Motivation

Problem Statement

Surface Modification Techniques

Corrosion Protection Mechanism

Nanocomposite coating system

Summary

• FTIR analysis confirmed the successfully loading of the inhibitors in CeO$_2$ nanoparticles.
• TGA measurements clarified the loading amount of inhibitors by weight loss measurements.
• SEM analysis investigated the release of the inhibitors and formation of the protective layer at the scratched area.
• Exceptional protection efficiency reaching 99.8 and 95.7% for the modified epoxy coating with DDA and NMTU, respectively.

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