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Volatile alkylammonium corrosion inhibitors

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Volatile corrosion inhibitors (VCI) are compounds which are transported in a closed environment to the site of corrosion by slowly volatilization from a carrier source. These inhibitors are mostly amine - based compounds, with free electron pair on nitrogen atom. Amine part of molecule is strongly attracted to the polar metal surface and the hydrophobic rest of molecule repels water to significantly retard corrosion. Usually natural polymers (cellulose, cotton) are used as carriers of VCI. Series of monomeric and dimeric alkylamineammonium salts of different hydrocarbon chain length have been synthesized. The detailed spectroscopy analysis (FTIR, ESIMS, ^1H NMR, ^{13}C NMR, 2D NMR) has been carried out. Our research on volatile corrosion inhibitors will be conducted by comparing the effectiveness of their actions in an aggressive corrosive atmosphere with high moisture content.

Biography

Kowalczyk I has completed his PhD and habilitation from Adam Mickiewicz University in Poznan. She work in Laboratory of Microbiocides Chemistry in Faculty of Chemistry. She has published more than 45 papers in reputed journals.

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