Supporting information

**Positively-charged Reduced Graphene Oxide as an Adhesion Promoter for Highly-stable Silver Nanowire Film**

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**Figure S1.** AFM images and height profiles of the rGO-NH$_3^+$ layers prepared with four different coverage levels.

**Figure S2.** SEM images of the pristine AgNWs and AgNWs films with adhesion promoters of PAH, GO-NH$_3^+$, and rGO-NH$_3^+$. 
Figure S3. Optical transmittance (at 550 nm) of the AgNWs films as a function of the surface coverages of GO-NH$_3^+$, and rGO-NH$_3^+$ layers.

Figure S4. Sheet resistance as a function of ultrasonication time in IPA of the AgNWs films with adhesion promoters of (a) GO-NH$_3^+$ and (b) rGO-NH$_3^+$ with different surface coverages.
Figure S5. Sheet resistance as a function of the detachment cycles (using 3M scotch tape) of the AgNWs with PAH and rGO-NH$_3^+$+. Inset shows the SEM image of the pristine AgNWs film after one time detachment.

Figure S6. Schematic geometry of the bending test. The strain along the substrate length direction ($\varepsilon_y$) was calculated from $\varepsilon_y = h/2R$, where, $R\cdot2\theta = L_0$, $\sin\theta = L/2R$. 
Figure S7. (a) Sheet resistances of the adhesion promoters of PAH, GO-NH$_3^+$ and rGO-NH$_3^+$. (b) Sheet resistances of the rGO-NH$_3^+$ layer with different surface coverage levels.