

Supplementary Material

Effective Inhibition of Carbon Steel Corrosion by Waterborne Polyurethane Based on N-*tert*-Butyl Diethanolamine in 2M HCl: Experimental and Computational Findings

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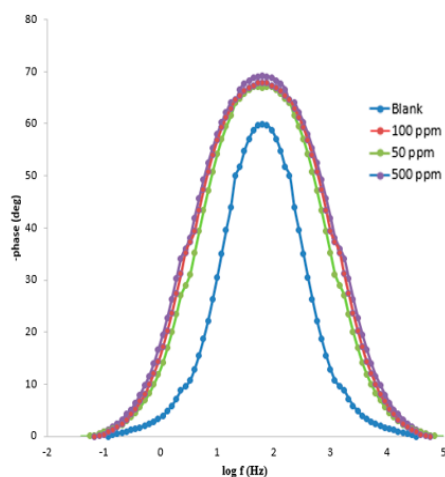
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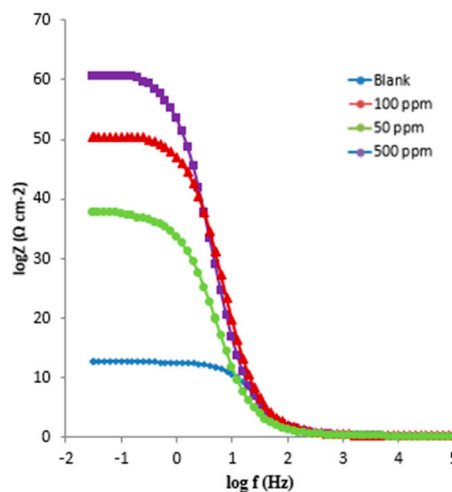
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Bode graphs

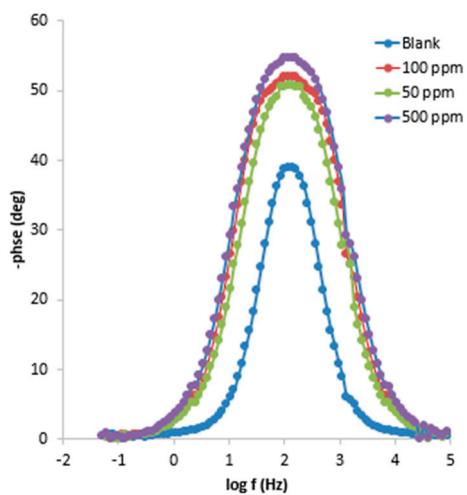
Bode diagram in coordinates $|Z| - \log f$ in the mid-frequency range is an inclined line indicating that the system has a predominant capacitive behavior. The maximum values of Z mod are manifested at higher concentrations of the corrosion inhibitor *tB-WPU* at the frequencies of 1-3 Hz. An increase in the value of Z mod in the presence of the corrosion inhibitor *tB-WPU* means the corrosion process deceleration.



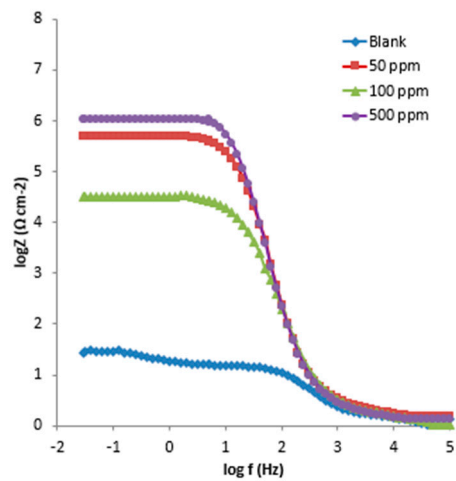
(a)



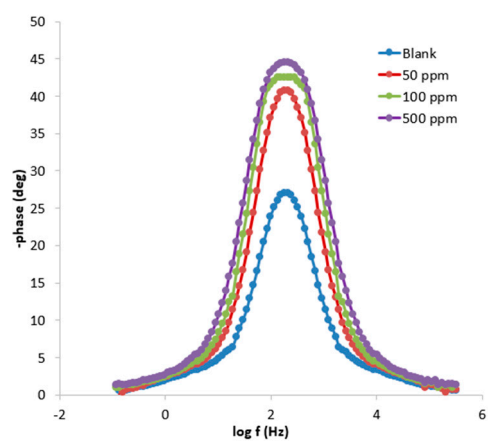
(b)



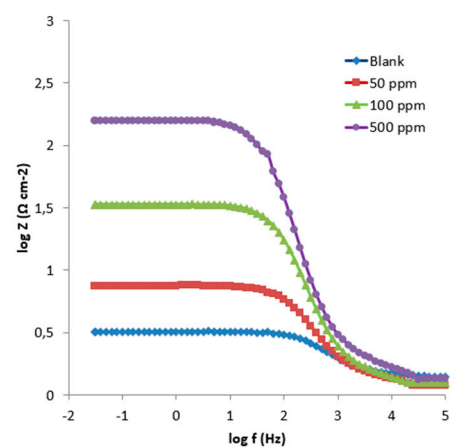
(c)



(d)



(e)



(f)

Figure S1. Bode phase angle plots (a,c,e) and Bode modulus plots (b,d,f) for CS in 2 M HCl in the absence and presence of different concentrations of *tB*-WPU inhibitor.