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Corrosion Inhibitive Behaviour of *Moringa Oleifera* in Acidic Medium

- Chapter
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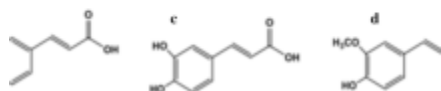
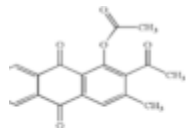
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Abstract

Due to the toxic nature of some inorganic corrosion inhibitors, attention is now being shifted to the use of organic inhibitors that are eco-friendly and effective at slowing down the corrosion rate of the metals. This research work investigated the corrosion inhibitive performance of *Moringa oleifera* on A36 mild steel in 1M H₂SO₄ medium, using gravimetric and potentiodynamic tests at different temperatures. The results obtained showed the corrosion rate of A36 mild steel decreased with an increase in *Moringa oleifera* inhibitor concentration (1–4 vol/vol%), and increased with increase in temperature (for both gravimetric and potentiodynamic polarisation tests). Also, the inhibitor efficiency of the *Moringa oleifera* inhibitor increased with an increase in inhibitor concentration, but decreased as the temperature increased (for both gravimetric and potentiodynamic polarisation tests). Langmuir adsorption isotherm accurately predicted the adsorption behaviour of the *Moringa oleifera* inhibitor on the surface of the A36 mild steel (with coefficient of regression, R^2 , of 1).

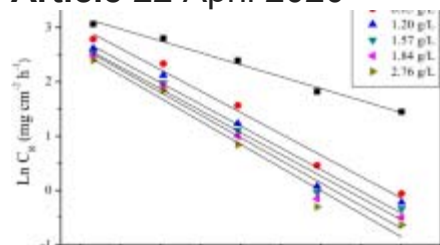
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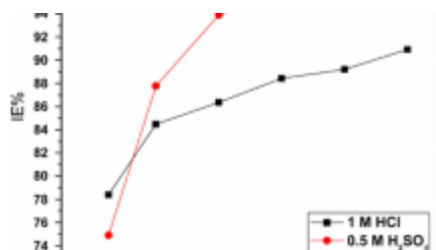
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