

## A study on the anticorrosive action of Ca, Mg doped mesoporous silica

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The employment of coatings to protect metals in aggressive environments is of great importance due to damages caused by corrosion. The evaluation and adoption of non-toxic anti-corrosion pigments is a high priority objective for paint companies worldwide. Calcium-exchanged silica has widely been used as anti-corrosion pigment due to its non-toxicity. In this study, calcium doped mesoporous silicates such as SBA-15, MCM-41, MCM-48 with high surface area were successfully synthesized to be used as anti-corrosion pigments. These materials release calcium under corrosive environment and inhibit corrosion at the steel interface. The anti-corrosion mechanism through which these materials function and the results obtained from corrosion testing are discussed.