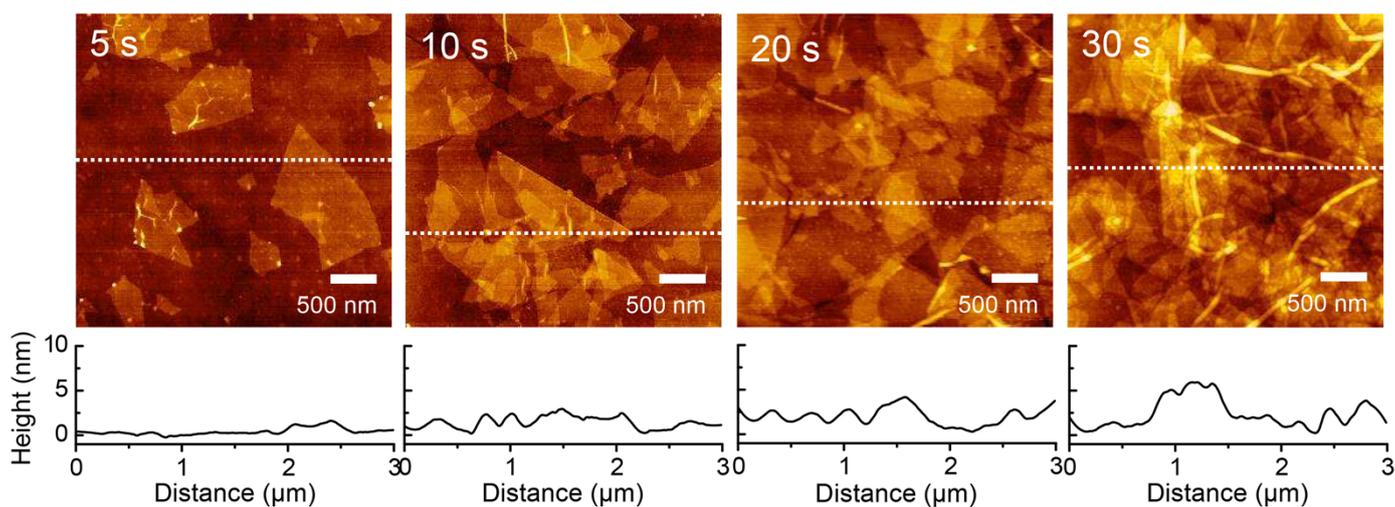


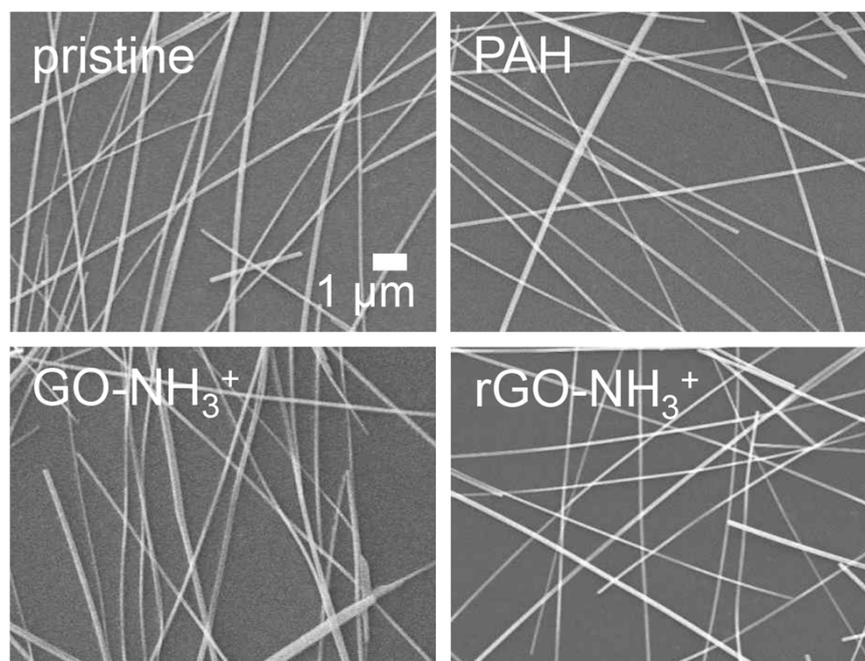
## Supporting information

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

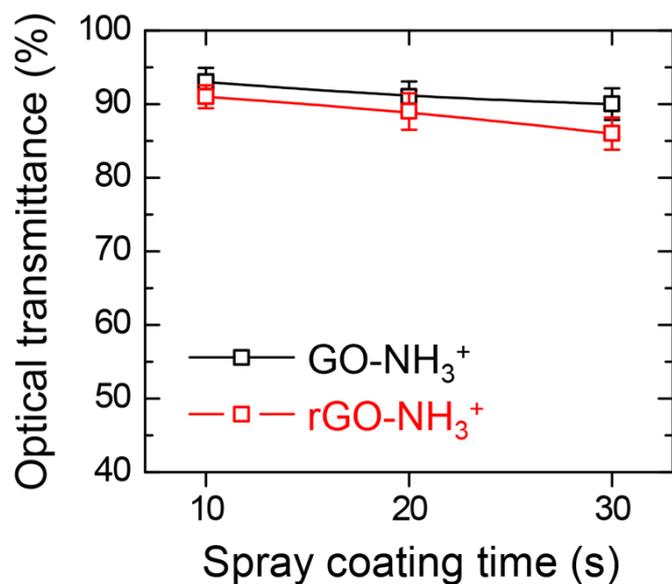
Qijun Sun,<sup>†</sup> Seong Jun Lee,<sup>†</sup> Hyungseok Kang, Yuseong Gim, Ho Seok Park, Jeong Ho Cho\*



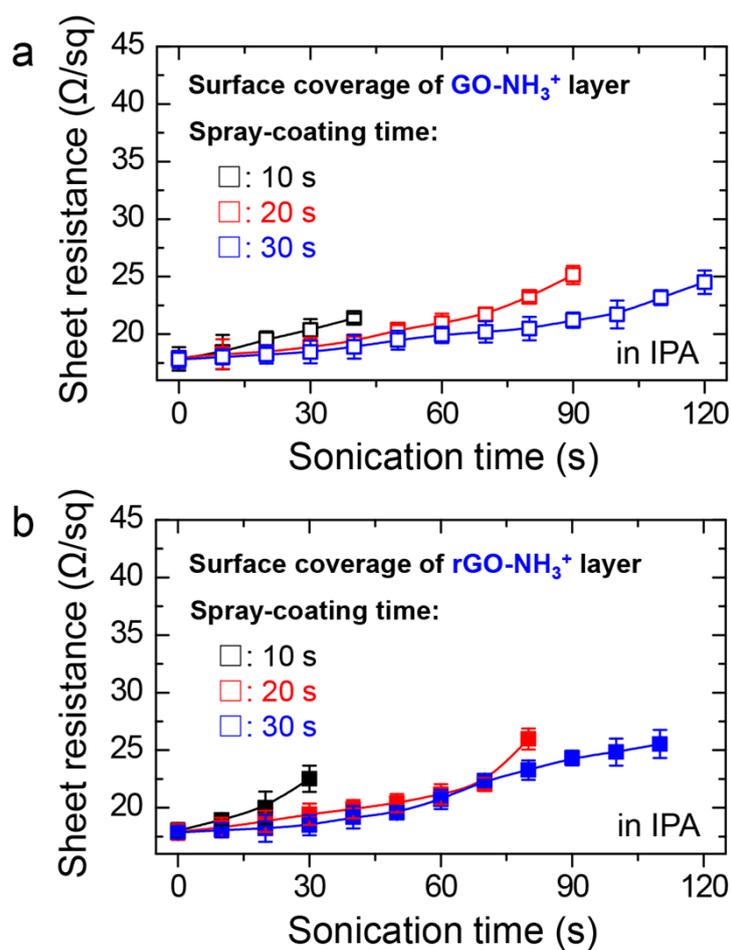
**Figure S1.** AFM images and height profiles of the rGO-NH<sub>3</sub><sup>+</sup> layers prepared with four different coverage levels.



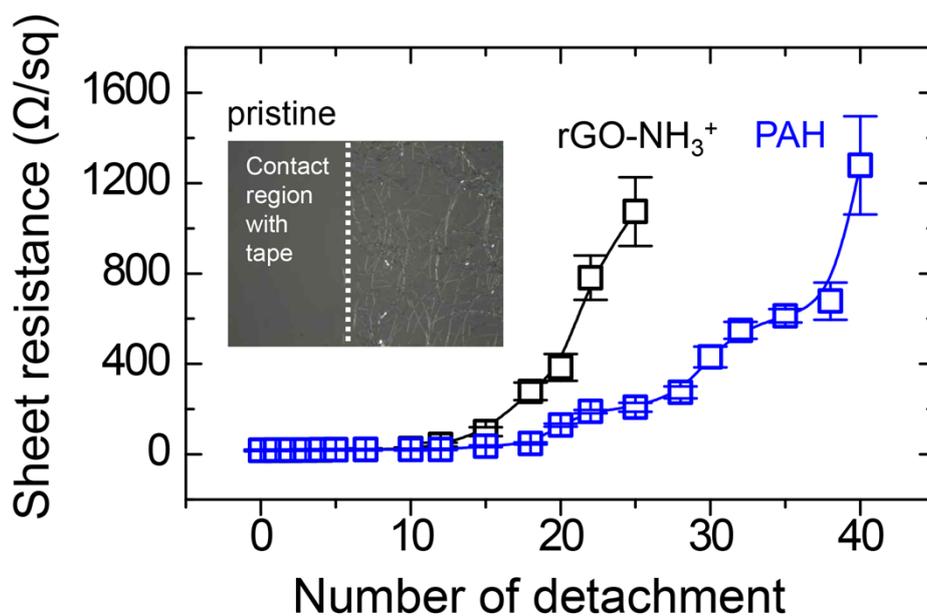
**Figure S2.** SEM images of the pristine AgNWs and AgNWs films with adhesion promoters of PAH, GO-NH<sub>3</sub><sup>+</sup>, and rGO-NH<sub>3</sub><sup>+</sup>.



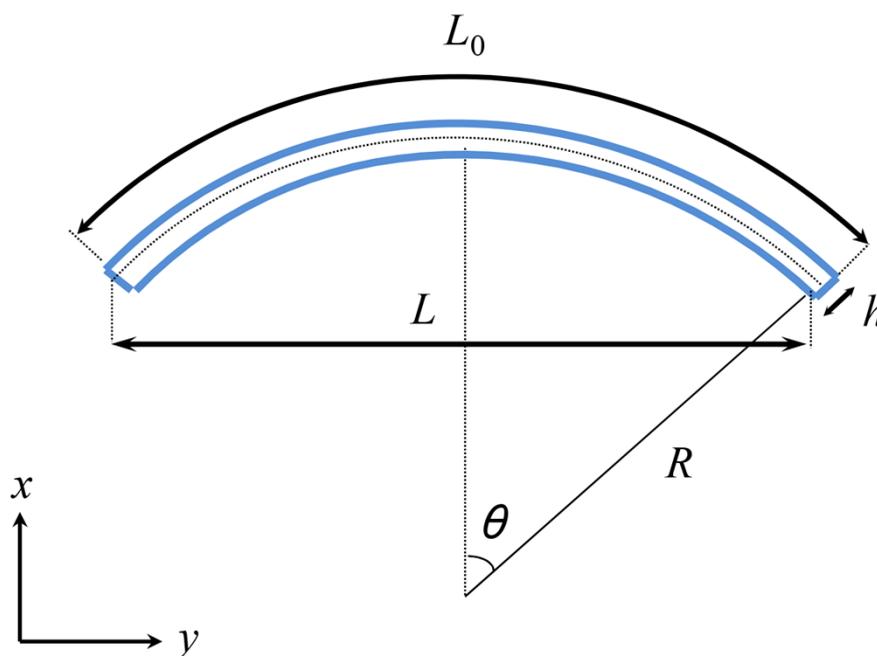
**Figure S3.** Optical transmittance (at 550 nm) of the AgNWs films as a function of the surface coverages of GO-NH<sub>3</sub><sup>+</sup>, and rGO-NH<sub>3</sub><sup>+</sup> layers.



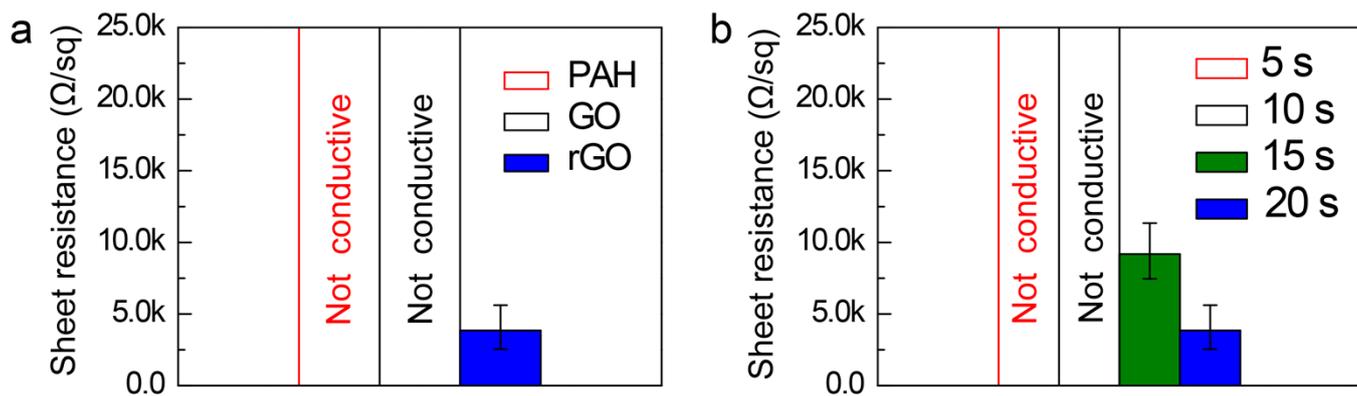
**Figure S4.** Sheet resistance as a function of ultrasonication time in IPA of the AgNWs films with adhesion promoters of (a) GO-NH<sub>3</sub><sup>+</sup> and (b) rGO-NH<sub>3</sub><sup>+</sup> with different surface coverages.



**Figure S5.** Sheet resistance as a function of the detachment cycles (using 3M scotch tape) of the AgNWs with PAH and rGO-NH<sub>3</sub><sup>+</sup>. 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 ( $\epsilon_y$ ) was calculated from  $\epsilon_y = h/2R$ , where,  $R \cdot 2\theta = L_0$ ,  $\sin\theta = L/2R$ .



**Figure S7.** (a) Sheet resistances of the adhesion promoters of PAH, GO-NH<sub>3</sub><sup>+</sup> and rGO-NH<sub>3</sub><sup>+</sup>. (b) Sheet resistances of the rGO-NH<sub>3</sub><sup>+</sup> layer with different surface coverage levels.