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Corrosion Inhibitor from Palm Lignocellulosic Waste

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Palm tree consists of different parts among which are the leaflet, rachis and fibers. All these parts constitute lignocellulose biomass components capable of producing value added end products. United Arab Emirates contains over 30 million date palm trees, 8 million of them in Al Ain city. Each palm tree produces at least 25 kg of dried leaves annually which is about 200 million kg of dried leaves annually in Al Ain city alone. This huge amount of waste is either disposed to landfills or is just burned, which is hazardous to the environment. However once processed palm lignocellulose biomass can produce anti corrosion materials. Corrosion remains one of industrial challenges due to its noxious attack reaction on the metal stimulated by the surrounding environment.

Therefore, the objective of this project is to solve two current problems, which are the waste and the corrosion, with beneficial solution for both the environment and the industry. In the present work, lignin will be extracted from date palm waste and converted to sodium lignosulfonate, which has been proven to be an anti-corrosion material.

The sodium lignosulfonate will be tested for anti-corrosion properties. The results from this study will contribute to environment, chemical industry and contribution to knowledge in the field.

Biography

Nour Abdel Rahman is a Chemical Engineering Master student at UAEU and holds a Bachelor Degree from the same institution. She is also a research assistant at Emirates Center for Energy and Environment, UAE, under the supervision of Prof. Ali H. Al-Marzouqi who is doubles as the Assistant Dean for Research & Graduate Studies and Professor of Chemical and Petroleum Engineering Department, UAEU.

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