

# Supporting Information for

## Corrosion Behavior of Eco-Friendly Airbrushed Reduced Graphene Oxide-Poly(vinyl alcohol) Coatings

*Souvik De,<sup>a</sup> Jodie L. Lutkenhaus<sup>a,b\*</sup>*

<sup>a</sup> Artie McFerrin Department of Chemical Engineering Texas A&M University, College Station,  
TX 77843, USA

<sup>b</sup> Department of Materials Science & Engineering, Texas A&M University, College Station, TX  
77843, USA

Table S1. Amount of PVA added into GO for different composition of PVA/GO composite.

Composition	Volume of 2 mg/mL GO (mL)	Weight of 1 wt% PVA solution (g)
20:80 PVA/GO	50	2.5
30:70 PVA/GO	50	4.28
40:60 PVA/GO	50	6.67
50:50 PVA/GO	50	10

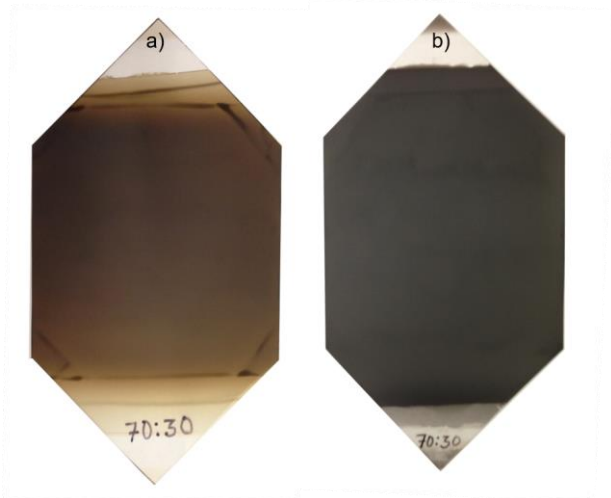


Figure S1. PVA/GO composite coating on PET substrate a) before reduction and b) after reduction.

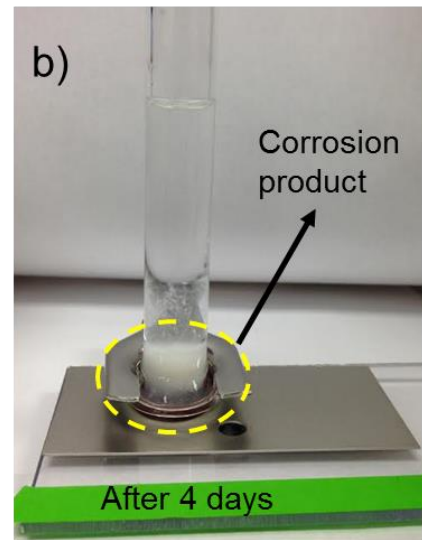
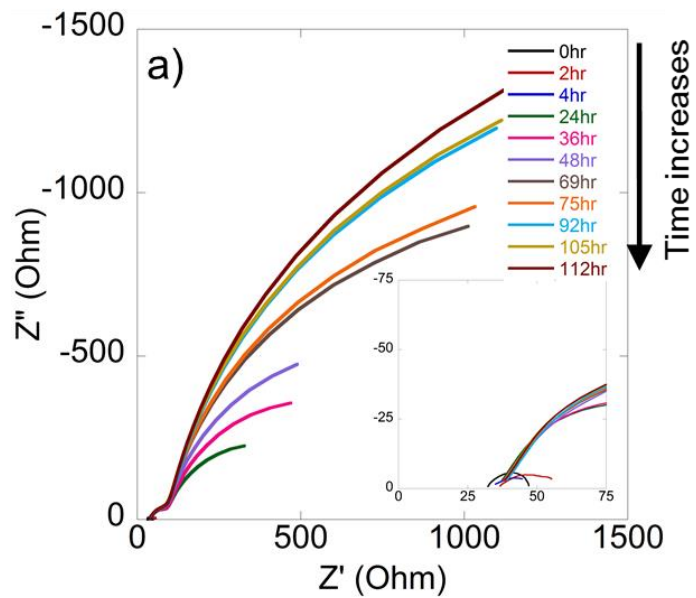


Figure S2. a) Temporal evolution of the Nyquist plot for bare aluminum alloy in 0.2 M NaCl. b) Rapid corrosion of bare aluminum alloy resulted in thick deposition of corrosion products during the EIS study in the paint-cell configuration.

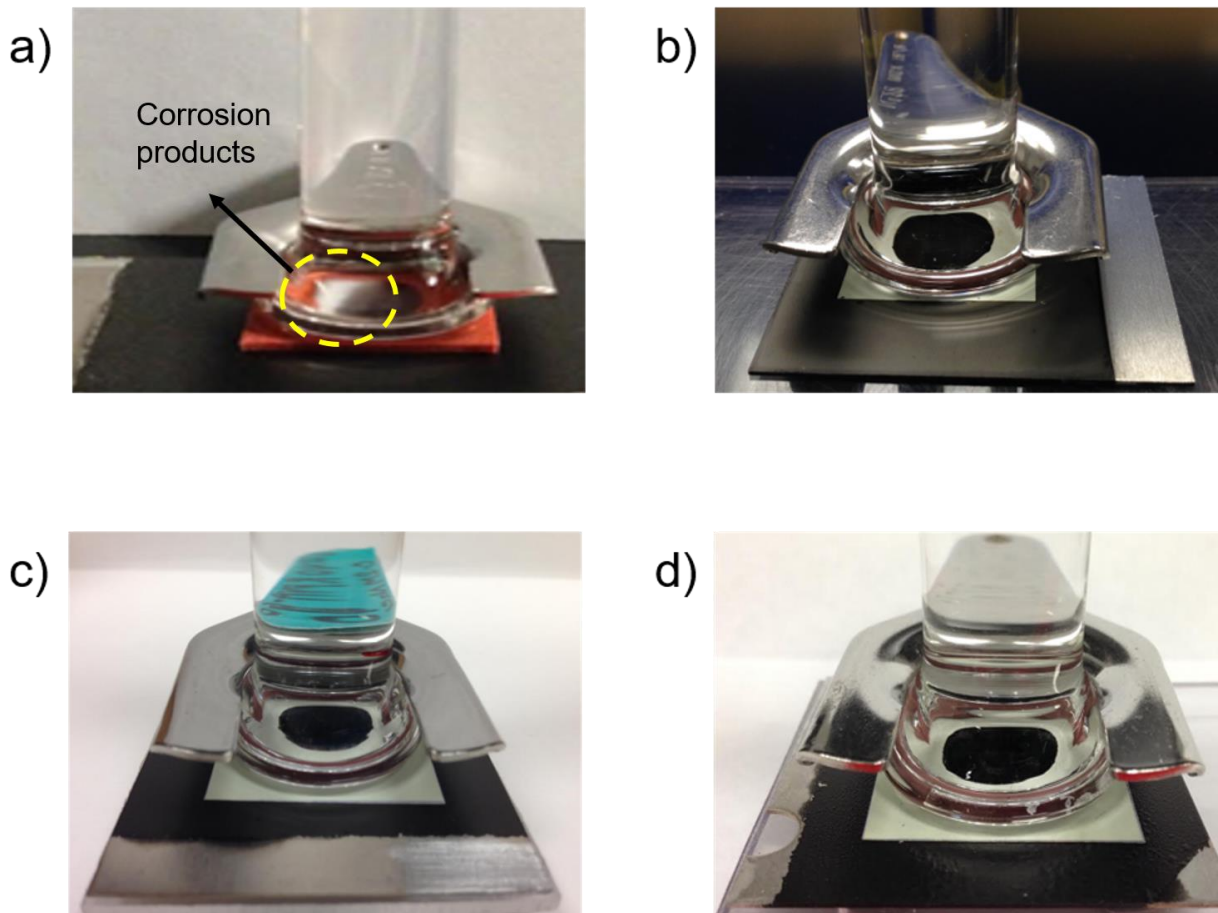


Figure S3. Digital images of a) 20:80 R-PVA/GO, b) 30:70 R-PVA/GO, c) 40:60 R-PVA/GO, d) 50:50 R-PVA/GO coated aluminum alloy at 20 days of electrochemical testing in paint cells. For 20:80 R-PVA/GO coated aluminum alloy, we observed slight corrosion products, whereas for other compositions, we did not observe any accumulated corrosion products after 30 days.