Electronic Supplementary Material (ESI) for RSC Advances.

Supporting Information

Investigation of anti-corrosive properties of o-Anisidine-N-Salicylidene and its nanocomposite o-Anisidine-N-Salicylidene / NiONPs on mild steel in 2N HCl

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Table S1

Estimation of Equilibrium Adsorption Constant (K_{ads}) and Free Energy of Adsorption (ΔG^{o}_{ads}) for o-AnNS and o-AnNS assembled on NiONPs on Mild Steel surface immersed in 2N HCl Solution

Temperature (K)	K_{ads} (L/mol)	ΔG^{o}_{ads} (kJ/mol)
o-AnNS		
308	1.67 X 10^3	-29.3
318	1.43 X 10^3	-29.8
328	0.91 X 10^3	-29.5
338	0.77 X 10^3	-30.0
o-AnNS assembled on NiONPs		
308	16.13 X 10^3	-35.1
318	17.54 X 10^3	-36.5
328	16.67 X 10^3	-37.5
338	18.18 X 10^3	-38.9

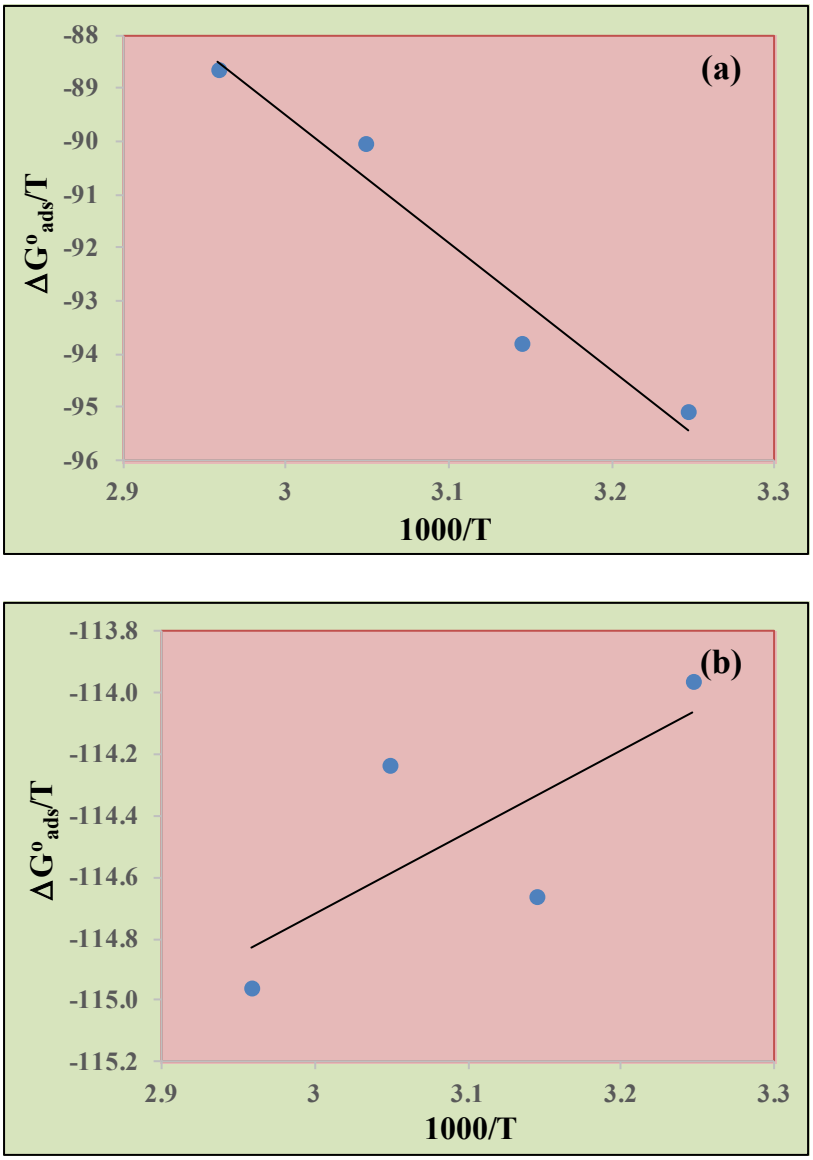

Fig. S1: The variation of $\Delta G^{o}_{ads}/T$ with 1/T for **(a)** o-AnNS and **(b)** o-AnNS assembled on NiONPs

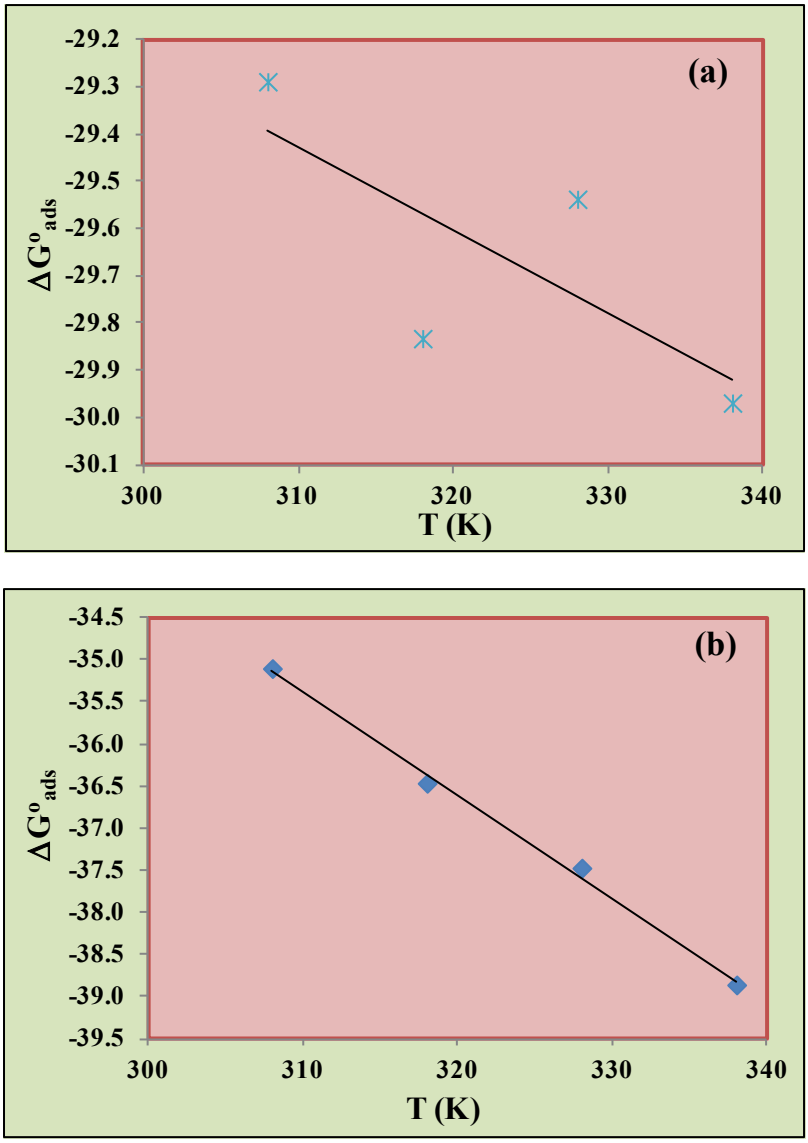

Fig. S2: Dependence of ΔG^{o}_{ads} on temperature for mild steel in 2N HCl containing **(a)** o-AnNS and **(b)** o-AnNS assembled on NiONPs

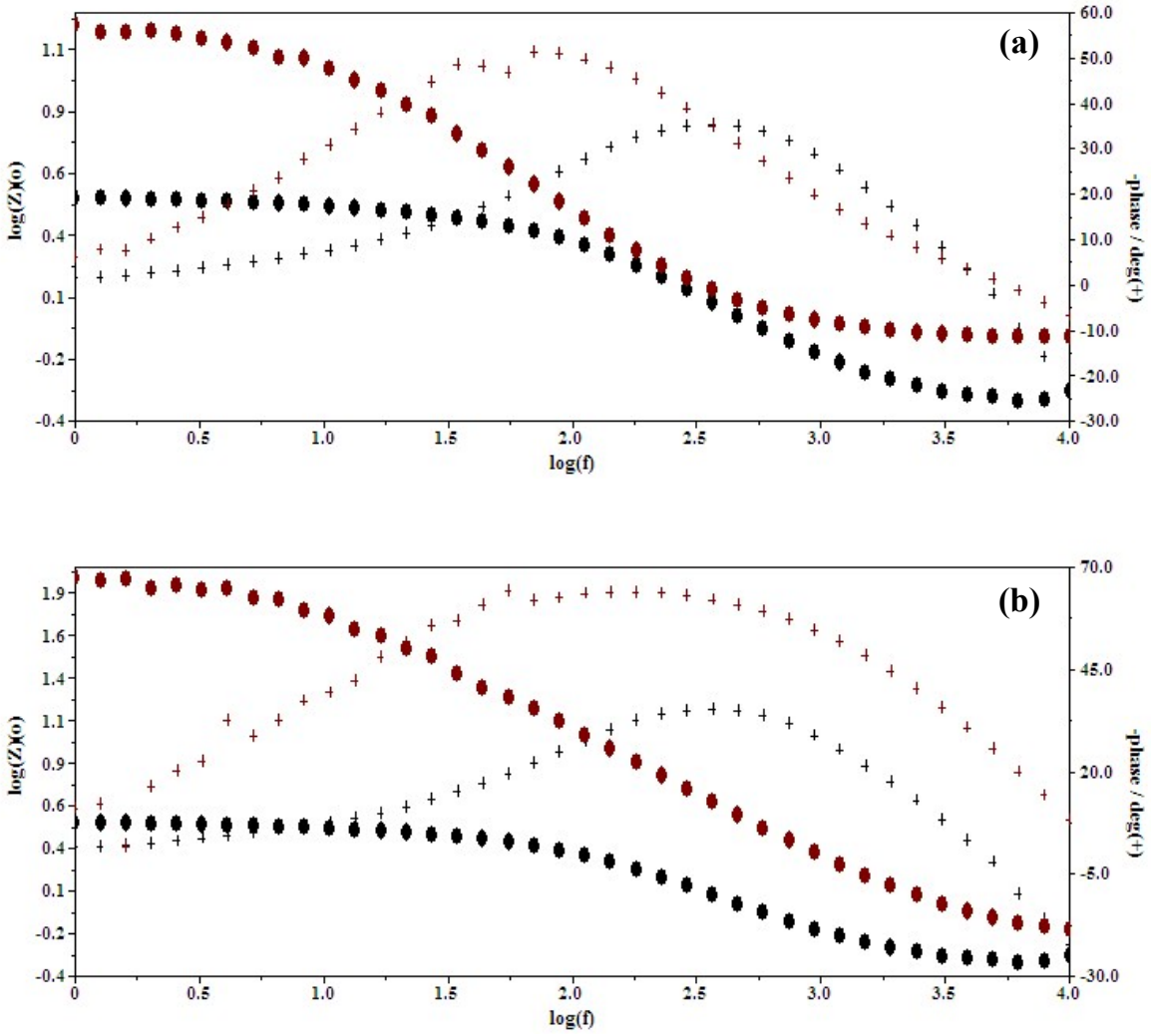

Fig.S3: Simulated and experimentally generated impedance diagrams for mild steel in 2N HCl and in the presence of 3.00 g L^{-1} **(a)** o-AnNS and **(b)** o-AnNS assembled on NiONPs