

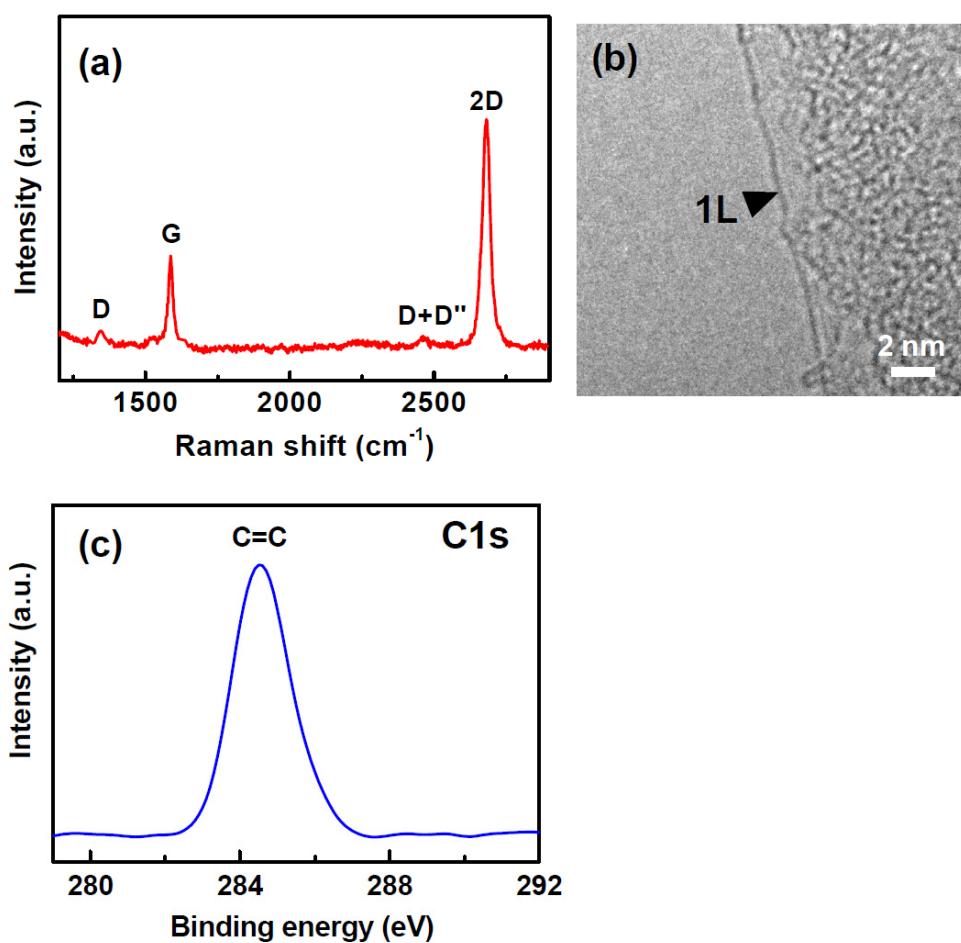
## Supporting Information for

### Direct and Self-selective Synthesis of Ag Nanowires on Patterned Graphene

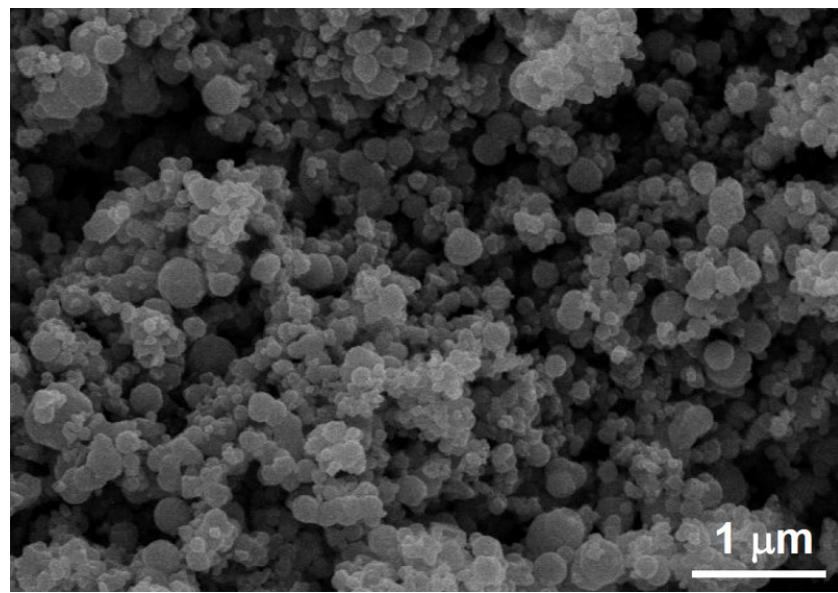
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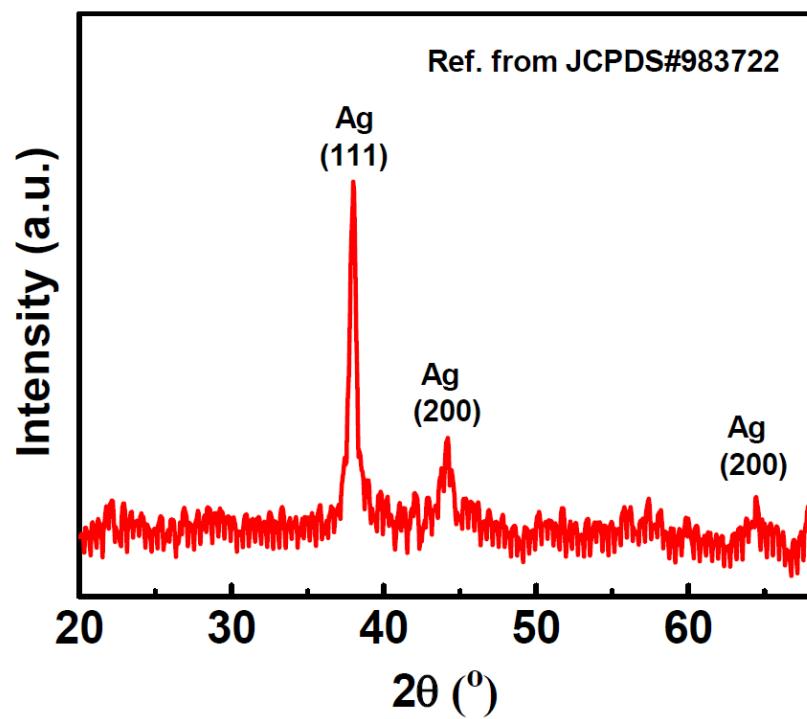
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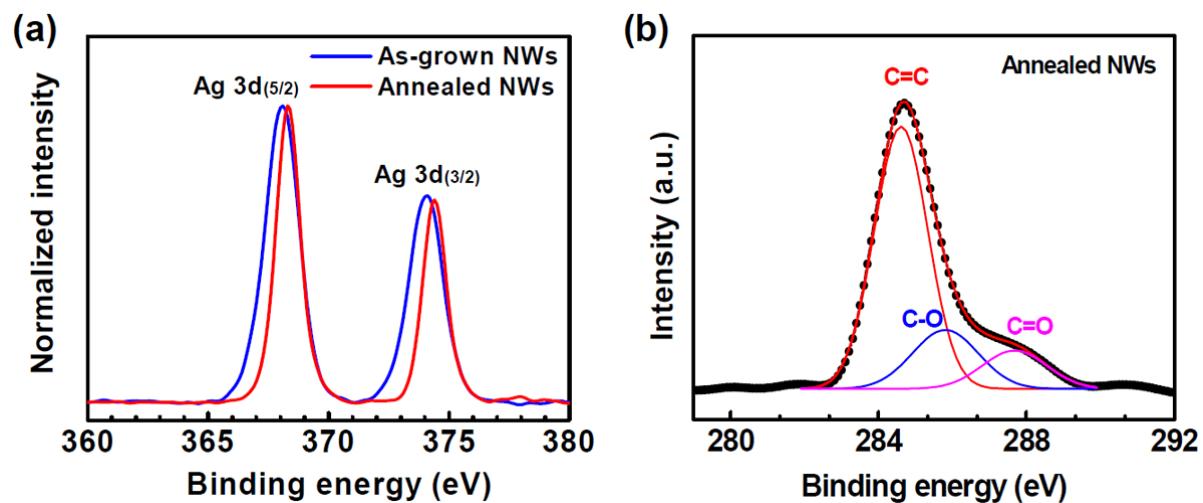
**Figure S1.** Characteristics of pristine graphene: (a) Raman spectrum, (b) HRTEM image, and (c) XPS spectrum of C 1s core level.



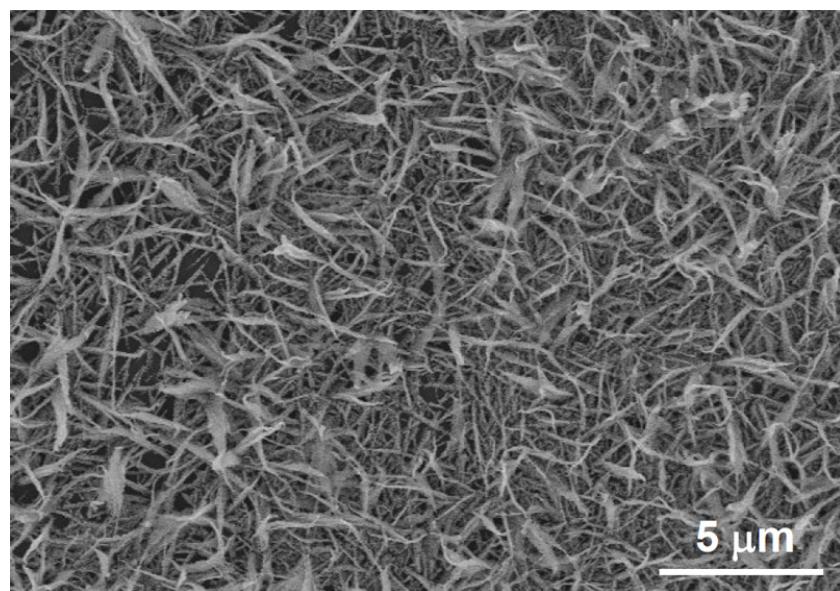
**Figure S2.** SEM image of Ag sediments collected in solution after 30 min reaction with 60 mM AgNO<sub>3</sub>.



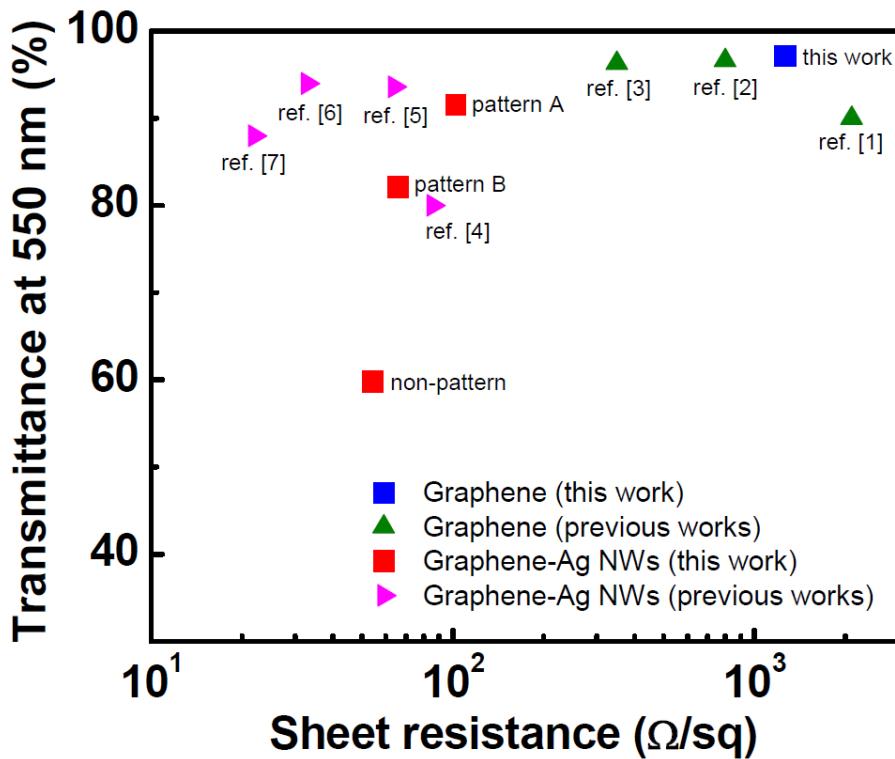
**Figure S3.** XRD pattern of annealed Ag NWs.



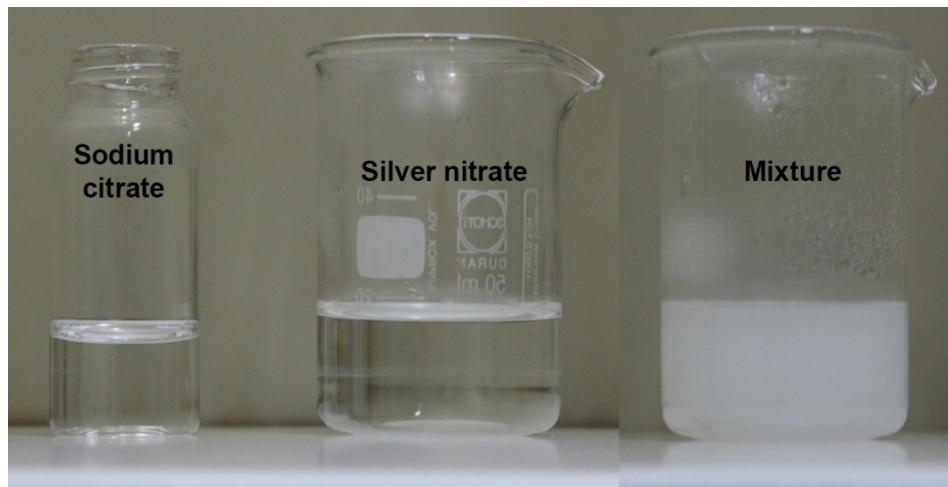
**Figure S4.** XPS spectra of annealed Ag NWs: (a) Ag 3d and (b) C 1s core levels.



**Figure S5.** SEM image of Ag NWs synthesized on graphene with 60 mM AgNO<sub>3</sub> for 30 min.



**Figure S6.** Sheet resistance and light transmittance at 550 nm of graphene and graphene-Ag NW hybrid films: comparison this work with previous studies (Refs. 1-7).



**Figure S7.** Photographs of sodium citrate and  $\text{AgNO}_3$  solutions, and the mixture of sodium citrate and  $\text{AgNO}_3$  solutions.

## References

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