Use of *Butea monosperma* Extract as Green Corrosion Inhibitor for Mild Steel in 0.5 M H₂SO₄

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The extract of *Butea monosperma* has been examined to check the inhibitory effectiveness of mild steel corrosion in 0.5 M H₂SO₄ by using polarization measurements and EIS technique. The adsorption of *Butea monosperma* extract on the surface of mild steel has been investigated by using AFM study, SEM study and absorption spectroscopic techniques. This investigation clearly tells us that the extract of *Butea monosperma* shows very high corrosion inhibition efficiency so it can be used in the form of an excellent inhibitor to protect the metal from corrosion.

Keywords: *Butea monosperma*, Electrochemical Impedance Spectroscopy, Polarization Measurements, SEM, AFM, weight loss measurements.

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