Effect of Ethanolic Extract of *Melia Azedarach* Fruit on Enhancing the Performance of Epoxy Coating for Corrosion Prevention of Mild Steel in 3.5 wt% NaCl

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Editor's note: Metals are prone to corrosion, and while chemical inhibitors are commonly used for protection, their toxicity limits their application. Sheydaei evaluated the anti-corrosion potential of ethanolic extract from *Melia Azedarach* fruit on mild steel in 3.5 wt% NaCl. The extract was used as a green modifier for sodium montmorillonite (Na+-MMT), creating a novel nanofiller (MA-MMT) incorporated into an epoxy coating. X-ray diffraction (XRD) confirmed that *Melia Azedarach* compounds penetrated the clay galleries, and polarization results indicated improved corrosion resistance with increased MA-MMT content, confirming its role as a mixed-type inhibitor.

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