Electronic Supplementary Material (ESI) for Physical Chemistry Chemical Physics.

Electronic Supplementary Information

Water-bath assisted convective assembly of aligned silver nanowire films for transparent electrodes

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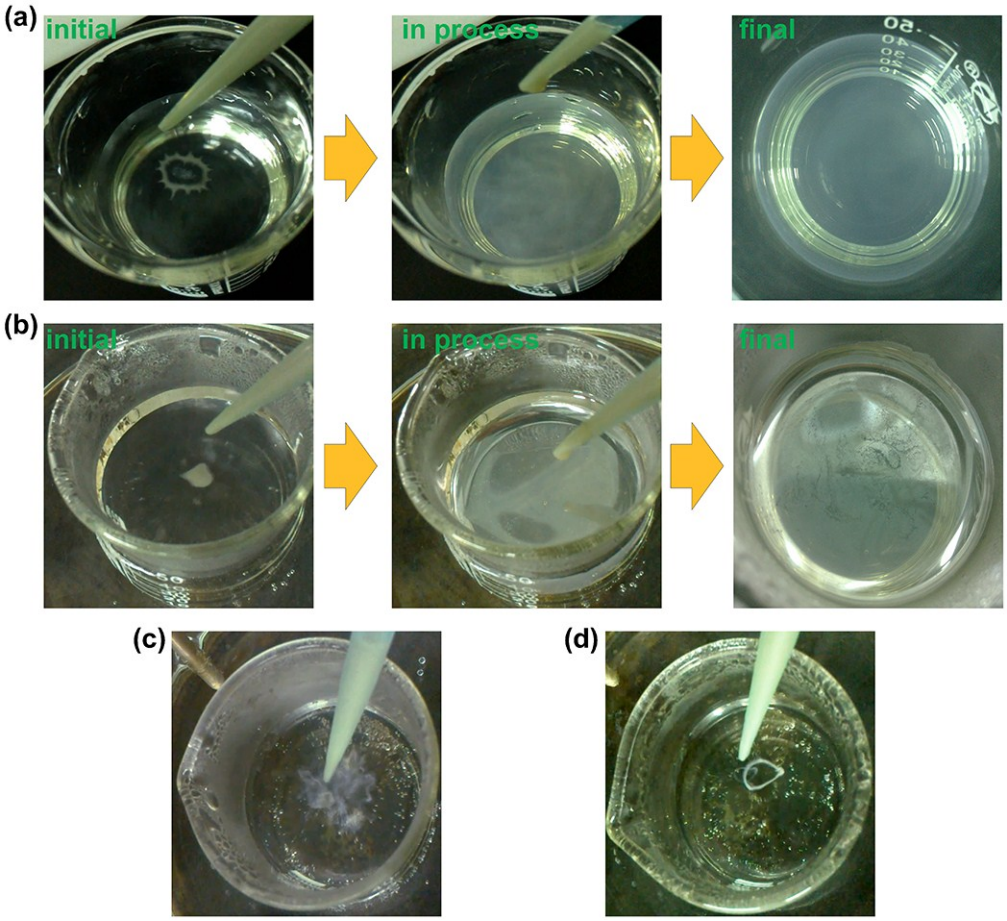

Fig. S1. Photographs of dropping process. (a) Drop AgNW@IPA on ultrapure water at room temperature. (b) Drop AgNW@IPA on ultrapure water surface with a 80 °C water bath. (c) Drop AgNW@water on ultrapure water surface with a 80 °C water bath. (d) Drop AgNW@IPA on IPA surface with a 80 °C water bath.

Note: To achieve a visible assembled Ag nanowires film, the concentration of the Ag nanowires used in Fig. S1 is higher than that in Fig. 1-7.

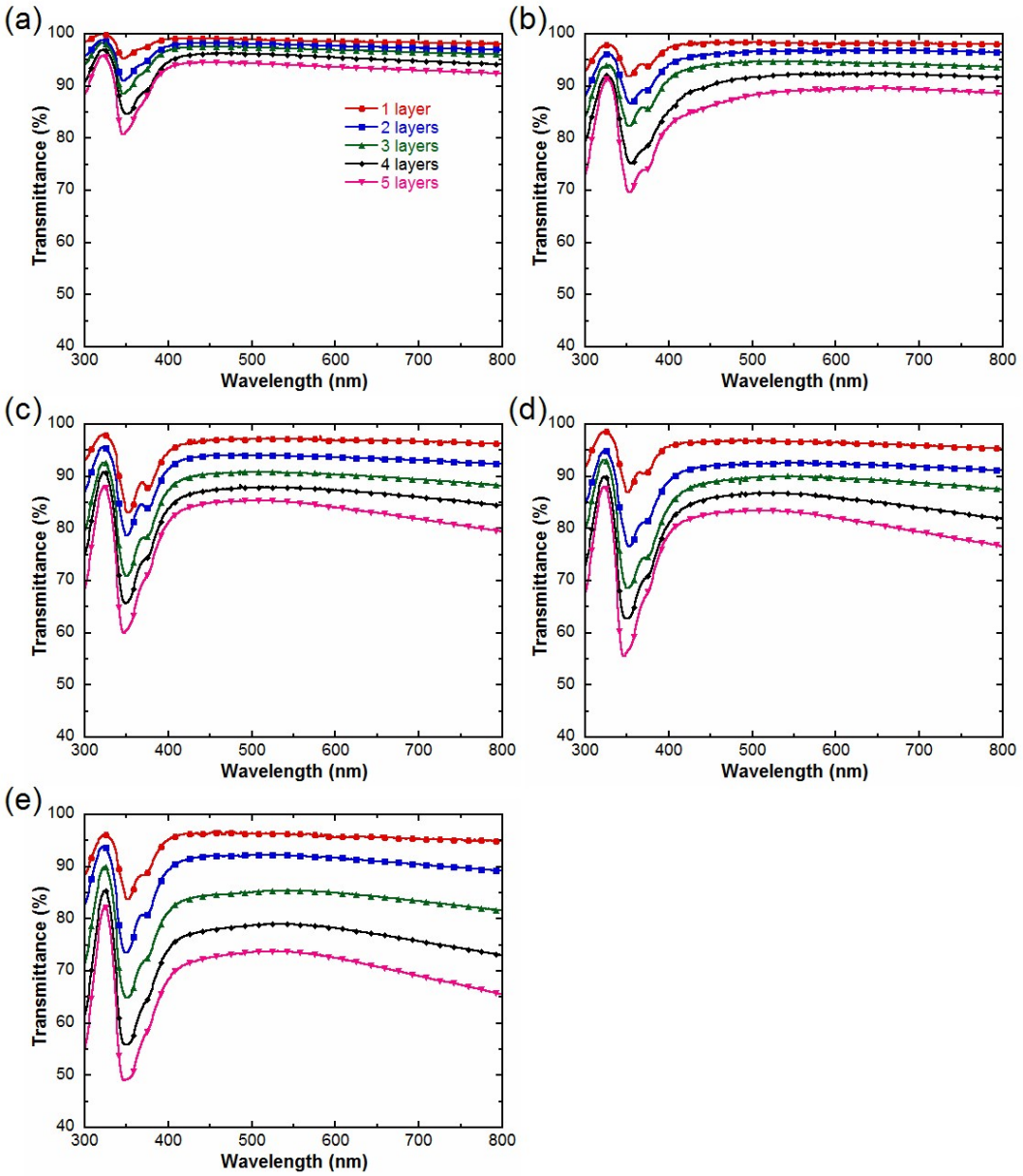

Fig. S2. Transmission spectra of AgNW films with the increasing dip-coating layer number fabricated at (a) room temperature (RT), (b) 50 ^{o}C, (c) 70 ^{o}C, (d) 80 ^{o}C and (e) 90 ^{o}C, respectively.

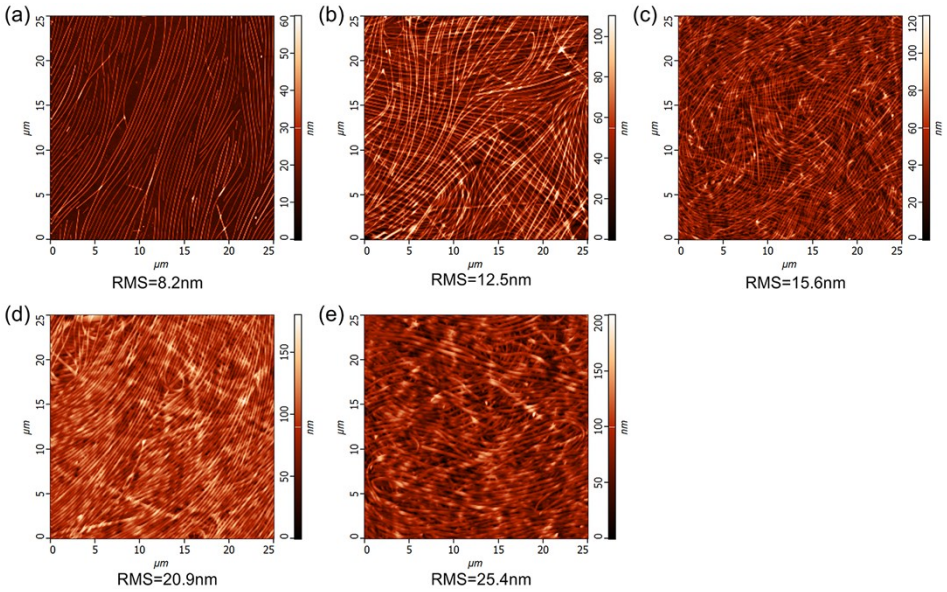

Fig. S3. AFM images and RMS data of AgNW films assembled fabricated at the water-bath temperature of 80 °C with (a) one layer, (b) two layers, (c) three layers, (d) four layers, and (e) five layers, respectively.

Table S1. Sheet resistance of OM-AgNW films by the different water-bath temperatures and dip-coating layer number. Note: Each of the sheet resistances reported is an average value obtained after at least ten multiple measurements.

Dip-coating layer number	1	2	3	4	5
R_{sq} (Ω/sq) @RT	∞	∞	∞	∞	∞
R_{sq} (Ω/sq) @50 °C	∞	68.7	28.4	18.2	12.3
R_{sq} (Ω/sq) @70 °C	∞	33.0	12.9	10.1	7.8
R_{sq} (Ω/sq) @80 °C	∞	21.9	11.4	8.5	6.5
R_{sq} (Ω/sq) @90 °C	∞	19.2	9.9	7.1	5.1