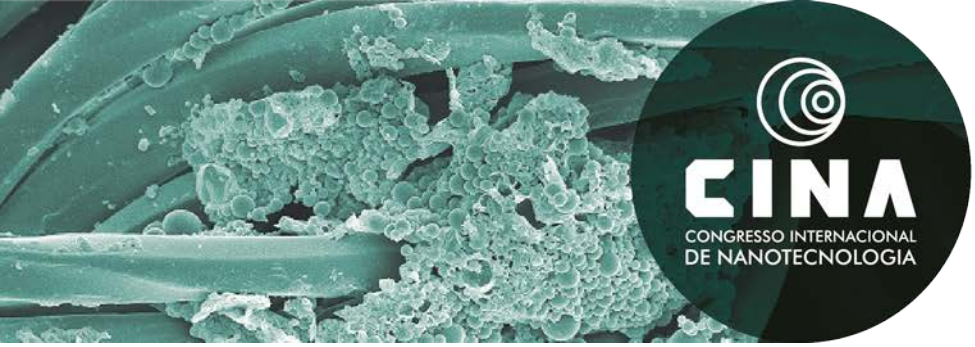


I CONGRESSO
INTERNACIONAL
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IV SIMPÓSIO SOBRE
NANOBIOTECNOLOGIA
E SUAS APLICAÇÕES

# INFLUENCE OF PH AND IMERSION TIME IN SILANIZATION WITH TANNINS TOGETHER FOR CORROSION PROTECTION OF STEEL GALVANIZED

Bruno Pienis Garcia
Erik Alves
Álvaro Meneguzzi

Alternative to the use of hexavalent chromium in the preparation of the galvanized steel surface, which must have a relevant anticorrosion ability, is the purpose of this study. Indicated by immersion by surface treatment using silane with the tannin inhibitor, an alternative to the protective coatings of the type used in barrier galvanized steel. Using different pH values to evaluate how best behavior taking into account the acidity of the solution and soak times which synergy is achieved. Substrates were degreased and after immersion cured for further characterization by electrochemical techniques, potentiodynamic polarization and electrochemical impedance, and SEM and EDS. The tests revealed a good synergy between the TEOS silane and tannin inhibitor. Some parameters have demonstrated superior performance compared to galvanized without treatment. The alternative proposal has potential and indicates that in the future we can provide a real alternative for the replacement of chromium in industrial processes.