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Design of Novel Superhydrophobic Aniline Trimer Modified Siliceous Material and Its Application for Steel Protection

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Abstract: Novel super-hydrophobic aniline trimer-containing siliceous coatings were carefully acquired through electrodeposition in a mixed solution of tetraethoxysilane and triethoxysilylpropyl isocyanate modified aniline trimer (M-AT). Chemical constitution, morphology, hydrophobicity and anticorrosion ability of as-prepared hybrid coatings were investigated by corresponding equipment. Compared to pure silica coating, the AT-containing silica coatings presented excellent super-hydrophobicity and enhanced anticorrosion performance. The impedance was

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