

*Supplementary*

# Sacrificial Dissolution of Zinc Electroplated and Cold Galvanized Coated Steel in Saline and Soil Environments: A Comparison

**Ameeq Farooq** <sup>1,†</sup>, **Umer Masood Chaudry** <sup>2,†</sup>, **Ahsan Saleem** <sup>1</sup>, **Kashif Mairaj Deen** <sup>1,3,\*</sup>, **kotiba Hamad** <sup>2,\*</sup> and **Rafiq Ahmad** <sup>1,\*</sup>

<sup>1</sup> Corrosion Control Research Cell, Department of Metallurgy and Materials Engineering, University of the Punjab, Lahore 54590, Pakistan; ameeq.farooq@gmail.com (A.F.); ahsansaleem318@gmail.com (A.S.)

<sup>2</sup> School of Advanced Materials Science & Engineering, Sungkyunkwan University, Suwon 16419, Korea; umer@skku.edu

<sup>3</sup> Department of Materials Engineering, University of British Columbia, Vancouver, BC V6T 1Z4, Canada

\* Correspondence: deen@mail.ubc.ca; (K.M.D.), hamad82@skku.edu; (K.H.); drrafiyahmad@hotmail.com (R.A.)

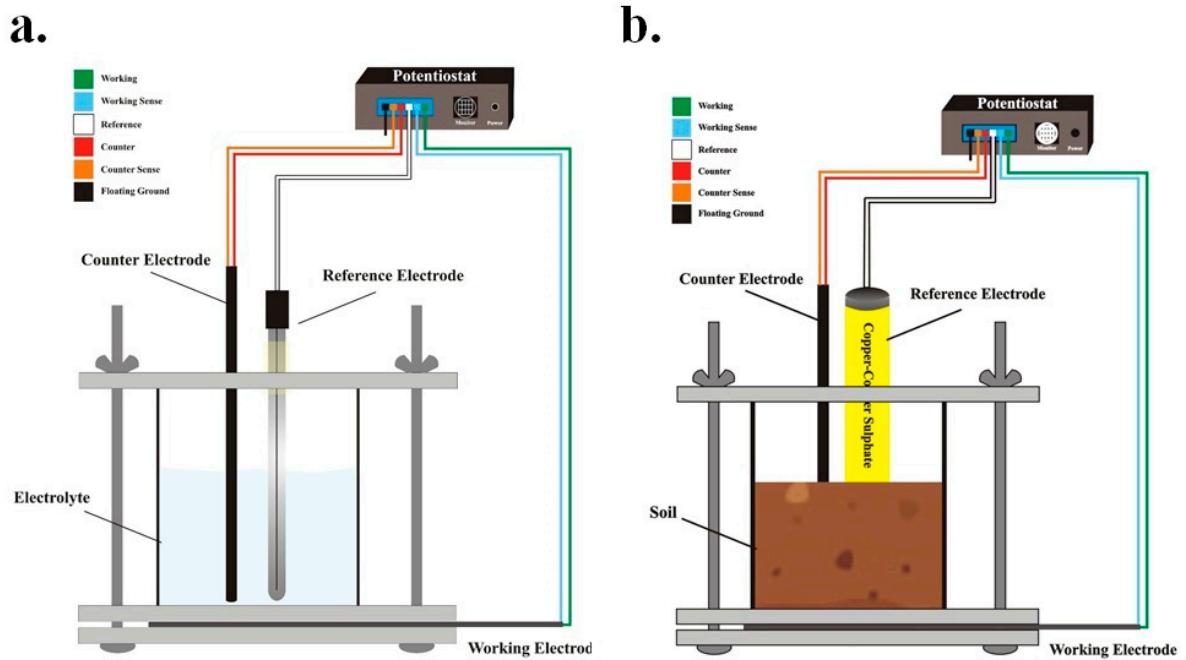
† Authors contributed equally to this work.

**Table S1.** Average roughness values of mild steel and coated panels.

Sample	Average Roughness ( $R_a$ ) ( $\mu\text{m}$ )
MS	4.12
GS	0.45
BS	1.15
DS	0.80

**Table S2.** Chemical composition of soil.

Description	Composition
pH of the soil paste	8.01
Sodium Adsorption Ratio (S.A.R)	5.3
% Saturation	41
	Ca + Mg 3.5
Soluble Cations (mg/L)	Na 7.0
	K 0
	CO <sub>3</sub> <sup>-</sup> -
Soluble Anions (mg/L)	HCO <sub>3</sub> <sup>-</sup> 2.0
	Cl <sup>-</sup> 1.25
	SO <sub>4</sub> <sup>-</sup> 7.25
% Sand (1–2 mm)	1.0
% Sand (0.05–1 mm)	5.7
% Silt	67.3
% Clay	26.0



**Figure S1.** Schematic diagram of paint cell (a) 3.5 % NaCl (b) Saline soil.