

In the solution-phase synthesis of silver nanowires, the sources of agents ethylene glycol (EG, Aldrich), silver nitrate ( $\text{AgNO}_3$ , Aldrich), poly(vinyl pyrrolidone) (PVP,  $M_w=40,000$ , Aldrich), potassium chloride (Aldrich) are systematically added to the reaction vessel at the room temperature in sequence. The objective of the sequential addition of reactants is to investigate the influence of different experimental procedures on the aspect ratio and shape of silver nanorods. The reaction takes place at temperature of  $170^\circ\text{C}$  for 2 hours and the reaction mixture is constantly in good mixing by a magnetic stirrer. At the end of reaction, the mixture is allowed to cool to room temperature and is diluted with acetone. The mixture is centrifuged at high speed (7000 rpm for 25 minutes). The supernate is removed and ethanol is added to the solid, after that the mixture is centrifuged again. The washing procedure is repeated for three times to ensure no residual reactants. At the end, the nanowires are stored in ethanol. Detailed procedure is listed in Table 1.

Table 1. Three samples are synthesized with the following different experiment processes.

Sample #	Control agent concentration ( $\mu\text{mol}$ )	Solvents adding consequences	Washing solvent
1	0.6	S1 and S2 are added simultaneously	Ethanol
2	0.6	Add S1, then S2	Ethanol+ Ethyl acetate
3	5	S1 and S2 are added simultaneously	Ethanol

Note: S1 is 0.1M  $\text{AgNO}_3$  in 5ml ethylene glycol; S2 is 0.3M poly(vinyl pyrrolidone) and a small amount of potassium chloride in 5ml ethylene glycol. The reaction te

