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""5.0 Mechanical Properties""""5.1 Peel Test""; ""5.2 Nano-indentation and Nano-scratch Tests""; ""6. Morphology""; ""6.1 Electron Microscopy""; ""6.2 Atomic Force Microscopy""; ""6.3 Contact Angle""; ""7. Electrochemical and Corrosion Analyses""; ""7.1 Cathodic and Anodic Polarization""; ""7.2 Exposure Tests""; ""7.3 Accelerated Weathering""; ""8. Microbial and Anti-fouling Characteristics""; ""References""; ""Thermally Stable Coatings for the Corrosion Protection of Magnesium Alloys: Double Layered Coatings Consisting of a Nanoparticulate Primer and a Sol-Gel Sealing""; ""Abstract"" ""Introduction""""Application of Nanoparticulate Coatings""; ""Application of Sol-Gel Sealings""; ""Salt Spray Tests""; ""Conclusion""; ""Acknowledgment""; ""References""; ""Sol-Gel Enhanced Ni-P Composite Coatings""; ""Abstract""; ""1 Introduction""; ""2 Experimental""; ""3 Influence of Processing Parameters on Ni-P-TiO<sub>2</sub> Composite Coatings""; ""3.1 The Effects of Dripping Rates of TiO<sub>2</sub> Sol""; ""3.1.1 Surface and Cross-Sectional Morphologies""; ""3.1.2 Phase analysis""; ""3.1.3 Mass Gains of Ni-P-TiO<sub>2</sub> Composite Coatings""; ""3.1.4 Micro-hardness of Ni-P-TiO<sub>2</sub> Composite Coatings"" ""3.1.5 Wear resistance""""3.1.6 Corrosion resistance""; ""3.1.7 Summary for the Effects of Dripping Rate""; ""3.2 The Effects of Concentration of TiO<sub>2</sub> Sol""; ""3.2.1 The Effects of Sol Concentration on the Surface and Cross-Sectional Morphologies of the Coatings""; ""3.2.2 The Effects of Sol Concentration on the Phase Structures of the Coatings""; ""3.2.3 The Effects of Concentration on the Deposition Mass Gains of the Coatings""; ""3.2.4 The Effects on Micro-hardness of the Coatings""; ""3.2.5 Wear Resistance of the Novel Ni-P-TiO<sub>2</sub> Composite Coatings""; ""3.2.6 Corrosion Resistance"" ""3.2.7 Summary""

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