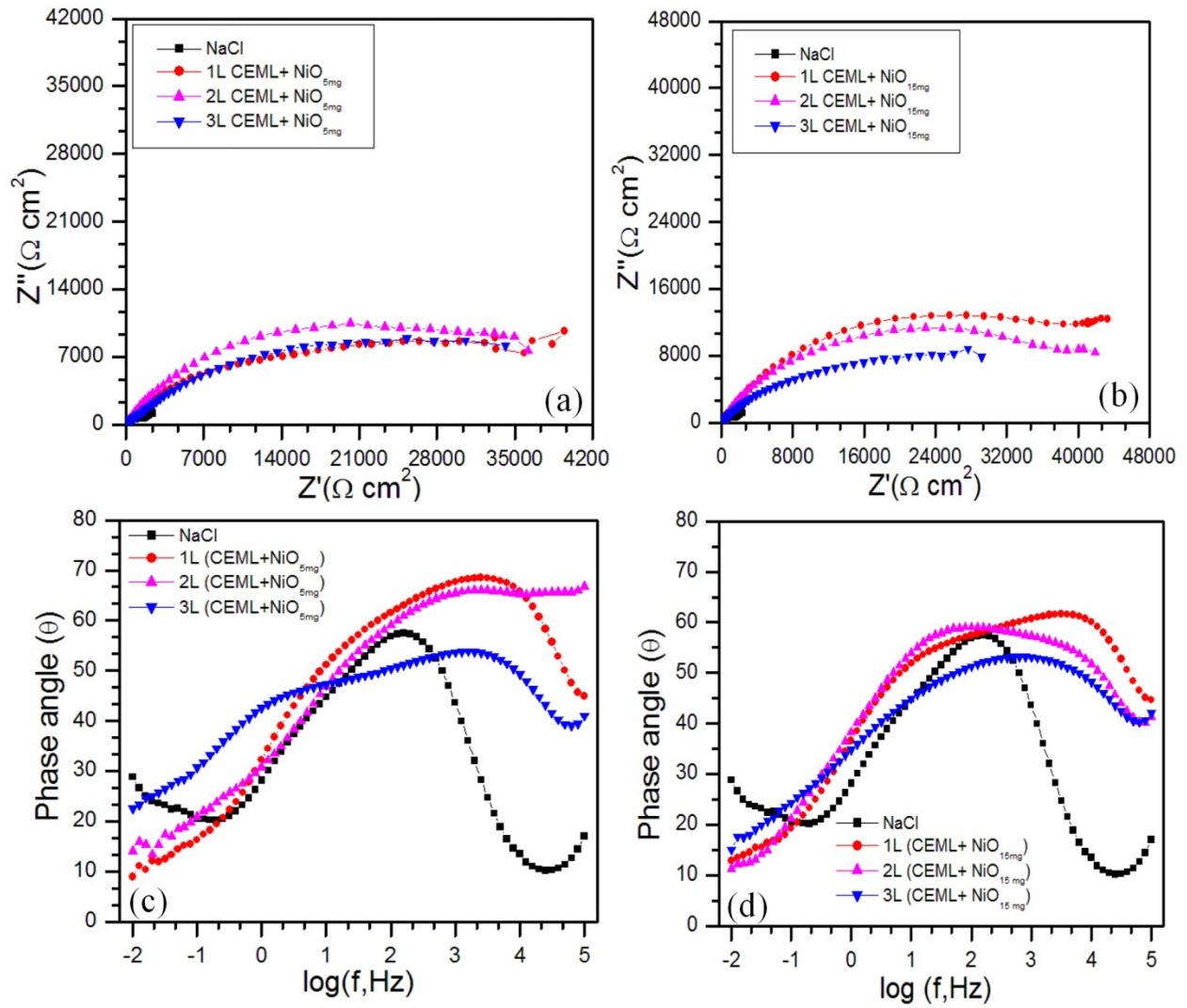


Figure S15

Supporting Information

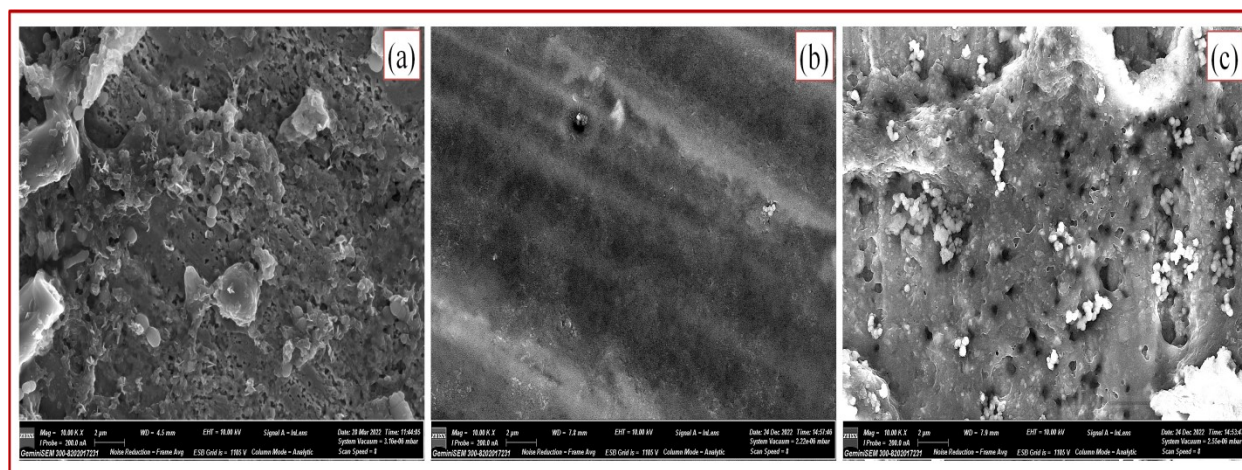


Figure SI6

Table SI1

Investigated System	% μ_T	% μ_{Rct}
Cu+ 2L CEML	88 \pm 2	87 \pm 1.5
Cu+ 2L (CEML+ NiO 5mg)	94 \pm 1.5	93 \pm 1
Cu+ 1L (CEML+ NiO 15mg)	96 \pm 0.5	97 \pm 0.5