

Supplementary Materials

Effect of Aluminum Flakes on Corrosion Protection Behavior of Water-Based Hybrid Zinc-Rich Coatings for Carbon Steel Substrate in NaCl Environment

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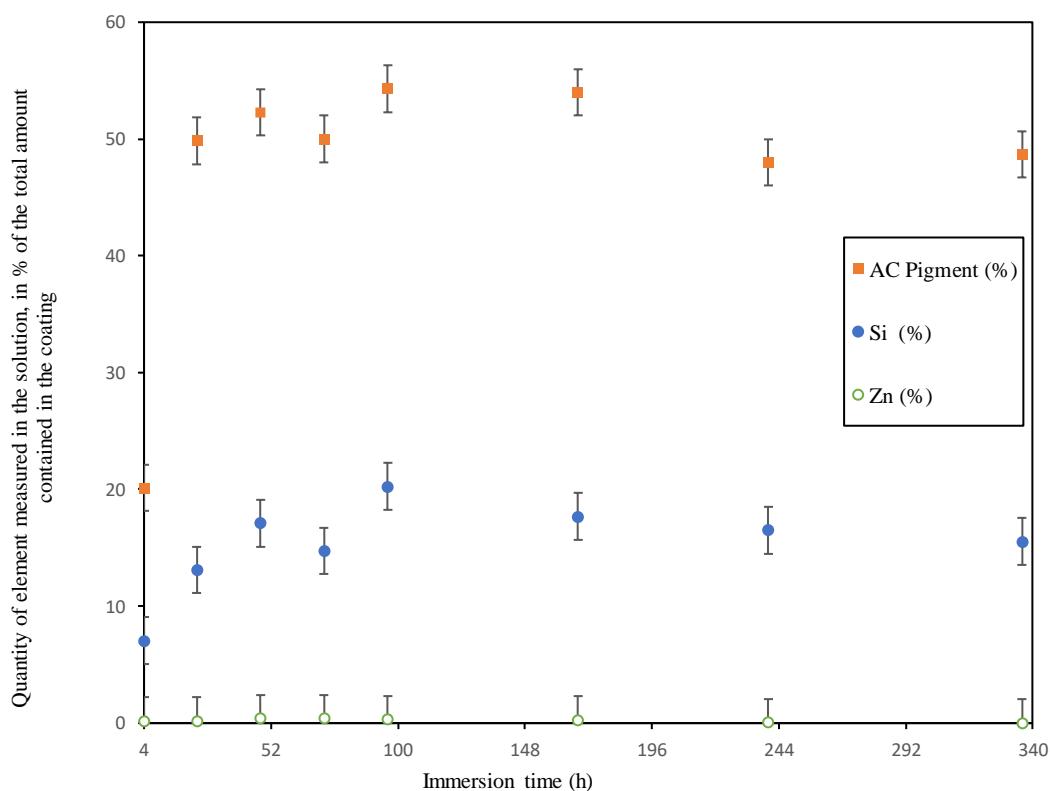


Figure S1. Evolution of the quantity of element detected by ICP-OES over immersion time for coating B.

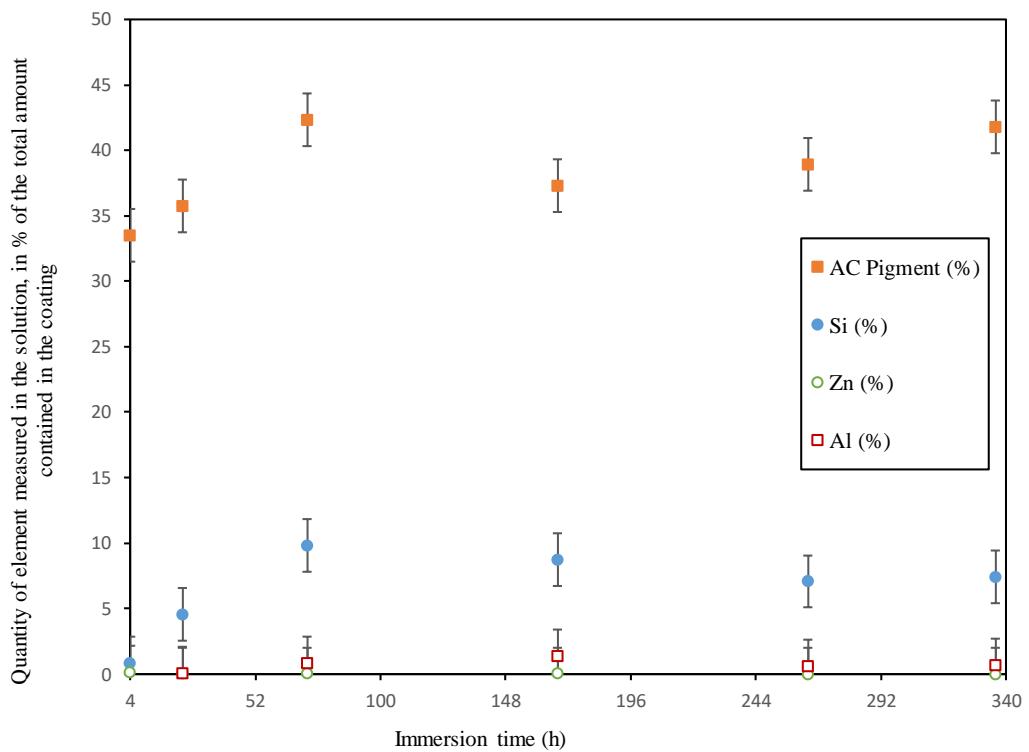


Figure S2. Evolution of the quantity of element detected by ICP-OES over immersion time for coating C.

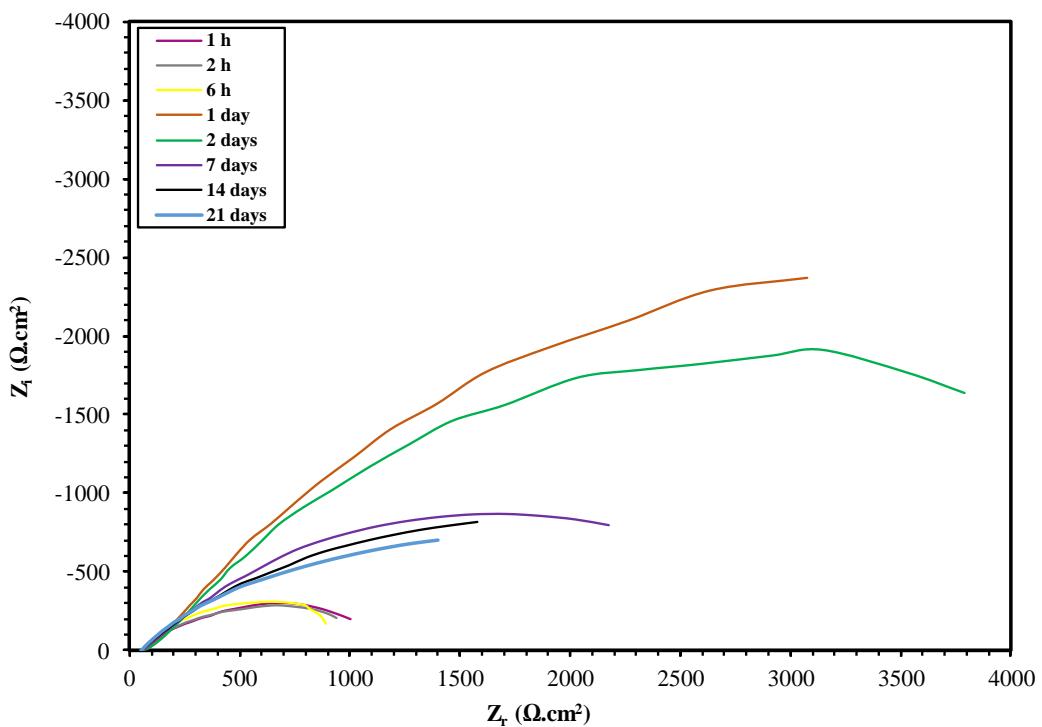


Figure S3. Nyquist diagrams of the coating B during immersion time in 3 wt% NaCl water solution.

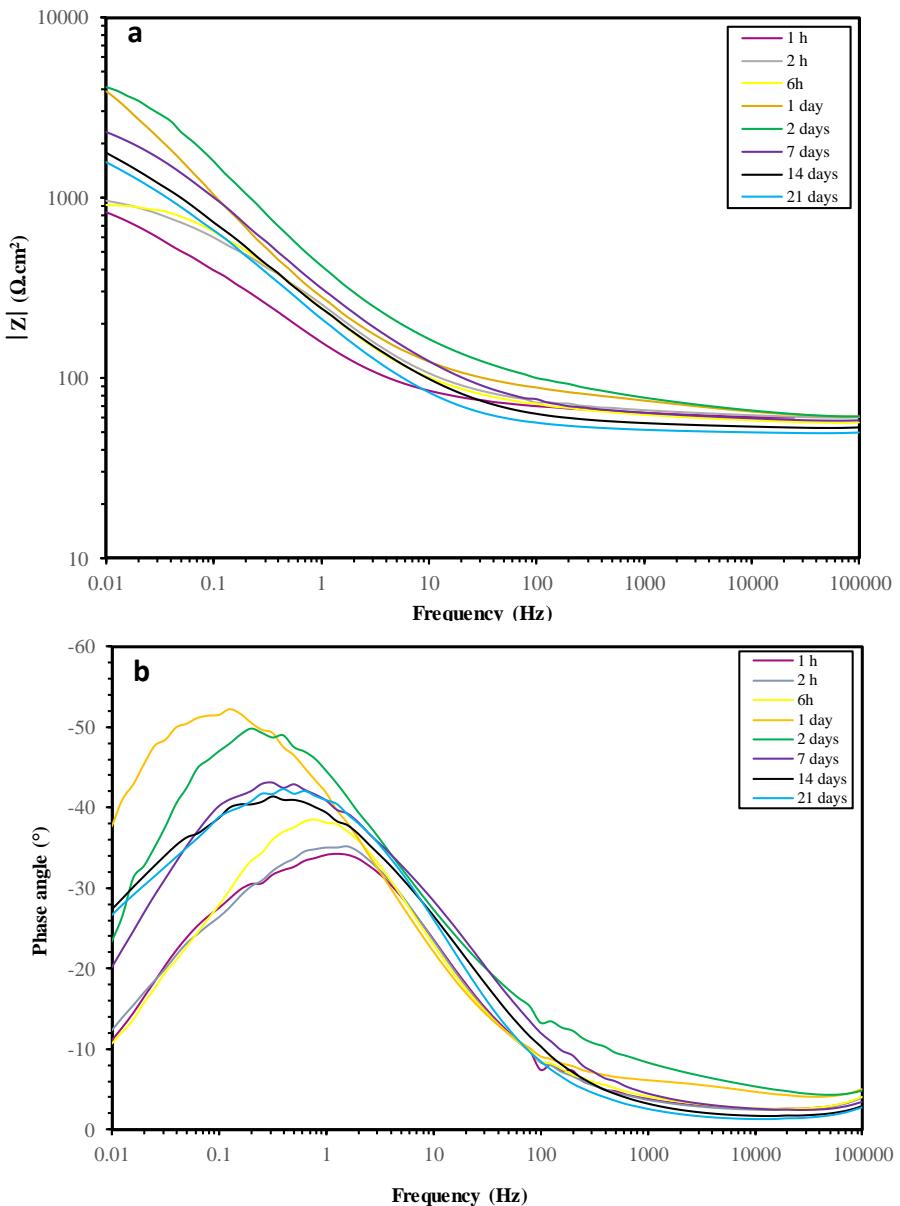


Figure S4. Bode ((a) Modulus and (b) Phase) diagrams of the coating B during immersion time in 3 wt% NaCl water solution.

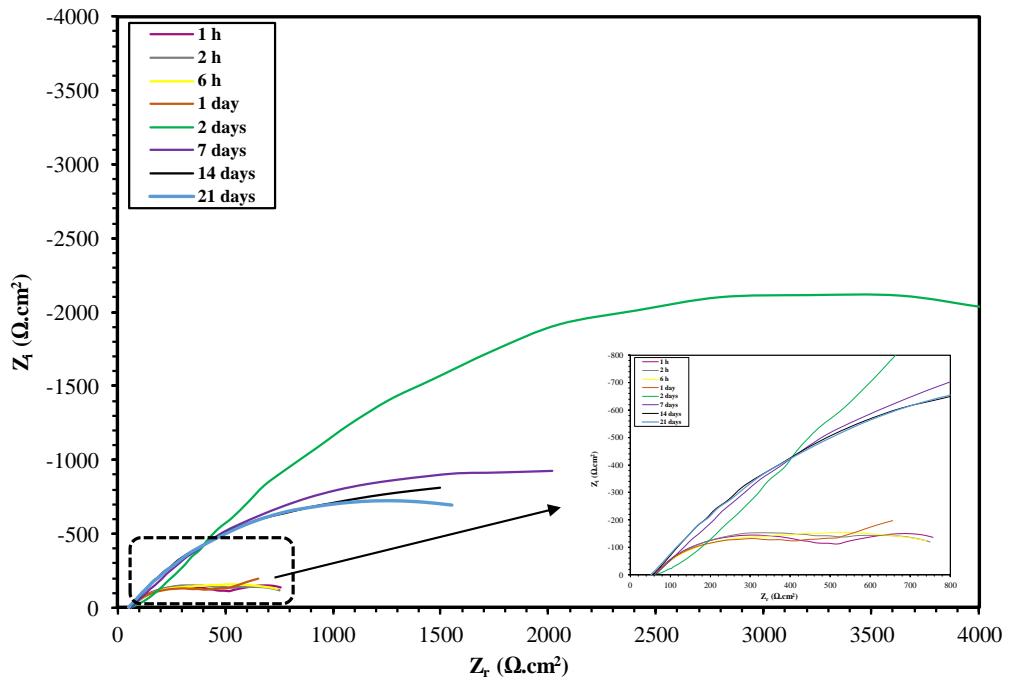


Figure S5. Nyquist diagrams of the coating C during immersion time in 3 wt% NaCl water solution.

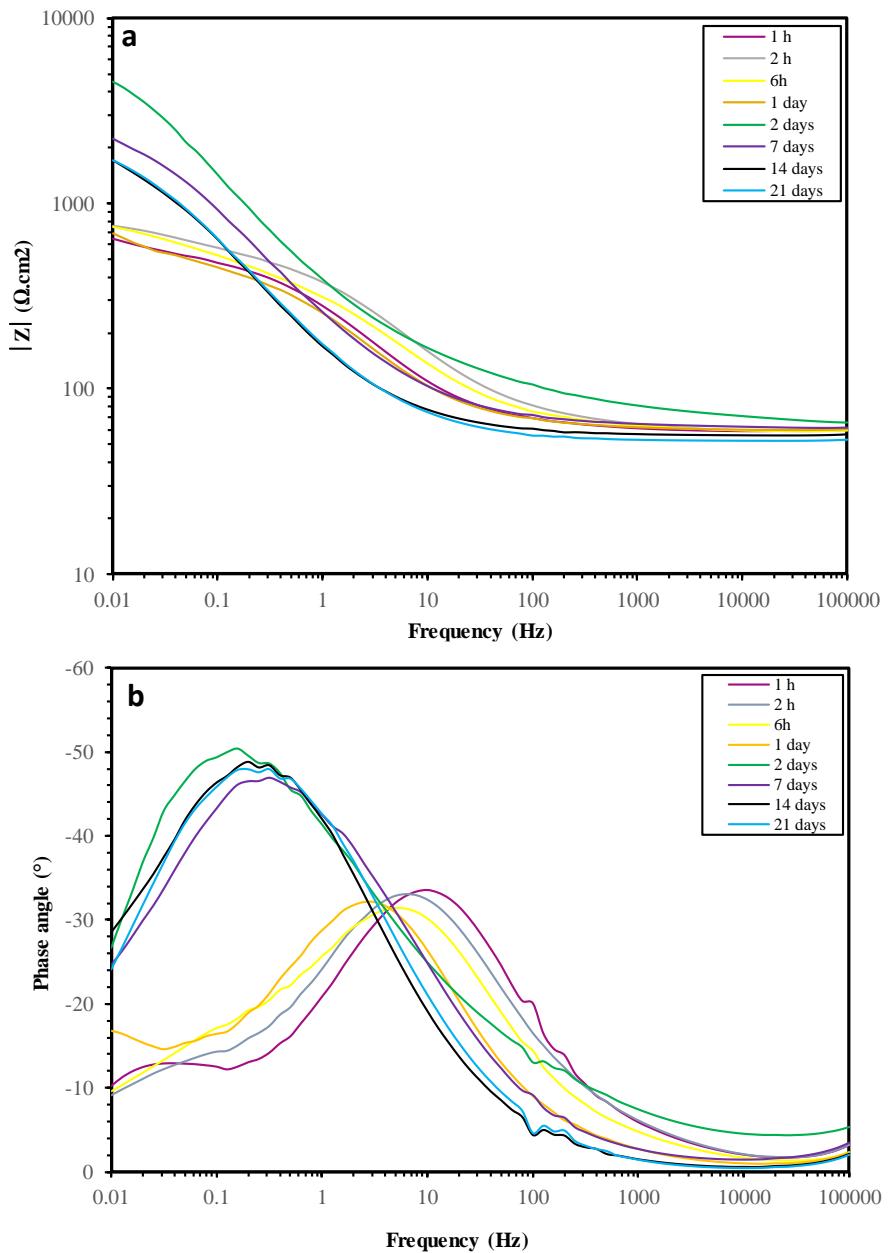


Figure S6. Bode (Modulus (a) and Phase (b)) diagrams of the coating C during immersion time in 3 wt% NaCl water solution.

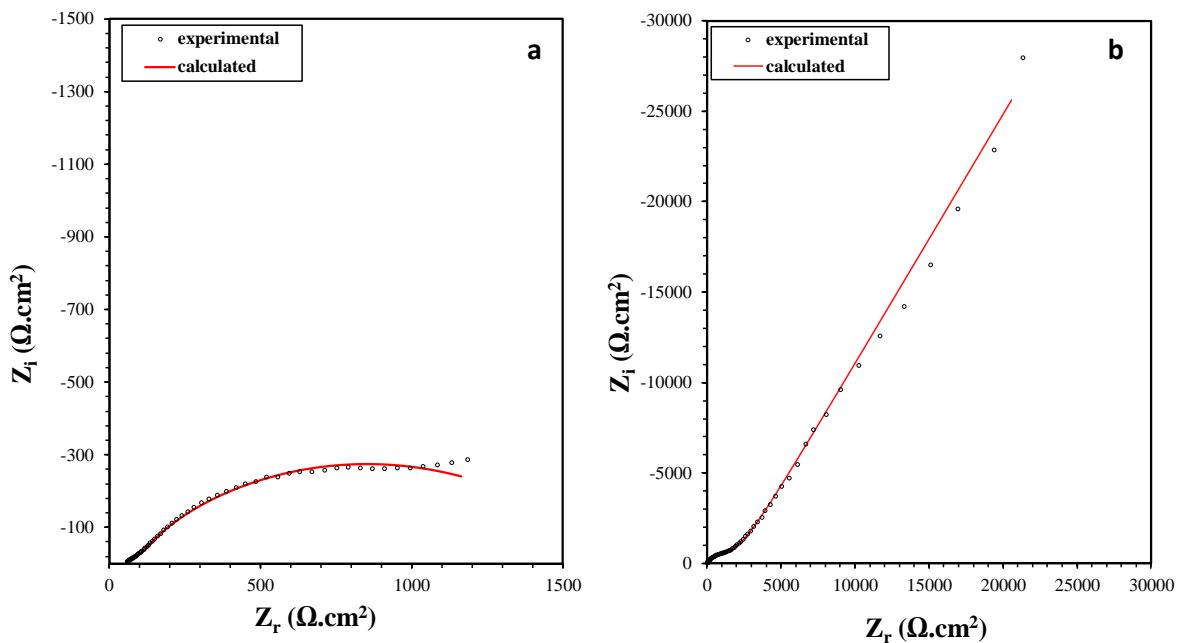


Figure S7. Nyquist diagrams of coating A after 2h of immersion fitted with model 1 (a) and after 14 days of immersion fitted with model 2 (b).

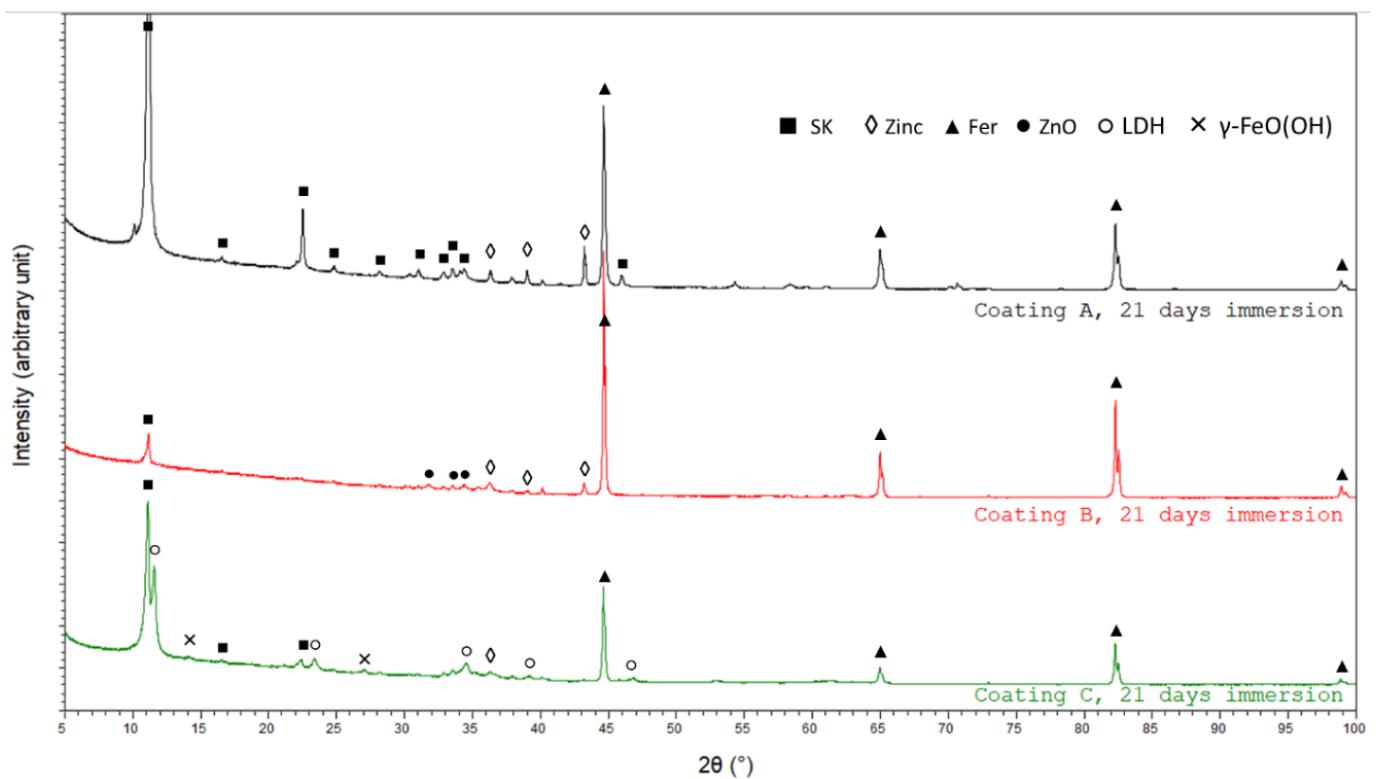


Figure S8. Diffractograms of the surface of coatings A, B and C after 21 days of exposure in 3 wt% NaCl water solution.

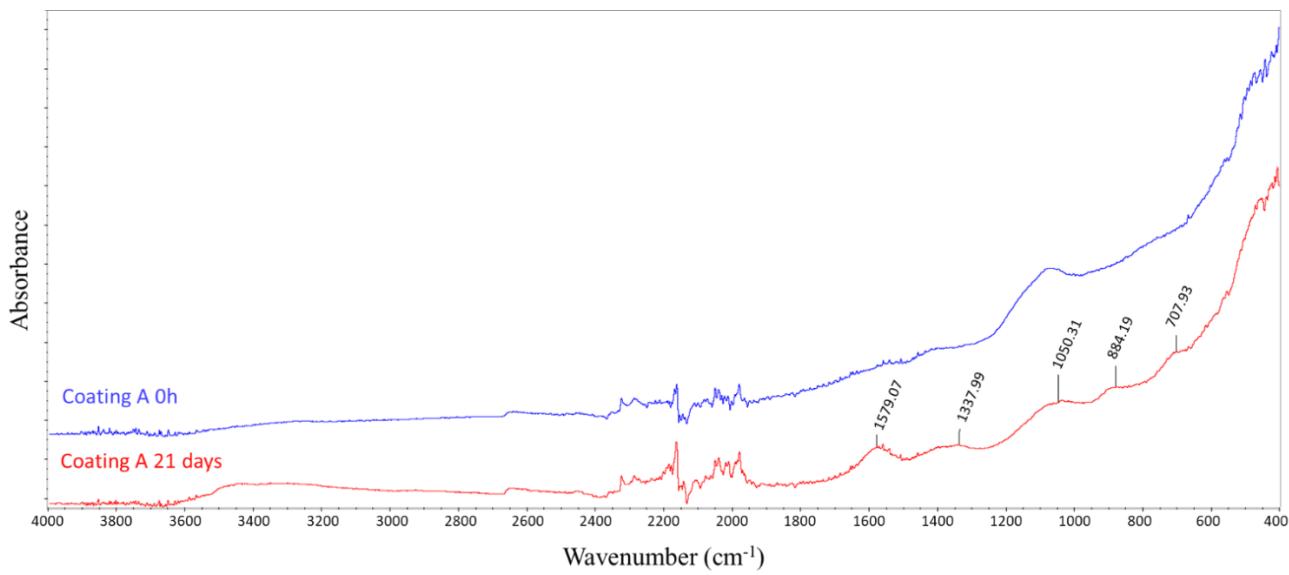


Figure S9. ATR-FTIR spectra of the coating A before and after exposure to 3 wt% NaCl water solution.

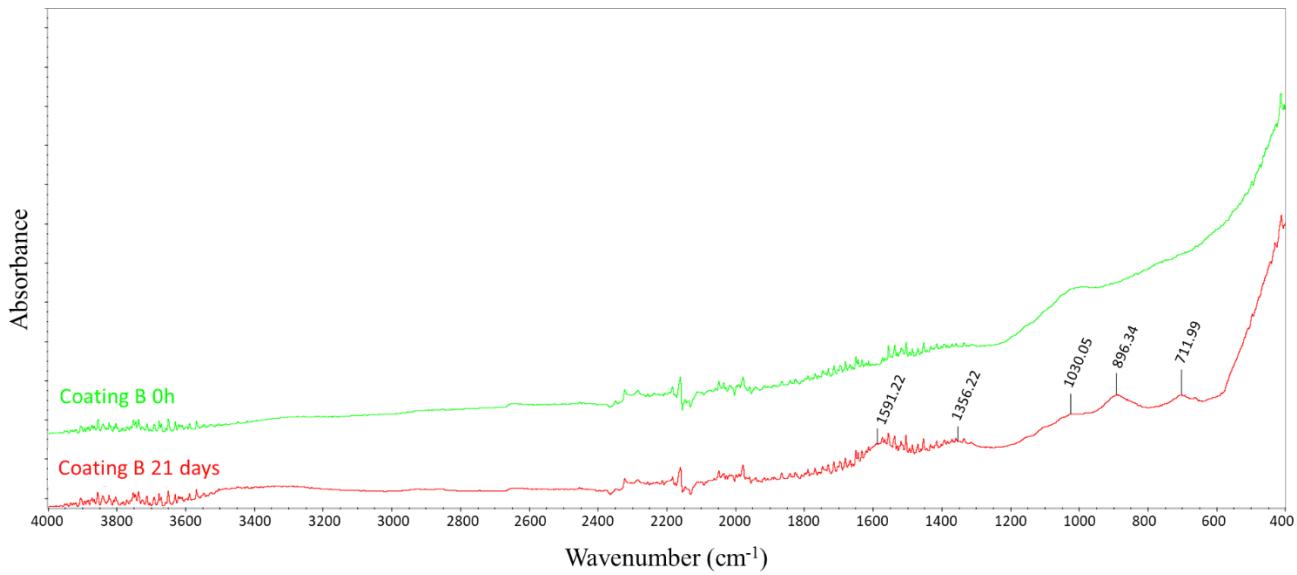


Figure S10. ATR-FTIR spectra of the coating B before and after exposure to 3 wt% NaCl water solution.

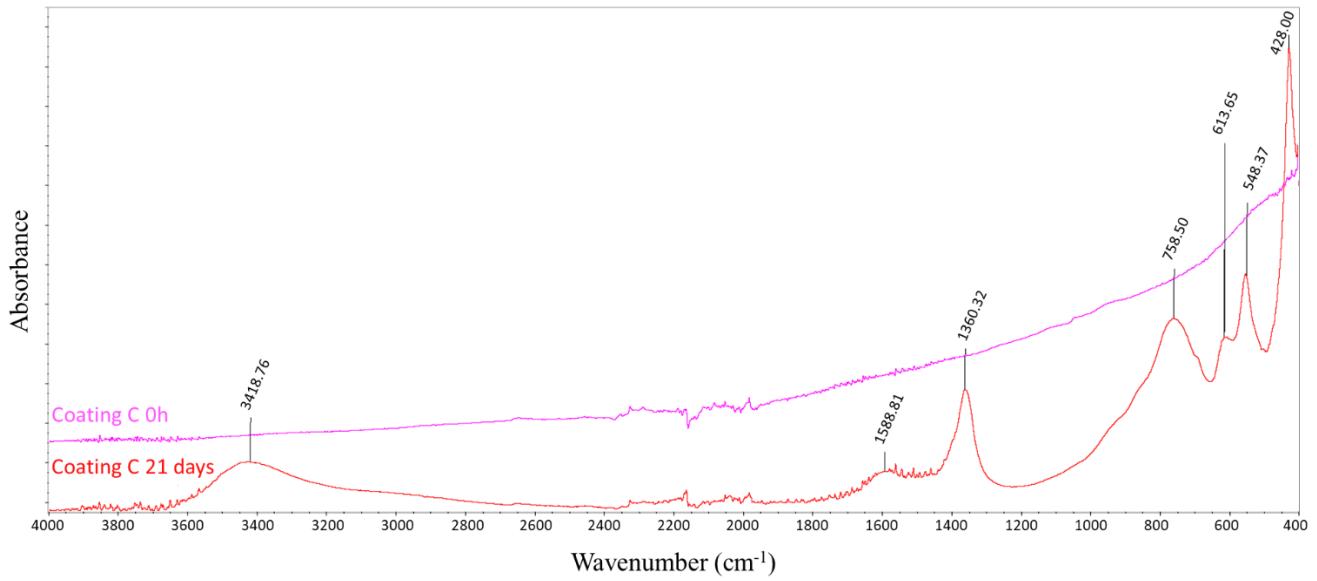


Figure S11. ATR-FTIR spectra of the coating C before and after exposure to 3 wt% NaCl water solution.