

**Synthesis and characterization of protective silica reinforced hybrid  
poly(vinylpyrrolidone)/acrylate/silane nanocomposite coatings**

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**SUPPORTING INFORMATION**

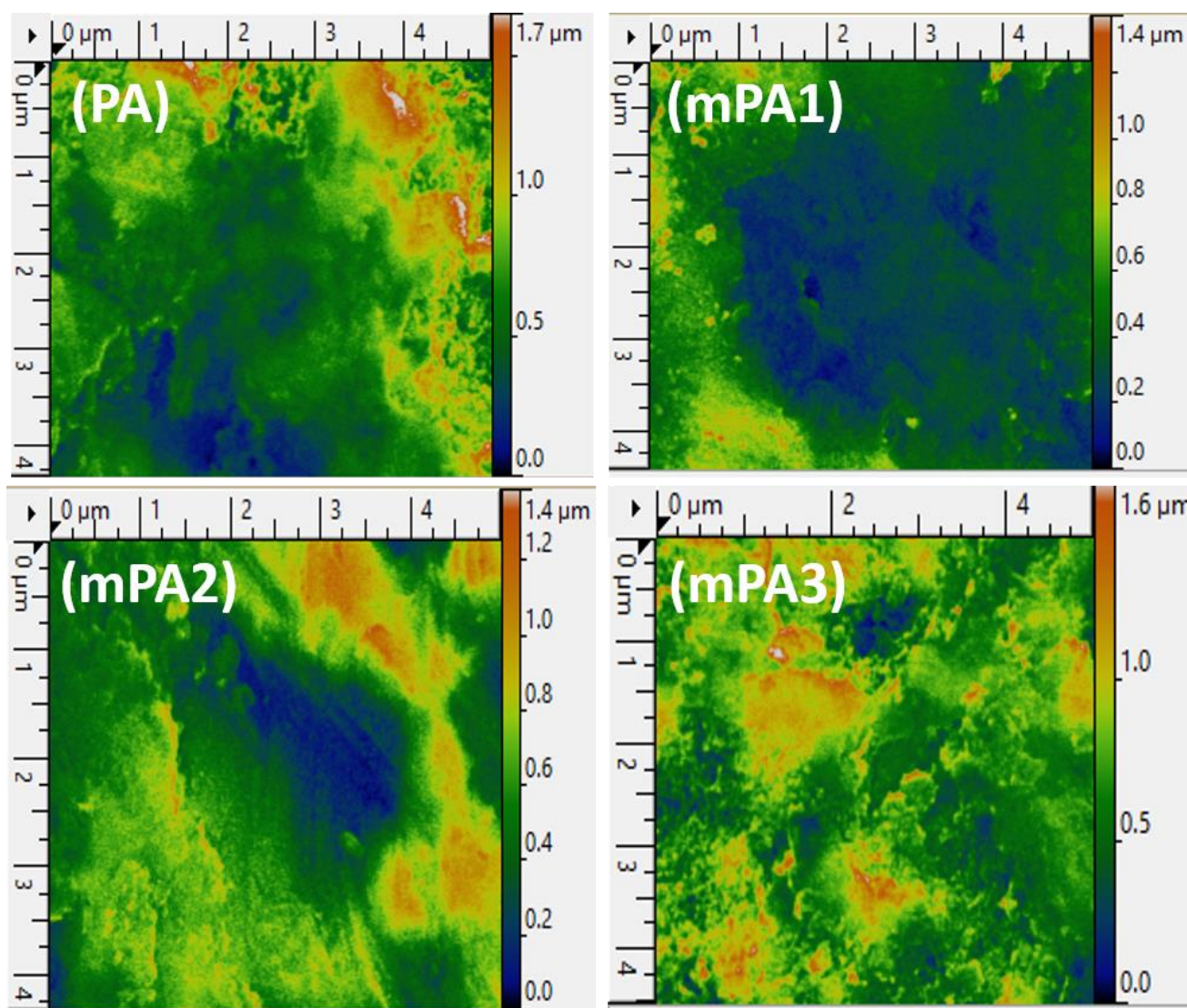


Fig. S1. 2D AFM micrograph unmodified (PA) and SiO<sub>2</sub>NP-modified (mPA1-3) polymer coated surfaces.

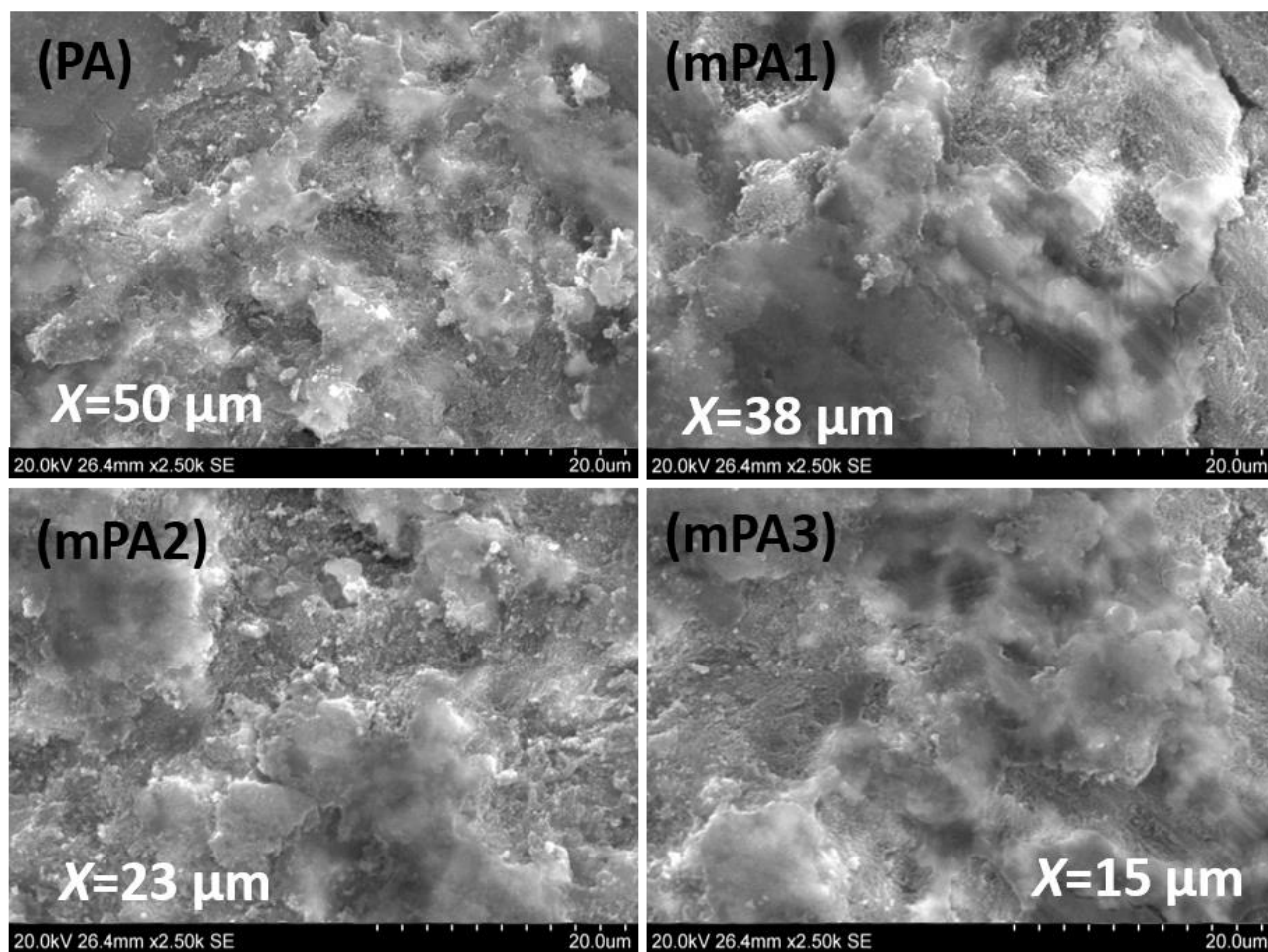


Fig. S2. The SEM surface appearances of unmodified (PA) and SiO<sub>2</sub>NP-modified (mPA1-3) hybrid poly(vinylpyrrolidone)/acrylate/silane coated surfaces on steel before exposure to saline 3.5 wt.% NaCl electrolytes; Coating thickness =  $X$  (measured in  $\mu\text{m}$ ).

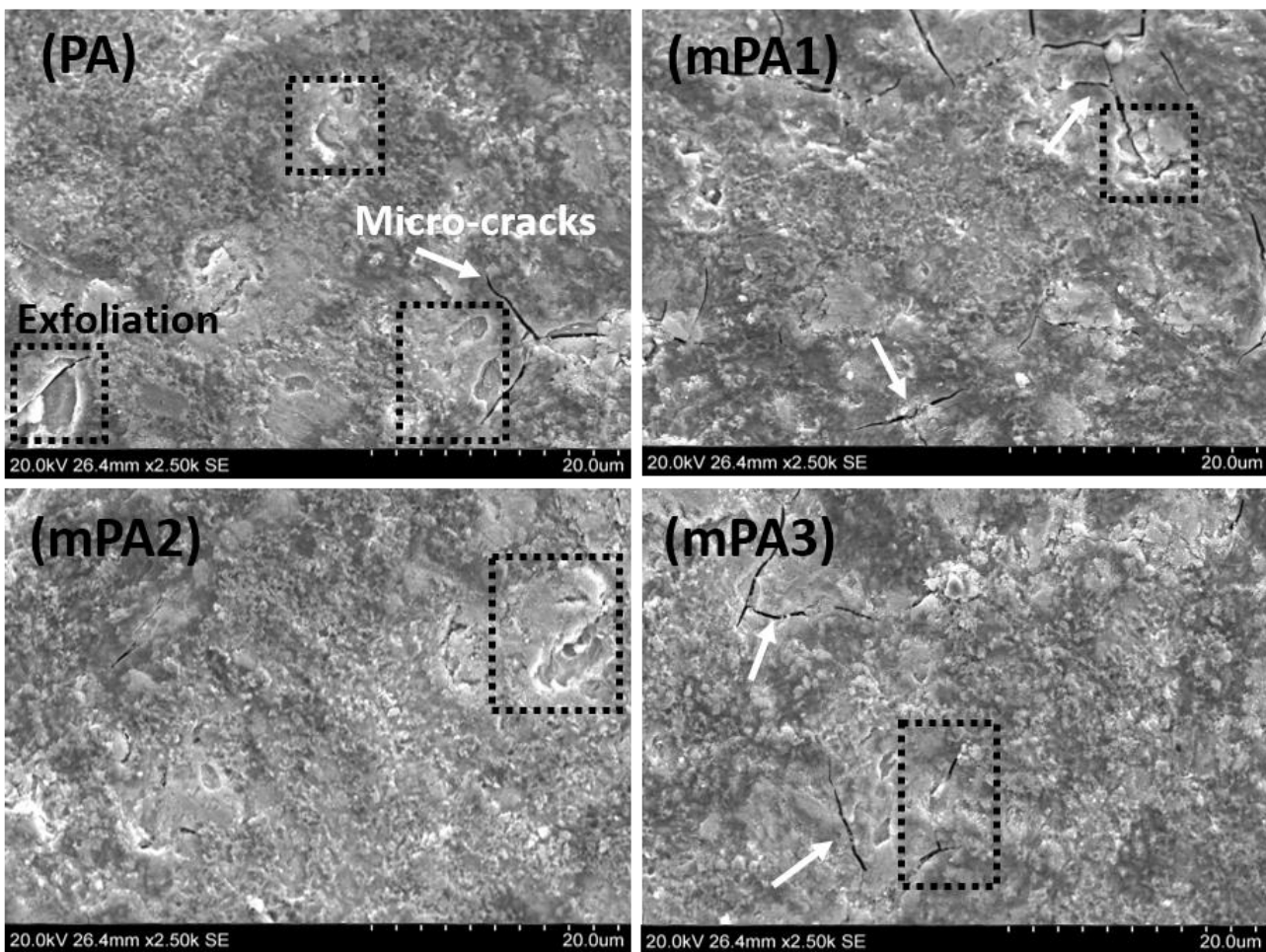


Fig. S3. The SEM surface appearances of unmodified (PA) and SiO<sub>2</sub>NP-modified (mPA1-3) hybrid poly(vinylpyrrolidone)/acrylate/silane coated surfaces on steel after a week exposure to saline 3.5 wt.% NaCl electrolytes.